

Trading Places

Why firms locate where they do

Ilona Serwicka & Paul Swinney August 2016



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Executive Summary

Encouraging economic growth right across the country has been put front and centre of Theresa May's ambitions in the first weeks of her premiership. The new prime minister has called for a "plan to drive growth up and down the country – from rural areas to our great cities". And it appears that a new approach to industrial policy will form the central plank of approaches to achieve this.

If areas up and down the country are to make a greater contribution to the national economy then they will need to grow their 'export base' – that is those businesses that sell goods and services outside of their immediate area, be that to regional, national or international markets. These businesses are important for three reasons. Firstly, they bring money into the local economy from elsewhere through the goods and services they sell. Secondly, their ability to innovate drives up productivity and wages at the local level. And thirdly, because their productivity growth puts money in the pockets of workers, their success drives growth in wages, jobs and businesses in local services too.

Because they are not tied to a local market, these exporters could, in theory, locate anywhere in Britain. But this report shows that these businesses have clear preferences for where they locate. And these preferences differ between goods and services exporters.

Services exporters show a very clear preference for an urban location. Cities cover 9 per cent of Britain, but are home to 61 per cent of the country's businesses in this sector. This clustering is particularly acute in city centres. Despite accounting for just 0.08 per cent of land, they are home to 11 per cent of Britain's service exporters. This is especially the case for foreign-owned service exporting businesses, of which 30 per cent were based in city centres in 2015.

Goods exporters show a greater preference for non-urban locations – 69 per cent are based outside of cities. The hinterlands around cities are the most popular choice for this sector, with 44 per cent of Britain's goods exporters being based there. But it is the rural economy that is most dependent on goods exporters, with almost one-in-four private sector businesses being in agriculture, mining or manufacturing (compared to 14 per cent in hinterlands, 7 per cent in suburbs and 4 per cent in city centres).

These patterns occur because of the inherent benefits that each of these areas offer to businesses. Cities offer access: access to knowledge, access to infrastructure (such as roads and railways), and access to deep pools of workers. But they also



¹ Prime Minister's Office Press Release 'New Cabinet committee to tackle top government economic priority', 2 August 2016 https://www.gov.uk/government/news/new-cabinet-committee-to-tackle-top-government-economic-priority

tend to have higher costs – such as the costs of space and congestion. Where businesses locate depends on the trade-offs that they are prepared to make, with higher-skilled services firms preferring the density of economic activity in a city centre and manufacturing firms preferring the cheaper premises and greater space that hinterlands offer.

Place matters not only because of the important role exporters play in the economy, but also because globalisation is altering the balance between goods and services in the export base. All areas – from city centres through to the rural economy – have seen a decline in their number of goods-exporting businesses. This has meant that areas have become increasingly reliant on the growth of services exporters to drive growth in their economies.

Because of the inherent advantages that cities offer, they have been able to respond better to the decline of goods exporters than more rural locations. Because cities offer both access to ideas and information and large pools of workers, they have been more successful at growing their number of service exporters – particularly high-skilled ones – to offset the losses seen elsewhere.

To improve the performance of the national economy, policy will need to make the most of the strengths of different areas that make up the national economy. But given that the UK is likely to continue to specialise in high-skilled services, the inherent advantages that cities offer mean that the performance of the national economy in the future will be increasingly driven by the ability of its cities to continue to attract investment in this area. This has three key implications for policy:

1. Industrial policy needs to be place-based

Our research shows that the national economy is not flat, meaning that policy to boost growth needs to start from a place-based perspective. Previous industrial strategies have focused on picking specific sectors, and have been place-blind. Greg Clark has recently made a commitment that the Government's economic plan will "take advantage of the differences and unique strengths that exist across the country". If the Government's new approach is to be more successful than past attempts, putting place at the heart of its industrial strategy will be critical.

2. To do this, policy needs a deeper understanding of the different advantages that different places offer to businesses

Different places offer different benefits to businesses. Cities, and city centres in particular, offer businesses access to knowledge, workers and other businesses, while hinterlands and more rural areas offer premises at a cheaper price. Both industrial and wider economic policy needs to work within this context. This more realistic approach would recognise the limits of policy to encouraging the growth of high-skilled services exporters in every place across the country. It would also recognise and strengthen the inter-relationships between places – for example city centres rely on suburbs and hinterlands for workers and customers, while hinterlands rely on cities for jobs.



² Department for Business, Energy & Industrial Strategy Press Release 'New ministerial local growth champions appointed by Business and Energy Secretary', 11 August 2016 https://www.gov.uk/government/news/new-ministerial-local-growth-champions-appointed-by-business-and-energy-secretary

3. Policy should not focus on micro-managing the location decisions that businesses make

Policies encouraging business growth have had a tendency in the past to micromanage the location decisions that individual firms make, either through business support policies or through relocation subsidies. Encouraging growth in the urban context will need to focus on strengthening the benefits of an urban location (through policies to improve skills, planning and transport) and reducing the negatives (by putting policies in place to alleviate congestion, pollution and housing costs).

This paper is the first of two research papers in the series. The second paper, to be published later in 2016, will look at the variation we see in the export base of different cities, and how their ability to attract investment from services exporters has had a big impact on their ability to grow and contribute to the national economy.





Introduction

In the wake of the EU referendum result, encouraging economic growth right across the country has been put front and centre of Theresa May's ambitions for her premiership. The new prime minister has called for a "plan to drive growth up and down the country – from rural areas to our great cities". And it appears that a new approach to industrial policy will form the central plank of approaches to achieve this.

For this to happen, all areas of the country will need to provide the conditions for business investment, either from indigenous companies looking to set up or expand, or from those located elsewhere in the country or overseas.

In particular, they will need to create conditions that attract investment from 'exporting' businesses, which export either to a regional, national or international market. Attracting these businesses is crucial for three reasons. Firstly, they bring in income to an area through the selling of their products elsewhere. Secondly, they drive productivity growth in an area, being best able to make the most of new innovations. And thirdly, they both create and drive up the wages of jobs in local service sectors, known as the 'multiplier effect'. ⁴So while they make up a relatively small part of the economy themselves, they have an important indirect effect on other parts of a local economy.

Because they serve regional, national or international markets, these businesses could choose to locate anywhere, from the centre of London to the middle of the Highlands. But it is clear from any walk around a city centre, drive along a motorway or view from the window of an intercity rail journey that they do not. This suggests that different parts of the country have very different appeals to certain types of business. And it has implications for political aspirations to encourage growth across the nation.

To make the most of each place, we need to understand the different roles they play in the national economy. This report does this by splitting Britain into four areas – city centres, suburbs, hinterlands and rural areas (see Figure 1) – and considers what their varying roles mean for industrial and wider economic policy. It presents five findings on the geography of businesses across the four areas, offers reasons for why these geographic patterns occur, and offers policy reflections on what this means for the new government's commitment to encourage growth across the country.

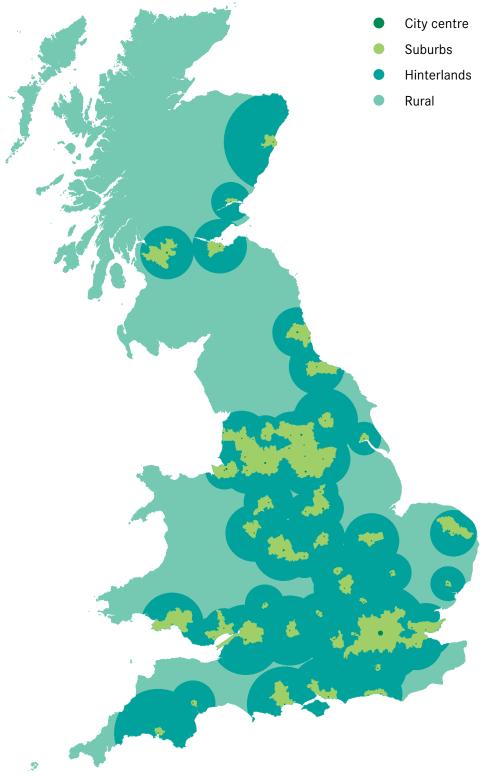


³ Prime Minister's Office Press Release 'New Cabinet committee to tackle top government economic priority', 2 August 2016 https://www.gov.uk/government/news/new-cabinet-committee-to-tackle-top-government-economic-priority

⁴ Moretti, E. (2013) *The New Geography of Jobs*. Houghton Mifflin Harcourt, New York. Rowthorne, R. (2010) "Combined and Uneven Development: Reflections on the North–South Divide", *Spatial Economic Analysis*, 5(4): 363–388

This research paper is the first of two papers in this series. The second, to be released later this year, will look in more detail at why businesses choose to locate in some cities over others.

Figure 1: City centres, suburbs, hinterlands and the rural areas of Britain



Source: ONS (2016), Census 2011, origin-destination data (WU02UK); Centre for Cities' own calculations.



Box 1: Defining city centres, suburbs, hinterlands and rural areas

The analysis in this report splits Britain into four areas: city centres, suburbs, hinterlands and rural areas. Cities are split into two areas – city centres and suburbs – because of the different role that previous work by Centre for Cities suggests that they play.⁵ Non-city areas are also split into two – hinterlands and rural – to investigate whether they too play differing roles:

- **City centres** are defined based on all the postcodes that fall within a circle from the pre-defined city centre point. The radius of the circle depends on the size of the residential population of a city and its size is as follows:
 - London radius of 2 miles;
 - Large cities radius of 0.8 miles;
 - Medium and small cities radius of 0.5 miles.
- **Suburbs** are defined based on the postcodes that fall within the rest of a city (defined as primary urban areas (PUAs), the standard definition of cities that Centre for Cities uses).
- **Hinterlands** are non-urban areas which are considered to fall within the travel-to-work area of cities. This varies from city to city and is determined by the average distance that a worker living outside of a city travels to get to their job in the city. For example, the travel catchment for London is equal to 63km, but for Worthing it is equal to 20km.
- The **rural** areas make up the remaining part of the physical landmass of Britain and fall outside of the travel catchment of cities.



⁵ Swinney, P. and Sivaev, D. (2013) Beyond the high street: Why our city centres really matter, London: Centre for Cities



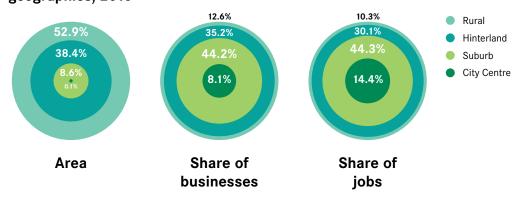
The geography of businesses and jobs in Britain

The concentration of businesses and employment varies across the country. Below we set out five findings about the nature of this variation.

1. The national economy is concentrated in cities, and particularly in city centres

Far from being evenly spread across the country, Britain's 2.5 million private sector businesses and 21 million private sector jobs are located in very specific places. Figure 2 below looks at the share of land, jobs and businesses that our four areas account for.

Figure 2: Distribution of businesses and jobs across the four geographies, 2015



Source: ONS (2016), Business Structure Database 2015; ONS (2016), Census 2011, origin-destination data (WU02UK); Centre for Cities' own calculations.

The chart shows that:

- Very little of the national economy is located in rural areas. As a whole, these areas accounted for 53 per cent of all land in Britain, but 13 per cent of businesses and 10 per cent of jobs in 2015.
- While 38 per cent of all land in Britain is accounted for by the hinterlands that surround cities, they are home to just over one third of businesses and 31 per cent of jobs.
- The suburbs of cities are home to the largest share of economic activity. They account for 9 per cent of land, but around 44 per cent of businesses and jobs.
- City centres see the greatest clustering of economic activity. Despite
 accounting for just 0.08 per cent of land, they were home to 8 per cent of
 businesses and 14 per cent of jobs in 2015. And despite their much smaller
 coverage of land, they had 40 per cent more jobs than the rural economy.

2. Britain's service exporters tend to locate in cities, while goods exporters are more inclined to locate outside cities

There is also a difference in the types of businesses that are attracted to different areas.

To get a better understanding of this, we split businesses into three categories - goods exporters, service exporters and local services - all of which have different requirements when it comes to location. This categorisation is discussed in more detail in Box 2.

Box 2: Characteristics of goods exporters, services exporters and local services

Broadly there are three types of private sector business. The location requirements of these businesses look very different to one another.

Local services (also known as business to consumer (B2C) or 'non-tradable' businesses), such as hairdressers or newsagents, sell direct to the consumer, and so typically serve a very local market. Because of this their location decisions are decided predominantly by where their customers live, work, or trade from.

Exporting businesses (also known as business to business (B2B) or tradable businesses) sell to regional, national or international markets. They form the export base of the local economy. The markets these businesses sell to do not tie them to a specific location, and so long as they can easily access their target market, they are free to set up wherever they want. But given the different requirements of goods (e.g. car manufacturers) and services (e.g. computer programming) exporters, their location decisions are likely to look very different.

For this research we have defined exporters and local services firms using Standard Industrial Classification (SIC) codes. This means that we are not identifying actual exporters, but looking at businesses in sectors that have potential to sell to a market beyond their local area. A full list of how each sector has been allocated can be found in the online appendix to this report.

Given that we are interested in the location decisions of the private sector, we do not look at where the public sector is located. We note however that higher education institutions have a role to play in exporting given the number of students from outside of their immediate area that they receive.

Why are exporters important?

Exporting businesses are important for three reasons. Firstly, because they receive their revenue from selling into markets at a regional, national or international scale, that they generate income independent of the performance of the local economy.⁶

Secondly, they tend to be more productive than local services businesses. A study of American firms of all sizes found that value added per person in



⁶ Rowthorne, R. (2010) "Combined and Uneven Development: Reflections on the North-South Divide", Spatial Economic Analysis, 5(4): 363-388

exporting firms in 2008 was around \$120,000 per job, compared with \$80,000 for local services firms. They also drive productivity growth, which drives long-run economic growth. For example, while a fitness instructor is as productive as he or she would have been 50 years ago, someone working in a car factory is now many times more productive than half a century earlier, while computers have vastly increased the value of work that someone working in cinema special effects, for example, can do in a day.⁸

Thirdly, exporting businesses also have a multiplier effect on jobs in local services. The better they perform, the higher local disposable income there is, and the higher the demand for goods and services provided by local services businesses such as shops and restaurants.

Enrico Moretti found that this multiplier varied according to the type of exporting business. He estimated that every extra traditional manufacturing job generated 1.6 extra local services jobs in US cities. But for the hi-tech exporting sector he found the ratio to be as high as five to one – for every one job created in the hi-tech exporting sector, five are created in the local services sector, both in high and low-skilled occupations.⁹

The graphic below summarises the three reasons why exporting businesses are important to the local economy:



⁷ Spence, M and Hlatshwayo, S. (2012) "The Evolving Structure of the American Economy and the Employment Challenge". Comparative Economic Studies, 54(4): 703-738.



⁸ Moretti, E. (2013) *The New Geography of Jobs*. Houghton Mifflin Harcourt, New York.

⁹ Moretti, E. (2013) The New Geography of Jobs. Houghton Mifflin Harcourt, New York.

Although exporting firms are in principle free to locate anywhere they can serve national and international markets, Figure 3 shows clear distinctions as to where they actually locate. In 2015, services-exporting businesses were most likely to be in cities, and city centres in particular. In total, 61 per cent of these businesses were located in cities, of which 11 per cent were in city centres alone, despite the tiny area of land they account for. Employment was even more concentrated, with 25 per cent of all jobs in this sector located in city centres, and 69 per cent located in cities as a whole.

number of businesses (%) 90 80 70 60 50 of total 30 20 10 Suburb City Centre All businesses Local services Goods exporters Services exporters 90 8 80 70 60 total ₽ 30 20 Hinterland 10 Suburb City Centre All employment Local services Goods exporters Services exporters

Figure 3: Where businesses in different sectors choose to locate, 2015

Source: ONS (2016), Business Structure Database

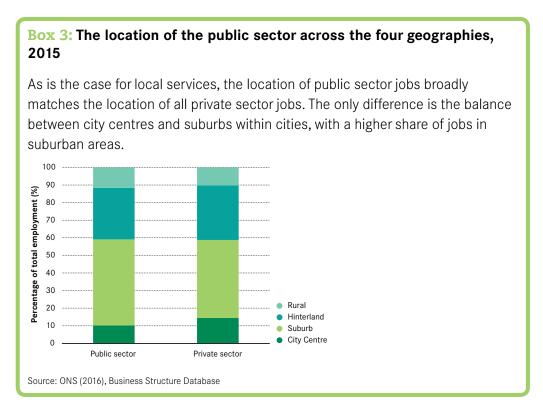
This meant that the total number of services exporters in city centres was higher than in rural areas (and jobs in service exporters was over five times higher), despite the radically different amount of land that they account for.

The location patterns of goods-exporting businesses were very different. Almost 70 per cent of these businesses were based outside of cities, with 44 per cent in hinterlands (compared to 35 per cent of all businesses).

The location of local services businesses, on the other hand, matches much more closely to overall patterns of businesses and employment. This suggests that the location decisions of these businesses is driven by the access to markets that locations give them.¹⁰ As Box 3 shows, similar patterns are seen for the public sector as well.



¹⁰ Simpson, H. (2007) An Analysis of industrial clustering in Britain, London: The Stationery Office



Taken together, these trends mean that the industrial structure of the four areas looks very different, as shown in Figure 4.

100 Percentage of total number of businesses (%) 90 80 60 40 30 Local services 10 Services exporters Goods exporters 0 City centre Suburb Hinterland 100 employment (%) 80 70 total 50 30 20 Services exporters Goods exporters Rural Suburb Hinterland City centre

Figure 4: The industrial profile of the four geographies, 2015

Source: ONS (2016), Business Structure Database

In city centres, the export base is dominated by services. The role that services exporters play declines when moving out from the centre of cities through suburbs and hinterlands to the rural economy, while the role that goods exporting plays grows

larger. This meant that out of the four areas the rural economy was most dependent on the fortunes of goods exporters in 2015.

Box 4 looks at the differences in economic structure of different parts of Manchester, its hinterland and the surrounding rural economy.

Box 4: Differences between cities and rural areas: case study of Manchester and beyond

Reflecting the aggregate results for the four different areas, different parts of Manchester, its hinterland and its associated rural area have very different economic structures.

			Industry (%)									
			Agriculture, energy and water	Manufacturing	Construction	Distribution, hotels and restaurants	Transport and communication	Financial, Real Estate, Professional and Administrative activities	Public administration, education and health	Other		
Geography	City centre	Manchester city centre	0.5	1.8	1.8	21.3	8.5	45.7	16.0	4.4		
	Suburb	Trafford Park & Trafford Centre	1.4	18.0	5.7	41.3	14.0	10.4	3.9	5.3		
	Suburb	Manchester Airport	0.3	12.5	1.5	16.5	48.4	13.7	6.4	0.8		
	Hinterland	M6 Jct23 (Haydock)	2.3	15.2	8.4	44.2	13.6	11.3	4.2	0.8		
Ge	Rural	Carlisle	1.6	10.4	7.8	25.4	8.2	11.6	30.5	4.6		
	Rural	Keswick	0.6	3.0	7.0	48.7	4.3	10.0	18.4	8.0		
	Rural	Oswestry	2.3	10.7	8.8	29.9	7.6	13.0	23.0	4.7		
	Rural	Penrith	2.0	5.3	9.2	29.8	6.8	11.5	31.2	4.2		
	Rural	Wrexham	0.6	4.6	3.7	25.3	3.8	10.7	46.9	4.5		
	National	England and Wales	2.3	8.9	7.7	21.5	8.9	17.2	28.5	5.0		

Source: NOMIS (2016), Census 2011. Colours denote whether the share of industry is above or below the average for England and Wales.

The above table shows that:

- Manchester city centre has a very high share of financial, real estate, professional and administrative activities (46 per cent) – much higher than other areas of the country.
- In Trafford Park and the Trafford Centre located in Manchester's suburbs

 activities are predominantly in distribution, hotels and restaurants (41 per cent).
- Manchester Airport, as expected, has a very high share of activities in transport and communication (48 per cent).
- Around Junction 23 of M6 motorway, in Manchester's hinterland, the major industries include distribution, hotels and restaurants (44 per cent).

But the rural economy within proximity of Manchester is very different. Compared to the average for England and Wales, the share of financial, real estate, professional and administrative activities is low (around 10 per cent). Rural areas, in general, are much more reliant on jobs in distribution, hospitality, leisure, recreation and tourism. And the share of the workplace population employed in the public sector is higher than in cities.

The differences across cities and rural areas also play out in the occupational structure.

Manchester city centre, for example, had a higher proportion of high-skilled occupations, accounting for half of all jobs in 2015. But in Trafford Park and Trafford Centre, one in two jobs were in low-skilled occupations. In Manchester Airport, most jobs required medium skills (35 per cent) but there was also a significant proportion of high skilled (30 per cent) and low-skilled occupations (34 per cent). And around junction 23 of the M6 motorway, the majority of occupations were low skilled (57 per cent).

In the rural areas, the share of high-skilled occupations was generally lower than the national average for England and Wales (41 per cent). In Oswestry, only 31 per cent of the workplace population worked in a high-skilled job in 2015.

			Occupation (%)				
			High skilled occupations	Medium skilled occupations	Low skilled occupations		
Geography	City Centre	Manchester city centre	50.8	25.3	23.9		
	Suburb	Trafford Park & Trafford Centre	28.7	21.3	50.1		
	Suburb	Manchester Airport	30.4	35.3	34.3		
	Hinterland	M6 Jct23 (Haydock)	20.4	22.9	56.7		
	Rural areas	Carlisle	31.8	33.4	34.8		
	Rural areas	Keswick	38.6	28.8	32.7		
	Rural areas	Oswestry	31.0	35.0	34.0		
	Rural areas	Penrith	34.3	33.2	32.5		
	Rural areas	Wrexham	37.5	32.9	29.6		
	National	England and Wales	40.8	32.3	26.8		

Source: NOMIS (2016), Census 2011. Colours denote whether the share of jobs is above or below the average for England and Wales. High skilled is defined as the SOC codes: 1. Managers, directors and senior officials; 2. Professional occupations; 3. Associate professional and technical occupations. Medium skilled is defined as the SOC codes: 4. Administrative and secretarial occupations; 5. Skilled trades occupations; 6. Caring, leisure and other service occupations. Low skilled is defined as the SOC codes: 7. Sales and customer service occupations; 8. Process, plant and machine operatives; 9. Elementary occupations.

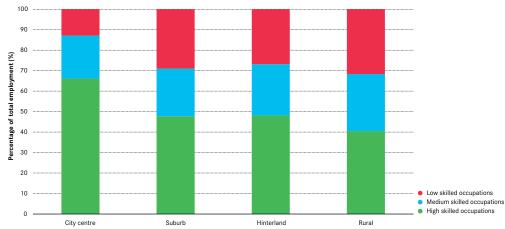
3. Service-exporting jobs in city centres tend to be more highly skilled

Jobs in service-exporting businesses include both low and high skilled positions, ranging from call centre operatives through to software engineers. Census data allows us to get a better understanding about the locational preferences of lower and higher skilled jobs within services exporters. As Figure 5 shows, service exporting jobs in city centres tended to be much more highly skilled than elsewhere in 2011,

with two thirds being in a high-skilled occupation. There was little difference between suburbs and hinterlands, but the rural economy tended to have a higher share of lower skilled jobs in its services-exporting sector.

Assuming these proportions held in 2015, this would mean that that 32 per cent of all of Britain's high-skilled jobs in service exports were located in city centres that year.

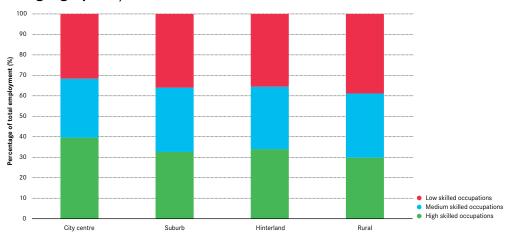
Figure 5: Occupational profile of jobs in service exporters across the four geographies, 2011



Source: NOMIS (2016), Census 2011. Note: Because the Census only provides data on industry by occupation by broad industry group, services exporters are defined here as groups H, J Transport and Communications, and K, L, M, N Financial, Real Estate, Professional and Administrative Activities. Because this data is only provided at Medium Super Output Area, the definitions of the four geographies do not exactly match the definitions used elsewhere in the report.

The pattern for goods-exporting jobs is similar (see Figure 6). The large number of high-skilled jobs in city centres for goods exporters may reflect that some manufacturers locate their head offices and office-based functions in city centres, rather than at their production facilities. Once again, the rural economy tends to have a smaller share of high-skilled jobs than the other areas.

Figure 6: Occupational profile of jobs in goods exporters across the four geographies, 2011



Source: NOMIS (2016), Census 2011. Note: Because the Census only provides data on industry by occupation by broad industry group, goods exporters are defined here as group C Manufacturing. Because this data is only provided at Medium Super Output Area, the definitions of the four geographies do not exactly match the definitions used elsewhere in the report.

4. City centre businesses tend to be larger than in other areas

Businesses in city centres were on average larger than in other areas in 2015, and were smallest in the rural economy. As Figure 7 shows, these differences were most pronounced for service exporters. In the city centre, the average service-exporting firm had 20 jobs. In the suburbs it was eight jobs, while it was seven jobs in the hinterland and six jobs in the rural economy. Similar patterns were seen for local services businesses too.¹¹

20
20
15
10
City centre
Suburb
Hinterland
Rural

Figure 7: Average firm size across four geographies, 2015

Source: ONS (2016), Business Structure Database

Goods-exporting businesses did not follow this pattern. Goods exporters were largest in the suburbs, closely followed by those in city centres. Meanwhile the rural economy tended to have much smaller businesses in terms of employment.

5. Foreign firms are even more likely to choose a city centre location

While the home of the owner or a historic legacy may explain the location decisions of some domestic businesses, this is much less likely to be the case for foreignowned businesses. So it is interesting to see that their location decisions emphasise the patterns seen for businesses as a whole.

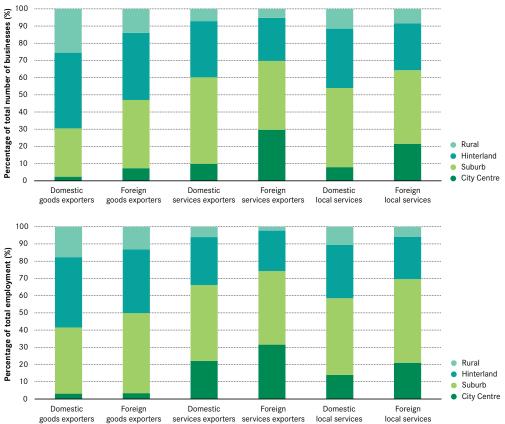
Foreign-owned services exporters were overwhelmingly more likely to choose a city centre location. As Figure 8 shows, whereas 11 per cent of all businesses in this sector were in a city centre in 2015, this figure was 30 per cent for foreign-owned businesses (and 70 per cent were in cities overall). Meanwhile they were less well represented across the other three geographies, with just 5 per cent of them based in the rural economy, employing 2 per cent of employees in this sector.

In terms of goods exporters, foreign firms have shown a greater preference for suburbs over hinterlands relative to domestic businesses. And very few have invested in the rural economy – whereas 25 per cent of all businesses in this sector were based in a rural area, for foreign-owned businesses the share was equal to 14 per cent (noting that this distinction was smaller for employment).



¹¹ This data is based on the number of people in each site (for example, the branch of a supermarket), rather than the average size of the business overall.

Figure 8: Distribution of domestic and foreign businesses and jobs across four geographies, 2015



Source: ONS (2016), Business Structure Database



Key statistics

City centres see the largest clustering of economic activity. Despite accounting for just 0.08 per cent of land, they were home to 8 per cent of businesses and 14 per cent of jobs in 2015. And despite their much smaller land area, they had 40 per cent more jobs than the rural economy.

This clustering is most acute for services-exporting firms:

- 11 per cent of these businesses are located in city centres, increasing to 25 per cent for employment.
- This is especially the case for high-skilled jobs in services exporters we estimate that 32 per cent of Britain's high-skilled jobs were located in city centres.

Businesses in cities, on average, are larger than elsewhere. Services exporters and local services businesses are largest in city centres, while goods exporters are largest in the suburbs of cities.

Foreign-owned businesses show an even greater preference for an urban location:

- 30 per cent of foreign-owned services-exporting firms were based in city centres in 2015, compared to 11 per cent for all businesses in this sector.
- Meanwhile foreign-owned goods exporters tended to prefer a suburban location – 40 per cent were based in suburbs in 2015, compared to 28 per cent of all businesses in this sector.





Businesses locate where they do because of agglomeration

The patterns of business location seen across Britain can be explained by agglomeration. Agglomeration is the process by which concentrating economic activity in one place makes businesses more productive. It works through three main channels:¹²

- **Sharing** the ability to share inputs, supply chains and infrastructure;
- Matching access to a large pool of workers;
- Learning the ability to exchange ideas and information, known as 'knowledge spillovers'.

The combination of these factors helps explain why 52 per cent of Britain's 2.5 million private sector businesses, and 59 per cent of the country's 21 million private sector jobs, cluster in cities; and why the urban economy plays a much larger role in the national economy than the rural one. It also helps explain why we see the differences set out above between different types of businesses in terms of the location decisions that they make.

Some businesses benefit to a much greater extent from knowledge spillovers than others. Because of the non-routine nature of their work, high-skilled, knowledge-focused businesses are the ones that benefit from the access to knowledge that a city location offers.¹³ And this knowledge is most easily accessible in dense areas.¹⁴ This is why, even though they could in theory locate anywhere, services exporters show a preference for a city centre location – their location is in part driven by where they can access knowledge.

Of course, businesses who locate in city centres pay a premium to be located there. Using rateable values as a proxy, Figure 9 shows city centres on average to be almost three-and-a-half times more expensive than rural areas. This means that the benefit of a city centre location for those who locate there must offset the higher costs of doing so.



¹² Duranton, G. and Puga, D. (2004), "Micro-foundations of urban agglomeration economies", *National Bureau of Economic Research* working paper 9931

¹³ Graham, D. (2007) "Agglomeration Economies and Transport Investment", *Journal of Transport Economics and Policy* 41 (3); Simpson, H. (2007) An Analysis of Industrial Clustering in Britain, London: The Stationery Office

¹⁴ See, for example, Carilino, G., Chattergee, S. & Hunt, R. (2006) "Urban Density and the Rate of Invention", Working Paper 06-14, Federal Reserve Bank of Philadelphia, 2006; Jaffe, A., Trajtenberg, M. & Henderson, R. (1993) "Geographic Localisation of Knowledge Spillovers as Evidenced by Patent Citations", *Quarterly Journal of Economics*, vol. CVIII, August, no. 3, pp577-598.

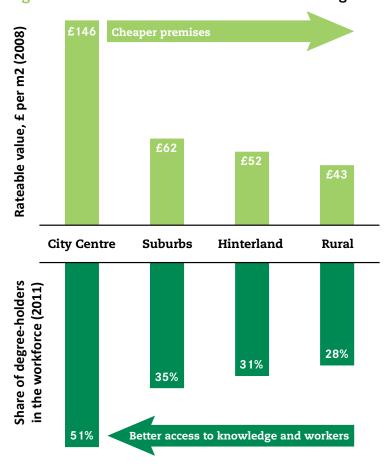


Figure 9: Trade-offs firms consider when deciding where to locate

Source: Neighbourhood Statistics; NOMIS (2016), Census 2011. Note: Rateable values are used as a proxy for land costs. Medium Super Output Areas were used to define the different geographies as this is the lowest geography that rateable values are available. Data is for England and Wales only.

Lower-skilled, more-routinised businesses, such as call centres and more traditional manufacturers, have much less need to access knowledge. For this reason, more expensive city centre accommodation offers little appeal for them. That said, agglomeration is still important to these businesses, particularly in terms of recruitment. This helps explain why we see a differentiation in terms of where manufacturers locate, with larger firms tending to locate in the suburbs because of the greater access to workers that it gives them. In this instance they have chosen to more expensive premises to improve their access to workers.

It also helps to explain why not all high-skilled services exporters locate in cities. As Figure 10 showed above, those services-exporting businesses that locate in the hinterland or rural economy tend to be much smaller than those in cities, meaning that having access to deep pools of workers becomes less important. But it does also mean that they do not benefit from knowledge spillovers, which may make them less productive as a result. Unfortunately we do not have the data to look at this.



¹⁵ Glaeser, E. (2001) Triumph of the City, New York: McMillian

¹⁶ We also note that in some instances the location decisions of businesses may be driven by the desire to locate near to their main customers, as may be observed with suppliers to a large car plant, or example. This is known as the 'industrial-complex' model (see Gordon, I.R. and McCann, P. (2000) "Industrial Clusters: Complexes, Agglomeration and/or Social Networks?" *Urban Studies*, Vol 37, No 3). Within this though it is important to consider what determined the location decision of the customer in the first place, which for large manufacturing businesses is likely to have been access to workers that a suburban or hinterland location offers.

¹⁷ The clear exception here is businesses such as pharmaceutical companies that tend to prefer out of town sites to prevent the sharing of commercially sensitive information before it has been patented.

The export base of Britain has concentrated in cities in recent years

The make-up of the export base of Britain has gone through big changes since 1998. Figure 10 shows that in terms of businesses and employment, the goods-exporting sector has declined across all areas, with sharpest decline in cities. Meanwhile the services-exporting sector has grown across all four geographies, with the strongest growth in the suburbs.

8 Percentage change in the number of businesses -10 -20 -30 -40 Services exporters Goods exporters City centre Suburb Hinterland Rural Percentage change in employment (%) 20 0 .20 Local services Services exporters Goods exporters City centre Suburb Hinterland Rural

Figure 10: Percentage change in the number of businesses and jobs by industry across four geographies, 1998-2015

Source: ONS (2016), Business Structure Database

While the growth of service exporters was lower in city centres than in suburbs and hinterlands, it is likely that given what we know about the occupations found in city centres as a result of agglomeration, a greater proportion of city centre growth would have been in higher-skilled, services-exporting occupations. Data limitations mean that we have been unable to measure this.

City centres were also the only geography to see their export base expand in employment terms over the period – all other areas saw a contraction. This partly reflects the much smaller goods-exporting base present in city centres in 1998, so meaning that in absolute terms the number of job losses they had to offset was smaller. The result was that the export base of Britain has become more concentrated in city centres since 1998 (see Figure 11).

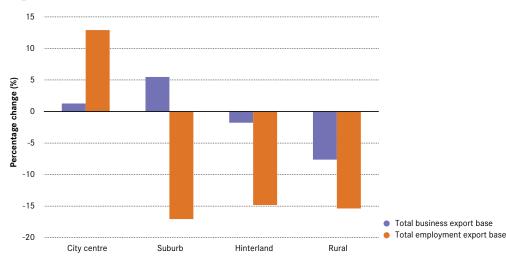


Figure 11: Change in the total export base, 1998-2015

Source: ONS (2016), Business Structure Database

Overall, this data also suggests that the export base for Britain as a whole, in terms of businesses and jobs, contracted over the period. This is a surprising result, and could be down to increases in productivity seen in exporting sectors. Since 1990, productivity has more than doubled in the manufacture of computer and electrical equipment and information and communications, and has almost tripled in chemicals and pharmaceuticals. By way of comparison, it has increased by just 0.7 per cent in food and accommodation, and has declined in real estate and arts, entertainment and recreation (all local services).¹⁸

An outcome of this is that there are fewer jobs in the export base to support jobs in local services. But as Figure 10 shows, local services have grown since 1998. The differing size of the multiplier effect for different types of business in the export base might explain this. As discussed earlier, research in America suggests that jobs in high-skilled exporting businesses have a larger multiplier effect on the local services sector than lower-skilled exporting jobs. ¹⁹ This would mean that although the export base has declined in size, the change in its composition has increased the size of its multiplier effect.



¹⁸ ONS, Blue Book

¹⁹ Moretti, E. (2013) The New Geography of Jobs. Houghton Mifflin Harcourt, New York



Implications for policy

In the wake of the EU referendum result, Theresa May has placed particular emphasis on a new industrial strategy as the way to achieve her priorities for the economy.²⁰

"...we need a proper industrial strategy that focuses on improving productivity, rewarding hard-working people with higher wages and creating more opportunities for young people so that, whatever their background, they go as far as their talents will take them. We also need a plan to drive growth up and down the country – from rural areas to our great cities."

Theresa May, 2 August 2016

Globalisation means that the national economy is likely to continue to specialise in ever more knowledge-based activity – there are many countries where production costs are lower, but few that can compete for more knowledge-focused businesses. The shift in the export base away from low-skilled activities (be they in manufacturing or services) towards more high-skilled ones is therefore likely to continue. The result is that productivity growth, wage growth and the creation of new job opportunities will become increasingly dependent on the performance of high-skilled service exporters.

Given the location preferences of service exporters, this means that an even greater share of the export base will concentrate in cities, and city centres in particular. This means that supporting growth of our cities will become increasingly important for the performance of the national economy as a whole.

This has three implications for policy:

1. Industrial policy needs to be place-based

Our research shows that the national economy is not flat, meaning that policy to boost growth needs to start from a place-based perspective. Previous industrial strategies have focused on picking specific sectors, and have been place-blind. Greg Clark has recently made a commitment that the Government's economic plan will "take advantage of the differences and unique strengths that exist across the country". ²¹ If the Government's new approach is to be more successful than past attempts, putting place at the heart of its industrial strategy will be critical.



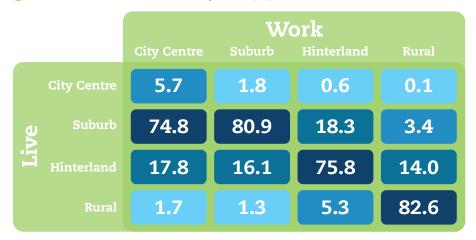
²⁰ Prime Minister's Office Press Release 'New Cabinet committee to tackle top government economic priority', 2 August 2016 https://www.gov.uk/government/news/new-cabinet-committee-to-tackle-top-government-economic-priority

²¹ Department for Business, Energy & Industrial Strategy Press Release 'New ministerial local growth champions appointed by Business and Energy Secretary', 11 August 2016 https://www.gov.uk/government/news/new-ministerial-local-growth-champions-appointed-by-business-and-energy-secretary

2. To do this, policy needs a deeper understanding of the different advantages that different places offer to businesses

Different places offer different benefits to businesses. Cities, and city centres in particular, offer businesses access to knowledge, workers and other businesses, while hinterlands and more rural areas offer larger premises at a cheaper price. Both industrial and wider economic policy needs to work within this context. This more realistic approach would recognise the limits of policy designed to encourage the growth of high-skilled services exporters in every place across the country. It would also recognise and strengthen the relationships between places – for example city centres rely on suburbs and hinterlands for workers and customers, while hinterlands rely on cities for jobs (see Figure 12).

Figure 12: Where workers live, 2011 (%)



Source: ONS (2016), Census 2011, origin-destination data (WU02UK)

3. Policy should not focus on micro-managing the location decisions that businesses make

Policies encouraging business growth have had a tendency in the past to micromanage the location decisions that individual firms make, either through business support policies or through relocation subsidies. Encouraging growth in the urban context will need to focus on strengthening the benefits of an urban location (through policies to improve skills, planning and transport) and reducing the negatives (by putting policies in place to reduce congestion, pollution and housing costs).



Conclusion

Britain is home to 2.5 million private sector businesses and 21 million private sector jobs. But these businesses do not locate just anywhere, suggesting that geography has a role to play in determining their performance, and in turn the performance of the national economy.

It is not just the clustering of businesses in specific locations that is important, but how this clustering differs across geographies. Our research reveals that there are geographical differences, particularly when looking at the nature of the export base of different areas. It shows that:

- **City centres** are home to 8 per cent of businesses, despite accounting for 0.08 per cent of land. And they tend to be particularly attractive to high-skilled service-exporting businesses and jobs we estimate that 32 per cent of Britain's high-skilled service export jobs were in city centres in 2015.
- **Hinterlands** tend to be relatively more attractive to goods-exporters. This area accounts for 44 per cent of the nation's goods-exporting businesses, compared to 35 per cent of all businesses.
- Rural areas account for a very small share of the economy, being home to 10 per cent of jobs despite accounting for 53 per cent of land. Given that rural areas are most dependent on goods exporters, with 22 per cent of jobs being in this sector, the contribution that the rural economy makes to the national one is likely to continue to reduce in the future.

The very distinct geography of jobs and businesses discussed in this report plays out because of the benefits of agglomeration. Cities offer access: access to knowledge, greater access to infrastructure (such as roads and public services) and access to deep pools of workers. But they also tend to have higher costs – such as the costs of space and congestion. Where businesses locate depends on the trade-offs that they are prepared to make, with higher-skilled services businesses preferring the density of a city centre and manufacturing businesses preferring the cheaper land that hinterlands offer.

This has very important implications with respect to the changing nature of the export base of different areas. Recent times have seen the continued contraction of the role of manufacturing, both in terms of businesses and employment. This has shifted the onus onto service exporters to play an ever larger role in generating income independent of the local economy.

These shifts make cities ever more important to the performance of the regional and national economies that they operate in. Given that services exporters (particularly in high-skilled ones) prefer a city location, then cities, and city centres in particular, will play an ever larger role in the national economy. If policy is to support the continued growth of the national economy, then it will need to remove the barriers to growth that our urban areas face.

Of course, the performance of city centres and suburbs differs across cities as agglomeration plays out to differing extents across them. This divergence will be the focus of a second paper in this research series that will be released later in 2016.



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