

All cylinders

The role of the Midlands Engine in the British economy

Matthew Coombes, Anthony Breach
May 2023



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Acknowledgements

The authors would like to thank the Midlands Engine Partnership for their support and time to make their research possible.

About the partner

The Midlands Engine is a pan-regional partnership working with the public and private sectors, and government, to unlock opportunities for investment and drive economic growth across the whole of the Midlands region.



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Executive summary

The Midlands Engine plays a large role in the UK economy, accounting for 13 per cent of the national output. However, its economy is £18 billion per year smaller than it should be, with its cities accounting for 89 per cent of this output gap. This is because its cities, and in particular its city centres, are not attracting enough highly-skilled service export firms to increase productivity across the region. Policy must address the barriers to growth if the Midlands Engine area is going to generate more prosperity locally and make a larger contribution to the national economy.

The Midlands Engine's economy is concentrated in its cities and city centres in particular. Its eight largest urban areas account for nine per cent of land area but 52 per cent of jobs and 50 per cent of output. The Birmingham urban area alone accounts for around a quarter of all jobs and output, despite only accounting for three per cent of the land area.

While production is concentrated in certain places, the benefits of production are felt across a wider area. One in five workers who live outside of a Midlands Engine city work in one, and often in higher-paid work than they can find near where they live. For example, a person commuting from Lichfield to Birmingham gains an annual boost of £3,900 to their salary, a 15 per cent increase compared to a person remaining in Lichfield to work.

The challenge for the Midlands Engine is that despite its cities playing a crucial role within it, they underperform. Centre for Cities' estimates suggest the Midlands Engine economy is £18 billion per year smaller than it should be, and 89 per cent of this gap is the result of the underperformance of its urban economies. The Birmingham conurbation alone accounts for £11 billion (58 per cent). This underperformance reduces the prosperity of the residents that live in and around the cities of the Midlands Engine and means that the national economy as a whole is smaller than it should be.

This mainly results from the underperformance of its service exporting sector.

Productivity in manufacturing export industries in the Midlands Engine, a sector in which this region performs relatively strongly, is close to the UK average. But output per worker in service exporting industries such as finance and communications, which have a particular preference for an urban location due to the inherent benefits that such a location offers to these activities, trails well behind the national average. This suggests that the cities are not offering the ‘agglomeration’ benefits that they should be to such businesses.

For the Midlands Engine to meet its full potential and play an even greater role in the national economy, policymakers should aim to help places within it to reach their potential. But policy should also recognise that the potential of some areas is inherently greater than others, and use this to guide policy focus. It should work to improve the benefits that different places offer by:

- 1. Improving the skills of residents.** The Midlands Engine has a higher share of residents without qualifications, and a lower share of graduates, compared to the UK as a whole. Policy interventions in the region should focus on getting those who currently don’t have the equivalent of five good GCSEs up to this level by targeting skills money in the area’s allocation from the Shared Prosperity Fund to support these people.
- 2. Making city centres more attractive places to do business.** Midlands Engine city centres have below average shares of office space. New high-quality city centre office space that meets the needs of occupiers, in particular service exporters, should remain a priority, even in a world of hybrid working. Policy should focus on helping to bring forward appropriate office space in these centres through planning policy and the use of central government funds designated for this purpose. For example, placing the region’s investment zones, which were announced in the Spring Budget 2023, in Birmingham, Nottingham and Leicester city centres would be one way to do this.
- 3. Improving public transport infrastructure and density within the big cities.** The Birmingham and Nottingham conurbations have the poorest transport accessibility in the region, shrinking their labour market and damaging their economic performance. Policy makers should look to align brownfield regeneration funds available from central government together with the current City Region Sustainable Transport Settlement for Birmingham and any future settlement for Nottingham to develop transport and housing in tandem, increasing the number of people who live around public transport stops.

It should also continue to support a competitive manufacturing sector, which is more likely to be found in the suburbs of or hinterlands around cities. The Midlands Engine manufacturing sector is currently performing close to the average for Great Britain. Policy makers should set out how to meet

future manufacturing demand by ensuring land, in particular greenfield sites, with access to large pools of workers are available in the suburbs and urban hinterlands.

Finally, national and local policymakers should look to better match economic policy with the geography it operates over **by getting devolution deals that together cover the whole of the Midlands Engine** by 2030. The West Midlands Combined Authority area has already benefited from the greater control it has had over policy, and this will likely increase with its recently-announced trailblazer deal. The East Midlands is also looking to benefit with the proposed deal now waiting for approval. The parts of the Midlands Engine without one should begin working on their own devolution deal to take advantage of the Government's intention to give all parts of England a deal by 2030.

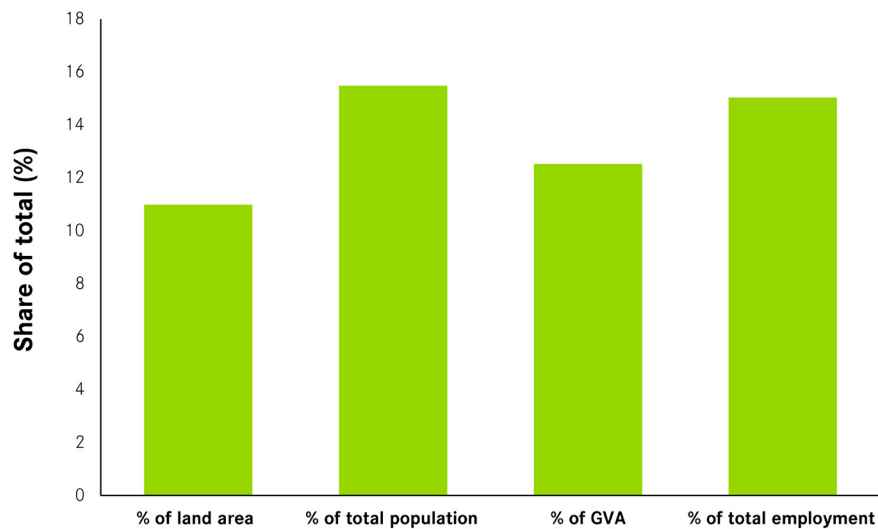
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Introduction

The Midlands Engine – a pan-regional partnership spanning from Lincolnshire to the Welsh border – makes a significant contribution to the UK economy. Figure 1 shows that it accounts for 15 per cent of the UK’s total jobs, even though it covers 11 per cent of the UK’s land area.

Figure 1: The role of the Midlands Engine in the British Economy

The contribution the Midlands Engine makes to the UK economy



Source: ONS Census (2021), ONS Regional gross value added (balanced) by industry: local authorities by NUTS1 region (2021), ONS Business Register and Employment Survey (2021)

That said, while it accounts for 15 per cent of total employment, it only accounts for 13 per cent of the UK’s GVA. This points to the relatively low productivity levels across the area.

This report provides a study of the Midlands Engine to better understand the geography of its economy, and sets out recommendations on how to increase

its productivity and contribute to the Government’s goals of growing the UK’s ‘innovation industries’¹ and the levelling up agenda.

The report first establishes the framework used to investigate the performance of different parts of the Midlands Engine and explains why the two types of exporting activity – manufacturing and service exports – drive the performance of local economies while having distinct needs.

This framework is then used to explain why different parts of the Midlands Engine play different roles in its economy, as well as the relationships between them (the geographies used are defined in Box 1). It then looks at the relative performance of each of these areas and explains patterns of underperformance, before making policy recommendations to improve the performance of the Midlands Engine economy and the national economy.

Box 1: Geographic definitions used within the Midland Engine in this report

Centre for Cities uses the primary urban areas (PUA) definition of cities and large towns to capture the built-up footprint of an urban economy to get a consistent measure of these economies. PUAs are calculated by using the ONS’ built-up area definitions, which capture the continuous built-up footprint of a settlement, and cross checking these with travel to work areas. It then uses the threshold of a daytime population over 135,000 to identify the UK’s 63 largest areas.

In the Midlands Engine, this means Derby is defined as Derby local authority area because the built-up footprint of the city fits within the core local authority boundaries. This is the same for Telford and Coventry. For other cities in the Midlands Engine, this is clearly not the case, and they include several local authorities:

- Birmingham – Birmingham, Dudley, Sandwell, Solihull, Walsall and Wolverhampton
- Leicester – Leicester, Blaby, Oadby and Wigston
- Mansfield – Mansfield, Ashfield
- Nottingham – Nottingham, Broxtowe, Erewash, Gedling,
- Stoke – Stoke-on-Trent, Newcastle-Under-Lyme

The areas within these definitions very clearly have their own civic identities, but as urban economies they are unified.

That said, the next section looks at the whole of the Midlands Engine

¹ Hansard HC Deb. vol.729 cols.834-847, 15 March 2023.

through the geography of medium super output areas (MSOAs), which are sub-local authority geographies. Through this it is possible to see the relative contributions that places like Wolverhampton make to the Midlands Engine economy. Some smaller separate urban areas with daytime populations between 40,000 and 135,000, including Lincoln and Worcester, are discussed in Box 5.

In addition, the analysis in this report splits the Midlands Engine into four distinct areas: city centres, suburbs, hinterlands and rural areas.

Cities are split into two areas:

- City centres are defined as the area within a circle from the pre-defined city centre point. The radius of the circle depends on the size of the resident population of a city:
 - Large cities of Birmingham and Nottingham – radius of 0.8 miles.
 - Medium and small cities of Leicester, Derby, Stoke, Coventry, Telford, and Mansfield – radius of 0.5 miles.
- Suburbs are defined as the rest of a city.

Non-city areas are also split into two:

- Urban hinterlands 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.
- Rural areas make up the remaining part of the physical landmass of the Midlands Engine area and fall outside of the travel catchment of cities and large towns. Some smaller urban areas, such as Lincoln or Skegness, that are far away from larger urban areas will fall into this definition.

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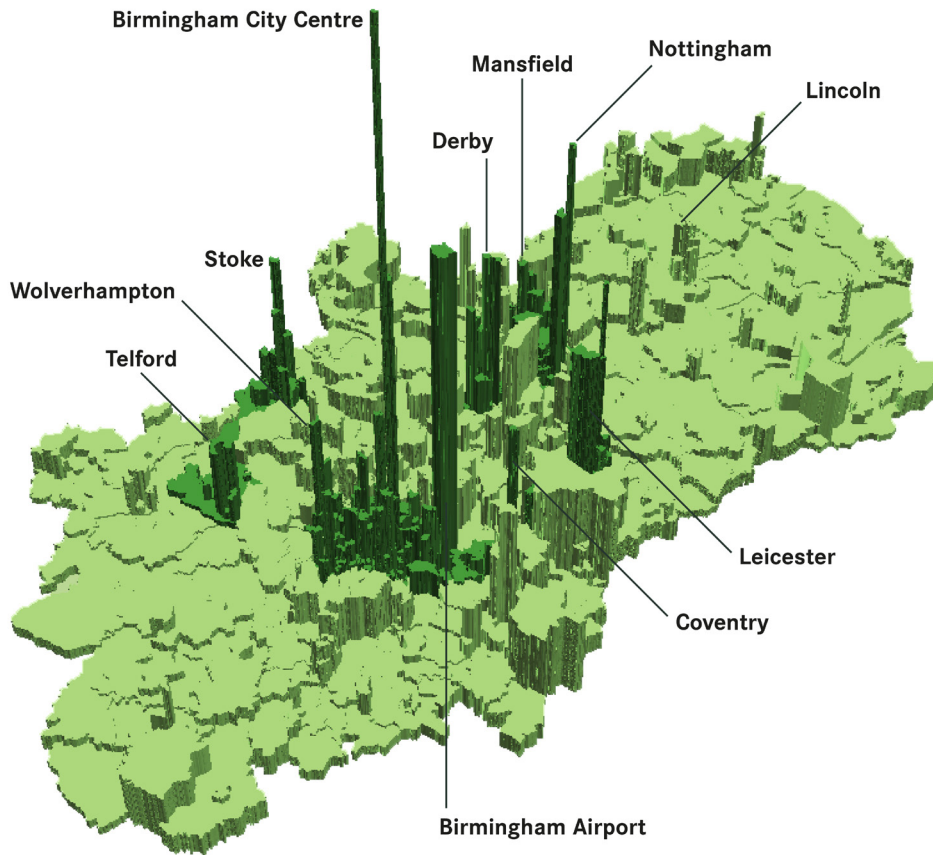
The economic geography of Midlands Engine

Different places play different roles in the Midlands Engine economy. It is a diverse region of cities, large towns as well as their suburbs, urban hinterlands, and rural areas. Each of these areas play distinct roles in the local and, by extension, national economies.

The economy of the Midlands Engine is ‘spiky’

The economy of the Midlands Engine is very much concentrated in and around its cities and large towns. Figure 2 shows in dark green the eight urban parts of the Midlands Engine – the Birmingham conurbation, Nottingham, Leicester, Derby, Stoke, Coventry, Telford, and Mansfield – and the height of the columns corresponds to the number of jobs within each neighbourhood (MSOA). Despite accounting for 10 per cent of the region’s land area, 53 per cent of employment is clustered within cities and large towns.

Figure 2: The geography of jobs in the Midlands Engine by medium super output area (MSOA), 2021



Source: ONS Business Register and Employment Survey (2021)

The city centre of the Birmingham conurbation is the most concentrated employment site in the Midlands Engine, accounting for three per cent of the total number of jobs in the region while accounting for just 0.02 per cent of the Midlands Engine's land area. This is as many jobs as there are in all of Shropshire, demonstrating the important role of Birmingham city centre in the regional and national economy.

Manufacturing and service exports are found in different parts of the Midlands Engine

The pattern of total employment masks differences in where 'exporting' firms choose to locate. Exporters are those firms that sell beyond their local market, including to other markets in the UK as well as abroad. As they can theoretically locate anywhere (because they are not tied to any one market) and are disproportionately responsible for productivity growth (see Box 2), understanding their locational choices is particularly important.

Box 2: Why exporters drive local economies

Previous work by Centre for Cities has shown that businesses that are more likely to sell beyond their local markets² – such as car manufacturing, publishing, and graphic design companies – are central to the performance of an economy for two reasons. The first is that they are more productive than those that focus on local services, such as retail, restaurants, or gyms. It is the variation in the performance of this export base that is the cause of the variation in productivity seen across the country (there is much less variation in the productivity of local services).

The second is that these exporting businesses are disproportionately responsible for productivity growth in the national economy. Between 1990 and 2017, productivity more than doubled in the manufacture of computer and electrical equipment and information and communications and tripled in chemicals and pharmaceuticals. By way of contrast, it increased by just two per cent in accommodation and food services, and declined in arts, entertainment and recreational services.³

The Midlands Engine has a greater specialisation in manufacturing exports compared to the rest of Great Britain. Seven per cent of jobs in Great Britain are in the manufacturing sector, but in the Midlands Engine it is almost 12 per cent of all jobs. In contrast, 15 per cent of jobs in Great Britain are in service exporting work, but it is 11 per cent in the Midlands Engine.

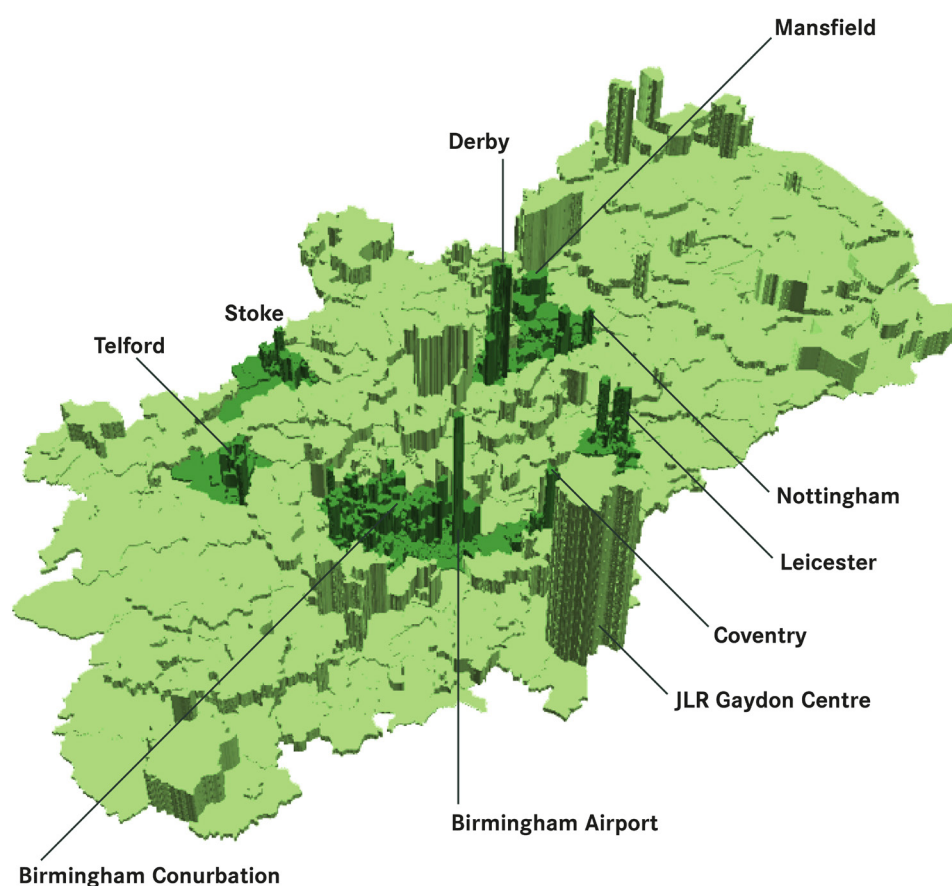
Figure 3 shows there are large concentrations of manufacturing activity on the fringes of and outside of urban areas, which means that cities and large towns account for 46 per cent of manufacturing employment in the Midlands Engine, lower than their share of all jobs.

Splitting the Midlands Engine into four areas – city centres, suburbs, hinterlands and rural (see Box 1 for definitions) reveals a preference for a suburban or hinterland location among these businesses. Figure 5 shows that of those manufacturing jobs outside of urban areas, 43 per cent are in the urban hinterlands, and the remaining 11 per cent are in rural areas of the Midlands Engine.

² Swinney P (2018), *The wrong tail: Why Britain's 'long tail' is not the cause of its productivity problems*, London: Centre for Cities

³ Swinney P (2018), *The wrong tail: Why Britain's 'long tail' is not the cause of its productivity problems*, London: Centre for Cities

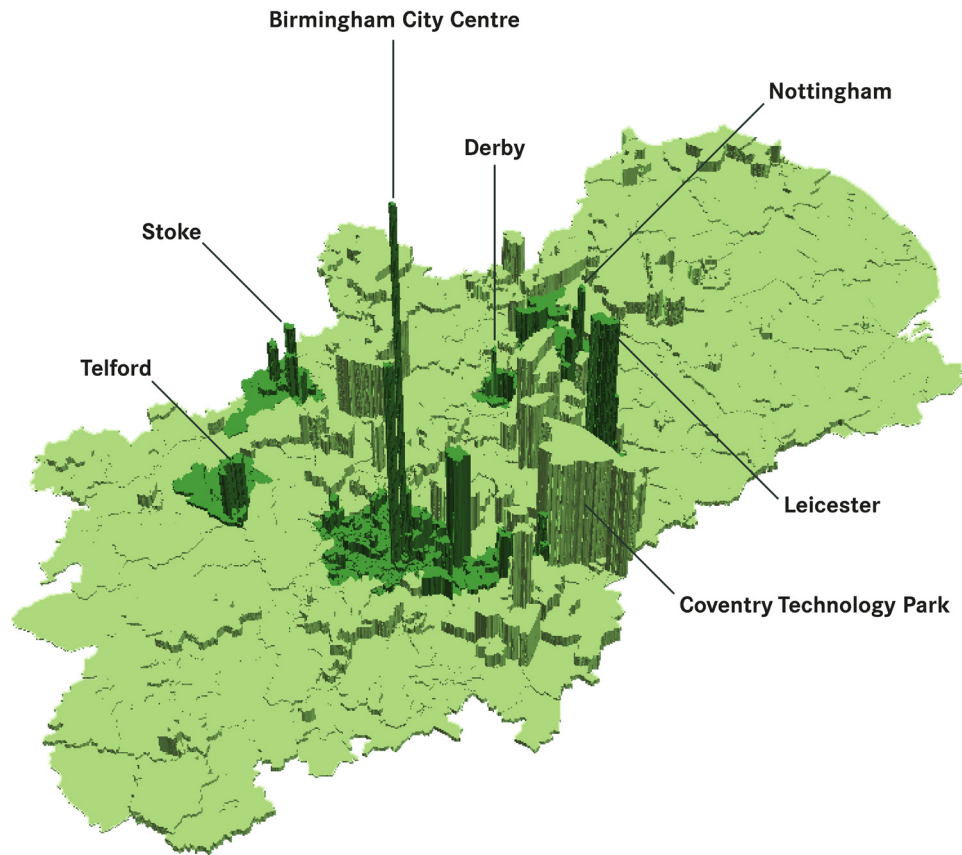
Figure 3: The geography of manufacturing jobs in the Midlands Engine by MSOA, 2021



Source: ONS Business Register and Employment Survey (2021)

In contrast, service exporters are much more clustered in cities and city centres in particular (see Figure 4). In total, 53 per cent of service export jobs of the Midlands Engine are in cities and large towns. Figure 5 shows that city centres alone are home to 11 per cent of service export jobs, and Birmingham city centre accounts for six per cent. The hinterlands are home to 41 per cent of service sector employment while just six per cent of these jobs are in deep rural areas.

Figure 4: The geography of service export jobs in the Midlands Engine by MSOA, 2021



Source: ONS Business Register and Employment Survey (2021)

The result is that the industrial structures of the city centres, suburbs, urban hinterlands, and rural parts of the Midlands Engine look very different. The area's export base in particular shows a preference for an urban location.

The geography of the Midlands Engine Economy is shaped by agglomeration

These patterns occur because different places inherently offer different benefits to exporting firms. Cities, and especially city centres, offer access to a large pool of workers and access to knowledge through face-to-face interaction with clients, collaborators, and competitors – known as agglomeration effects – as discussed in Box 3.

Box 3: The benefits of agglomeration

There are three main benefits that agglomeration offers:⁴

- **Sharing:** The ability to recruit from a larger pool of workers with relevant skills.
- **Matching:** The ability to share inputs, supply chains and infrastructure, such as roads, rail and street lights.
- **Learning:** The ability to exchange ideas and information between co-operating and competing firms, known as ‘knowledge spillovers.’

Knowledge spillovers are particularly important for service exporting firms as they increase innovation and therefore productivity for these highly competitive firms. This is because knowledge – more specifically, tacit knowledge – is best spread via face-to-face interactions. And these face-to-face interactions are more likely to occur over much smaller distances and in more dense areas where both formal and informal meetings are more likely to come about.⁵ Within a city, this area is the city centre.

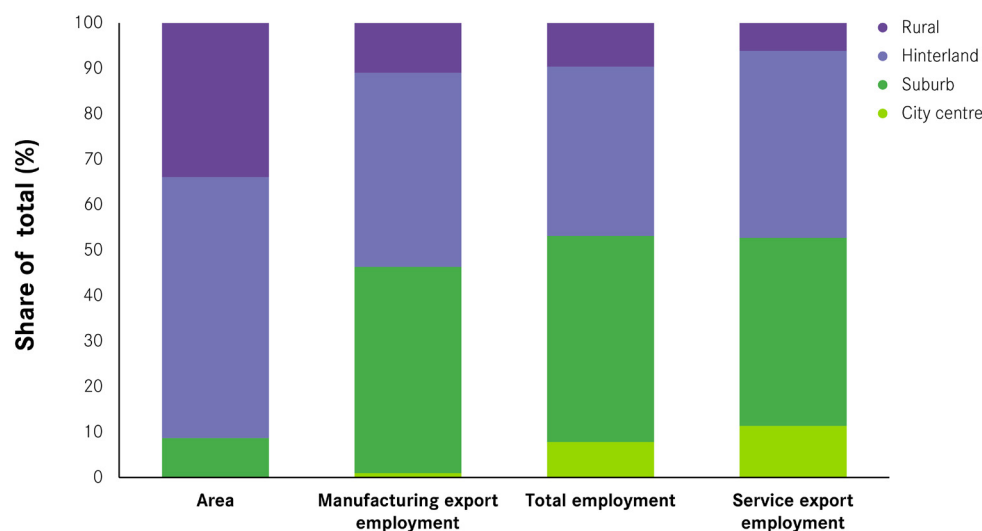
These areas also tend to have higher costs, such as costs of space and congestion. Where businesses locate depends on trade-offs that they are prepared to make. The location of service export firms above suggest they prefer the density of city centre despite the cost of doing so – 11 per cent of service exporting jobs found on less than 0.1 per cent of the Midlands Engine’s land area.

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

5 See, for example, Carilino, G., Chatterjee, 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 5: Share of employment accounted for by service export and manufacturing export employment

Distribution of employment across four geographies



Source: ONS Business Register and Employment Survey (2021)

Manufacturing is relatively more common in the suburbs and hinterlands of the Midlands Engine, as these locations allow them to access cheaper and larger development sites, easy access to national infrastructure, and a large pool of workers from nearby urban areas. Rural areas have cheap land but struggle to provide the large number of workers manufacturing activity requires, while city centres have more expensive and limited supply of land that is undesirable for manufacturing.⁶

Box 4 discusses how the fallout from COVID-19 is affecting these locational decisions.

Box 4: COVID-19 and the Midlands Engine

The COVID-19 pandemic changed much of the conversation around ways of working, and the role of cities in their respective economies. While hybrid working is more popular than before the pandemic, this still requires people to attend their workplace for at least part of the week. Table 1 shows that only 16 and 15 per cent of workers exclusively work at home in the East and West Midlands, whereas 50 per cent of workers are unable to work from home in these regions. Overall, 85 per cent of the population is still going to work in person at least once per week.

⁶ Serwicka I and Swinney P (2016), *Trading Places: Why firms locate where they do*, London: Centre for Cities

Table 1: Midlands Engine working from home patterns

	UK Average (%)	East Midlands (%)	West Midlands (%)
Homeworking only	16	16	15
Hybrid working	28	23	25
Travelled to work only (able to homework)	10	11	10
Travelled to work only (not able to homework)	46	50	50

Source: Characteristics of homeworkers, Great Britain, Opinions and Lifestyle Survey, ONS (2023)

The pandemic has also changed the way that workers view their commutes. Currently, three quarters of workers want to have a commute that is under 30 minutes, while only 57 per cent currently do.⁷

Property market data has shown that despite tenants preferring to use smaller work spaces since the pandemic, office occupancy levels reached a post-pandemic high in 2022, largely due to large uptake by the technology, media and entertainment, and telecommunications sector.⁸ As a result, Birmingham's city centre prime rent is forecast to grow by almost 35 per cent between 2019 and 2025.⁹ If this forecast comes to pass then it would indicate that firms continue to be willing to pay the premium to locate in city centres and that despite a rise in hybrid working, cities will continue to be centres of production for the Midlands Engine.

The Midlands Engine's urban economies support jobs for people who live outside of urban areas

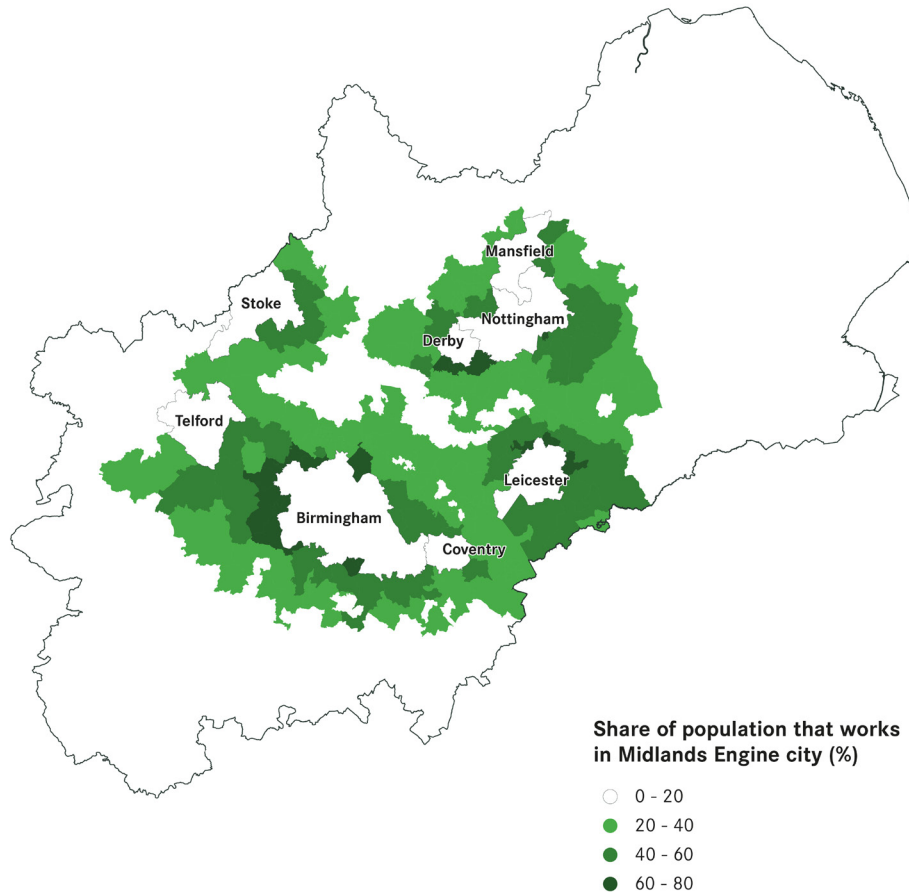
Even though urban economies are the main centres of production in the Midlands Engine, the prosperity and opportunities generated within them is not limited to urban residents. The economic benefits they provide are felt outside their boundaries and enjoyed by residents of urban hinterlands and rural areas. Figure 6 illustrates the share of non-urban residents who work in the Midlands Engine cities – almost one in five workers in the Midlands Engine who lives outside an urban area works in one of the region's urban economies. Box 5 discusses the role of smaller urban areas in providing employment to people outside their boundaries.

⁷ CBRE (2022), Cross-Generational Attitudes That Will Transform the Built Environment, p.18

⁸ Savills (2023), Regional Office Spotlight 2023

⁹ Savills (2023), Regional Office Spotlight 2023

Figure 6: The Midlands Engine's cities provide jobs for people who live outside cities



Source: Census 2011

This in turn means that urban economies of the Midlands Engines depend on their hinterlands for workers. In total 13 per cent of the urban workforce comes from outside of the largest built-up areas. Of these, the economies of Mansfield and Coventry rely the most on workers who live outside the built-up area, with 22 per cent and 21 per cent respectively doing so.

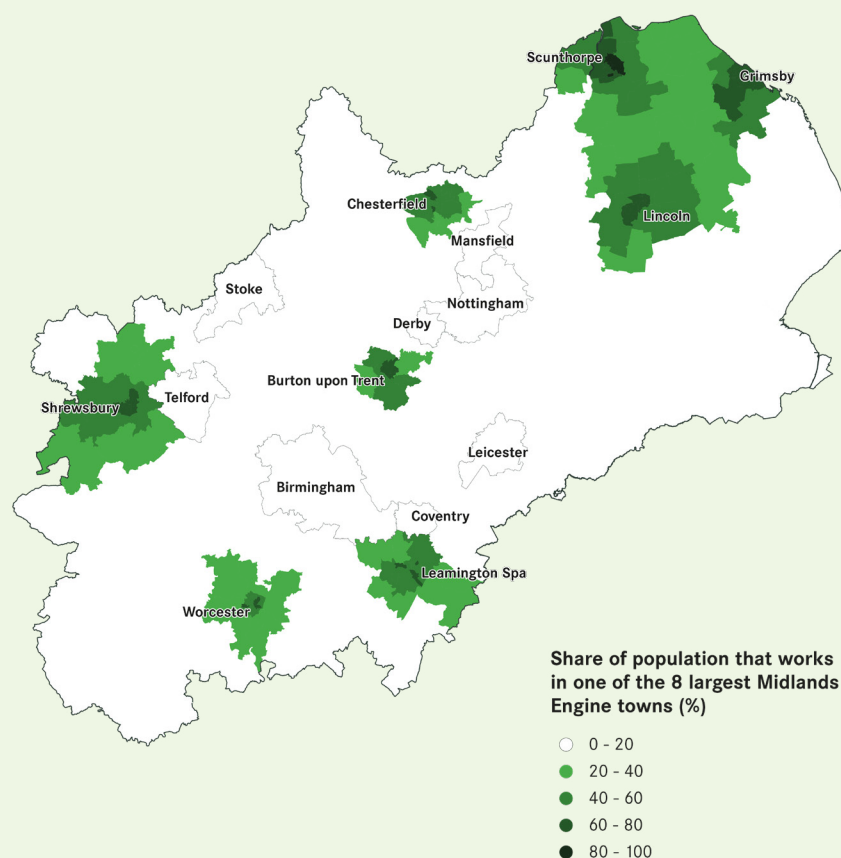
Box 5: The role of smaller urban areas in the economy of the Midlands Engine

While the eight cities and large towns of the Midlands Engine (with a daytime population of more than 135,000) play an outsized role in the regional and national economy, smaller settlements also make important contributions to their local economies. These roles are distinct from those of the large urban areas.

Eight urban areas in the Midlands Engine have daytime populations of between 40,000 and 135,000.¹⁰ These places (including the civic cities of Lincoln and Worcester, and the towns Grimsby, Royal Leamington Spa, Burton upon Trent, Chesterfield, Shrewsbury and Scunthorpe) are significant local employers. They account for 2.4 per cent of the Midlands Engine's total area, but 10 per cent of total employment.

Like their larger neighbours, they play an important role in providing jobs in the more rural parts of the Midlands Engine. Figure 7 shows that they fill in some of the gaps that larger towns and cities do not reach in Figure 6. However, their labour markets are much smaller than those of the cities and large towns, meaning they do not provide jobs to people living outside their boundaries or to the wider Midlands Engine at the same scale.

Figure 7: Commuting patterns around smaller urban areas in Midlands Engine



Source: ONS Business Register and Employment Survey (2021)

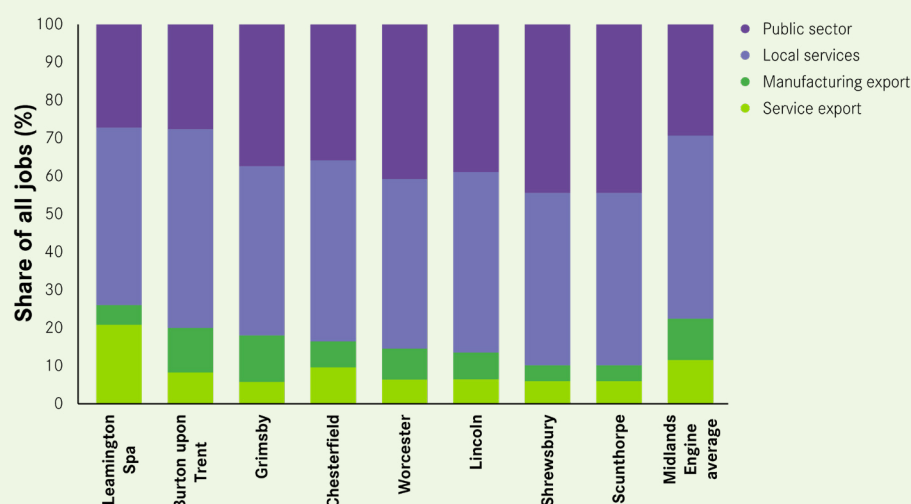
In addition, their share of the Midlands Engine's exporting employment is smaller than employment as a whole – only eight per cent of service export employment, and nine per cent of manufacturing employment are in these

¹⁰ These towns are defined using the ONS' built up area definitions.

towns. Figure 8 shows that, with the exception of Leamington Spa, all of these towns provide fewer exporting jobs than the average for the Midlands Engine.

Figure 8: Most smaller urban areas have a greater reliance on the public sector compared to cities in the Midlands Engine

Distribution of employment within small urban areas



Source: ONS Business Register and Employment Survey (2021)

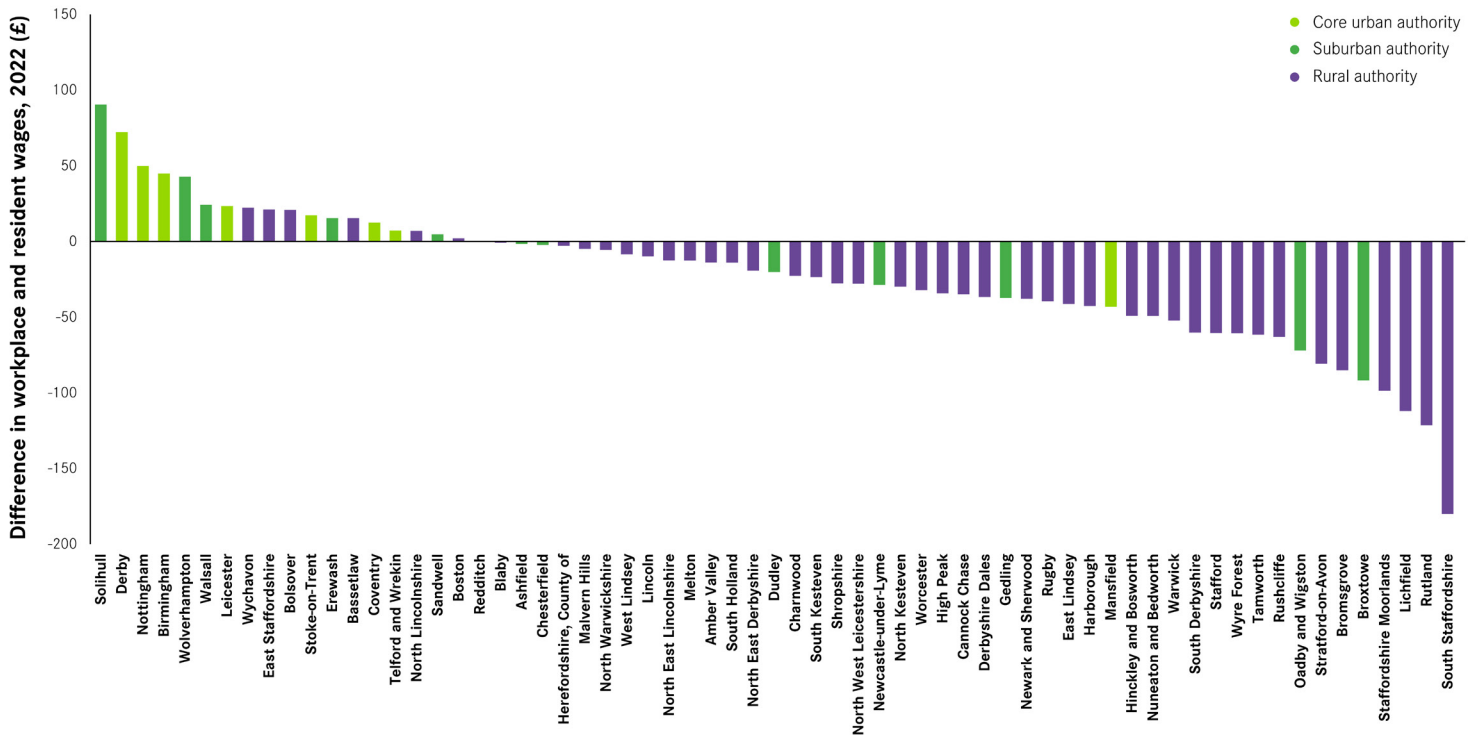
In contrast, the public sector is a larger employer than average in all these towns except Leamington Spa and Burton upon Trent – in Scunthorpe and Shrewsbury, 44 per cent of jobs are provided by the public sector compared to the Midlands Engine average of 29 per cent.

The smaller urban areas of the Midlands Engine are important centres of local employment and service provision, but they do not play the same exporting role that larger urban economies play in the Midlands Engine or the national economy.

Cities and large towns do not just offer access to jobs, however; they offer access to higher-paid jobs. Figure 9 shows the difference between workplace and resident wages across the local authorities of the Midlands Engine. Where workplace wages are higher than resident wages, commuters to those local authorities are enjoying a wage premium over residents.

Figure 9: Difference between workplace and residential wages across the Midlands Engine local authorities

Difference in workplace and residential wages by local authority



Source: ONS Annual Survey of Hours and Earnings (2021)

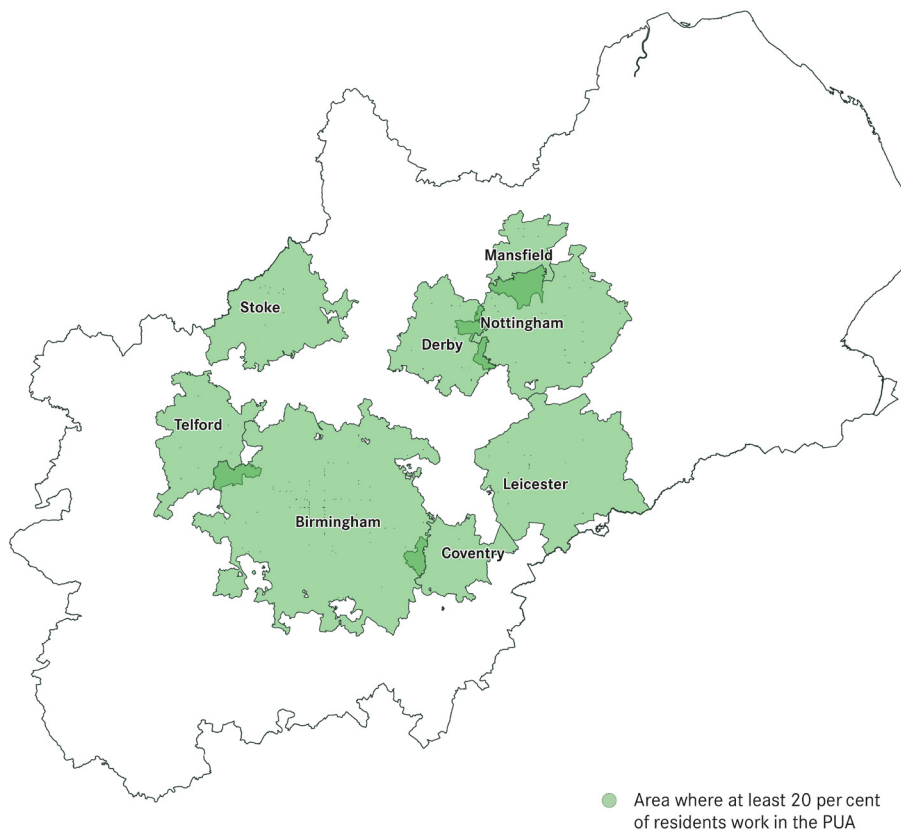
Local authorities with city centres in their boundaries, marked in light green in Figure 9, offer a particularly strong mix of these benefits to workers. Accordingly, while 7 out of the 8 core urban local authorities in the Midlands Engine have higher workplace wages than resident wages, only 5 out of 13 of suburban local authorities in dark green do, as do 7 out of 45 of non-urban local authorities in purple.

This shows that the agglomeration benefits of Midlands Engine cities and large towns translate into higher wages for workers. And by commuting to cities and large towns residents of non-urban areas enjoy the benefits of living outside of urban areas and the benefits of working within them. Accordingly, a commuter from Lichfield to Birmingham earns an estimated average annual boost to incomes of £3,900, a 15 per cent increase, compared to if they took up a job in Lichfield.

The Midlands Engine has at least eight different urban economies

Commuting patterns also show that the Midlands Engine comprises a number of distinct urban economies rather than one whole economy. This can be seen in Figure 10, which illustrates with commuting patterns that the Midlands Engine is composed of eight individual urban labour markets, with little commuting between these areas (as is also seen both elsewhere in the UK and in Europe).¹¹

Figure 10: There is little overlap in urban labour markets, as is seen elsewhere in the UK and Europe



Source: Census (2011)

In summary, the Midlands Engine is made up of a series of economies, with production clustered in and around the largest cities and towns. This brings opportunity not just for those people who live in these places, but those living within commutable distance too. How well these distinct local economies perform, and which has the greatest potential for improvement is the subject of the next section.

¹¹ Swinney P (2016), Building the Northern Powerhouse, London, Centre for Cities

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Urban economies in the Midlands Engine are below their ‘productivity potential’

While cities in the Midlands Engine are centres of production and home to the majority of the area’s exporting base, it is important to look at their performance relative to places outside the Midlands Engine as well as within it. This section looks at how they measure up to their potential.

The Midlands Engine’s cities and large towns do not offer the benefits of agglomeration as they should

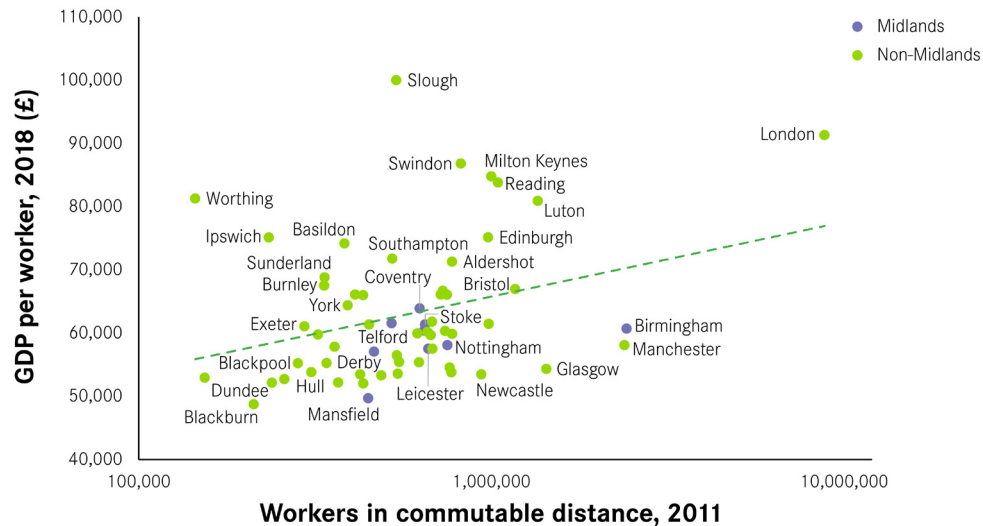
Economic theory predicts that larger cities should be more productive, as agglomeration effects increase with size. This is because as economic activity concentrates in one place, the benefits of a city location – matching, learning, and sharing – multiply.

Figure 11 demonstrates that while this broadly holds true across the UK as a whole, the biggest cities outside of London do not experience this effect, with almost all of them sitting below the trendline. This makes the UK an outlier relative to other developed nations and means that the relationship in Figure 11 is weaker than for other developed countries.¹² As at least some of these big cities should be leading rather than lagging the national average. Their poor performance is a large problem for both their local and the national economy.

¹² Enenkel K and Swinney P (2020), Why big cities are crucial for levelling up, London: Centre for Cities

Figure 11: The UK's largest cities underperform – including some in the Midlands Engine

Productivity and adjusted city size



Source: ONS, Regional gross domestic product (GDP) reference tables; ONS, Census 2011

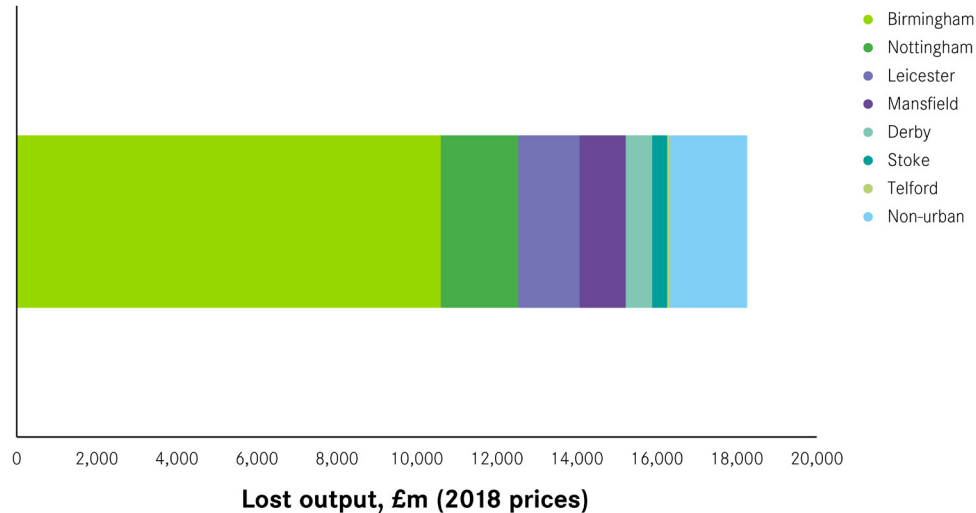
Birmingham and Nottingham urban areas are mainly responsible for the Midlands Engine's underperformance

The gap between a place's performance and the trend line (the difference between their actual and potential level of productivity) gives an estimate of the amount of output that each city in the Midlands Engine would be adding to the national economy were it performing at its potential. Doing this for all parts of the Midlands Engine demonstrates how far the Midlands Engine is from its potential and illustrates the contribution that different parts of it make to this underperformance.

The Midlands Engine falls around £18 billion a year short of its productivity potential, making it eight per cent smaller than it should be (see Figure 12). The Birmingham conurbation underperforms by £10.5 billion every year, about 58 per cent of the total underperformance of the Midlands Engine. It is followed by Nottingham and Leicester, which each account for a further £1.9 billion (10 per cent) and £1.5 billion (eight per cent) share of the total gap. Mansfield's gap is £1.2 billion (six per cent) compared to Derby and Telford with £800 million (four per cent). In total, urban areas underperform by £16.3 billion per year, which accounts for 89 per cent of the annual output gap.

Figure 12: The biggest cities drive the Midlands Engine's output gap

Contribution the different areas of the Midlands Engine's estimated lost output



Source: ONS, Centre of Cities' calculations

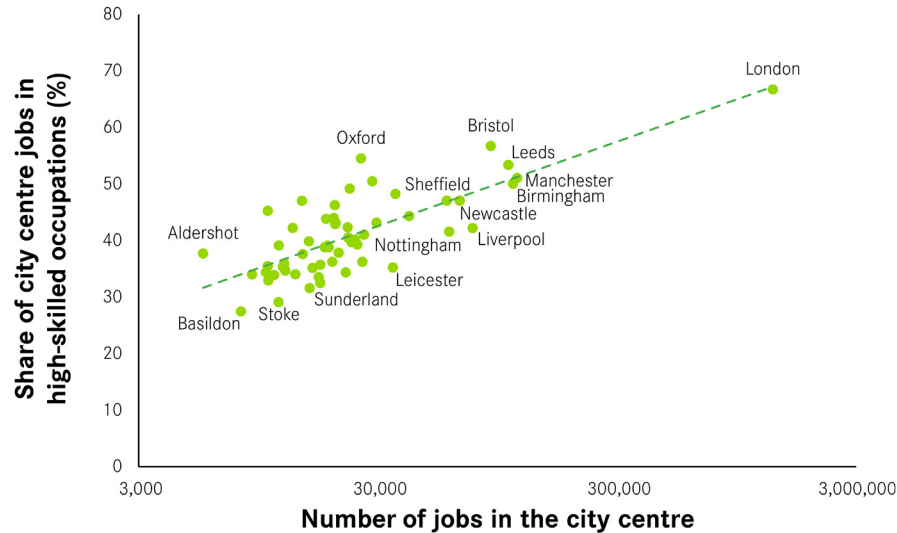
It is for this reason that the Levelling Up White Paper identified the underperformance of the UK's biggest cities outside of London as the key reason why areas outside of the Greater South East lag behind the Greater South East. Addressing Birmingham's underperformance in particular will be central – not only to boosting the Midlands Engine but helping to level up the UK economy too.

Birmingham city centre performs closer to expectations, but is too small

While agglomeration doesn't appear to be playing out as clearly at the city scale as in other developed countries, at the city centre scale the relationship is much clearer. Figure 13 shows that as a city centre gets bigger, the share of jobs that are in high-skilled occupations increases. The good news is that Birmingham city centre does sit on the trend line, reflecting the mix of high-skilled jobs that the previous section showed are located within it.

Figure 13: Larger city centres have higher shares of high skilled jobs

City centre size and share of jobs that are high skilled



Source: Census 2011

But the chart also shows that, despite Birmingham urban area being almost three times the size of Leeds in terms of population, the city centre economies of both cities are very similar in size. This shows that though Birmingham city centre is successful, it is much smaller than it should be, limiting the prosperity it generates and the contribution it makes to the wider Midlands Engine economy.

The Midlands Engine's service exports underperform

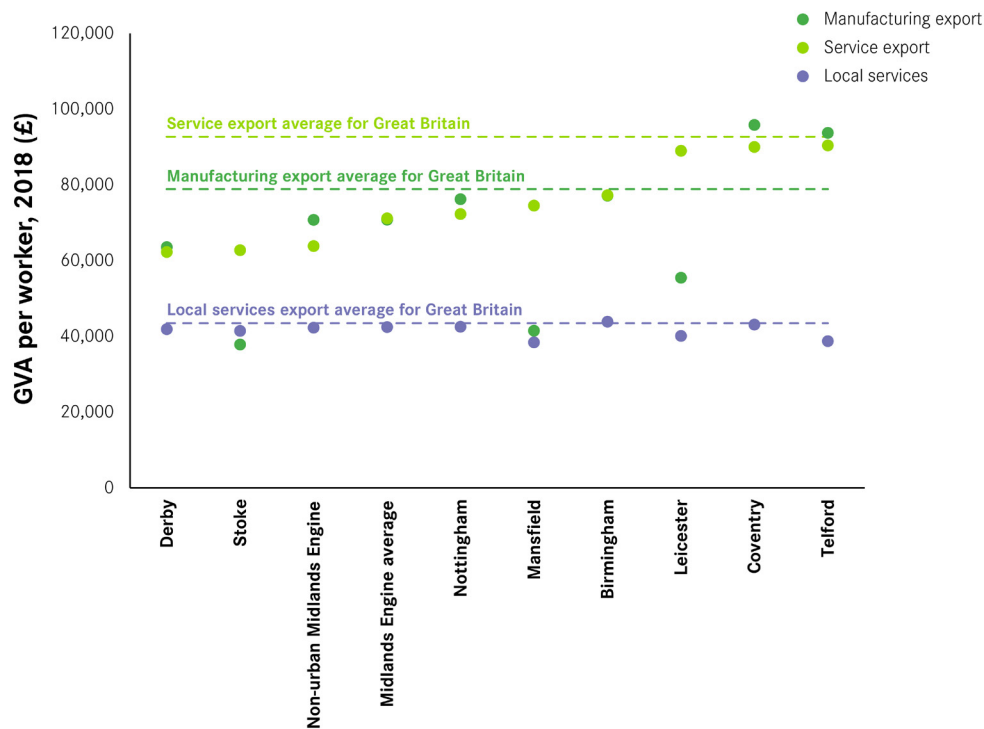
The Midlands Engine underperformance is driven by the underperformance of service exporting activities in these cities. Figure 14 plots the productivity of local services, manufacturing exports and services exports, revealing three insights:

- Local services (businesses such as hairdressers and restaurants) are both low in productivity and see very little variation across Great Britain. Even between the Midlands Engine urban and non-urban areas, the average GVA per local services worker is around £40,000. They are not the cause of differences in productivity between places.
- The productivity of manufacturing in the Midlands Engine at £70,800 per worker is close to the British average of £78,900. Some urban economies also have more productive manufacturing sectors than Britain as a whole, such as Coventry with £95,800 and Telford with £93,700. It is considerably lower in Stoke and Mansfield at £40,000 per worker, suggesting there may be some specific issues to address around manufacturing in these places.
- The productivity of service exports in the Midlands Engine, although

comparable to manufacturing at £70,700 per worker, is considerably lower than the British average of £92,700. Unlike manufacturing, no city or large town has an service export sector more productive than the country as a whole.

Figure 14: The Midlands Engine is underperforming in the productivity of its service export sector

Real productivity: output per job, constant price



Source: ONS Regional gross value added (balanced) by industry: local authorities by NUTS1 region (2021)

Although Midlands Engine cities and large towns are high-skilled economies compared to surrounding areas, the implication is that they are not attracting enough higher-productivity service exporters. Given the preference for an urban location, and city centre location in particular, this is important in understanding why the Midlands Engine's cities are underperforming. The performance of the 'new economy' in the Midlands Engine echoes the broader performance of the export base (see Box 6).

Box 6: The new economy in the Midlands Engine

The 'new economy' encompasses emerging knowledge-intensive sectors like FinTech and advanced manufacturing. Despite its small size, accounting for only three per cent of all UK firms, its position at the forefront of using new technologies and innovations makes it important for improving the UK's productivity and prosperity and a central pillar for the future success of

the whole economy.

Previous work by the Centre for Cities found that the new economy is disproportionately based in cities, and city centres in particular. In fact, 59 per cent of firms cluster in the nine per cent of land covered by 63 largest cities and towns, while 13 per cent of firms cluster in city centres accounting for 0.1 per cent of land.¹³

Figure 15 shows that all the Midlands Engine cities sit below the average for Great Britain for the number of new economy firms per 10,000 working age people. In contrast, the non-urban areas of the Midlands Engine both outperform urban areas (contrary to the national picture) and have almost the same number of new economy firms per 10,000 working age people as the non-urban average for Great Britain and overall average for Great Britain, suggesting that they perform as expected.

Figure 15: The Midlands Engine Cities are underperforming in their number of new economy firms

Number of new economy firms per 10,000 working age people



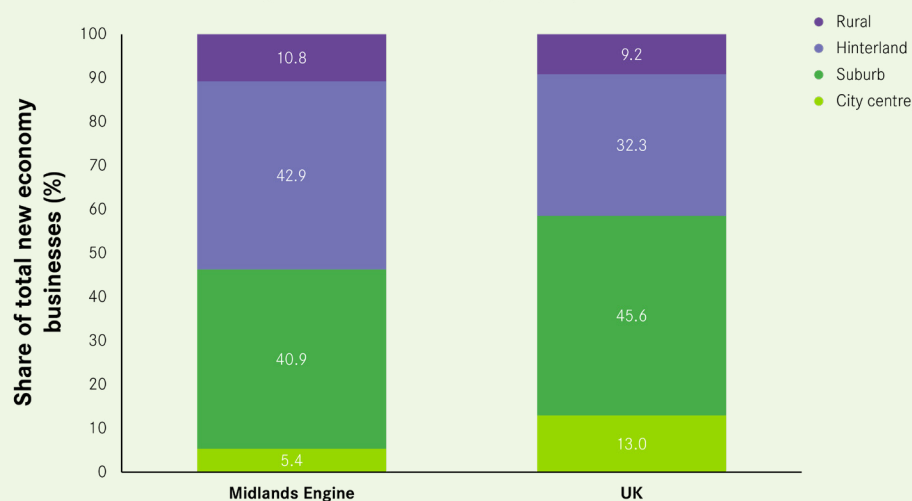
Source: The Data City, ONS (2021)

This is reflected in Figure 16, which shows that the Midlands Engine city centres are home to only 5.4 per cent of all new economy firms in the region while the hinterlands see 42.9 per cent of all new economy firms, compared to 32.3 per cent found in the UK overall.

13 Rodrigues G, Vera O and Swinney P (2022), "At the frontier: The geography of the UK's new economy", London: Centre for Cities

Figure 16: The new economy firms of the Midlands Engine are disproportionately outside of cities

Share of new economy firms across four geographies



Source: The Data City, ONS (2021)

It ultimately shows that while the non-urban areas of the Midlands Engine are performing well, the cities, and in particular, the city centres of the Midlands Engine are not attracting and generating the cutting-edge new economy firms that drive growth and innovation for the region.

Manufacturing employment is falling, but service exports employment is growing

The underperformance of service exporters is important, not only because they have the potential to be very productive, but also because the UK is continuing to specialise in them. As shown in Table 2, the Midlands Engine is too. While manufacturing employment has declined since 2015 across the non-urban and most urban places in the Midlands Engine (except Telford), employment in service exports is growing across the Midlands Engine and outpacing overall jobs growth in five out of the eight urban economies of the region.

Table 2: Growth of manufacturing and service export employment between 2015-2021

	Manufacturing exports	Service exports	Total
Non-Urban	-4%	7%	6%
Birmingham conurbation	-14%	11%	6%
Coventry	-20%	-12%	6%

Derby	-1%	27%	15%
Leicester	-7%	24%	2%
Mansfield	-21%	-12%	7%
Nottingham	-8%	26%	-5%
Stoke	-10%	-3%	5%
Telford	1%	37%	10%

Source: ONS Business Register and Employment Survey (2021)

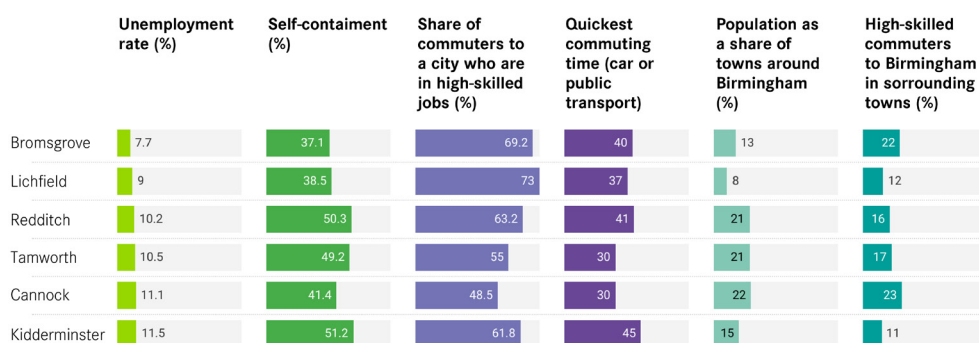
These changes do not mean that manufacturing's importance to the Midlands Engine is declining. As manufacturing becomes more capital intensive and efficient, employment shrinks as the sector remains globally competitive. However, it does mean that, for the Midland Engine to become more prosperous in the future, it needs the services part of its exporting base to be performing in the way its manufacturing part currently does.

City underperformance impacts the rest of the Midlands Engine

The underperformance of the Midlands Engine's cities and large towns doesn't just affect the aggregate size of the Midlands Engine economy, their underperformance has knock-on effects for people who live in towns near them. Figure 17 shows the implications of this for the living standards of the six towns that are within 45 minutes of Birmingham's urban area.

Of this group, Bromsgrove and Lichfield have strong employment outcomes. Part of the reason for this is that their residents disproportionately access the high-skilled opportunities available in the Birmingham urban area, and this makes these two towns more prosperous as a result. They account for 34 per cent of Birmingham's high-skilled commuters from surrounding towns, but only 21 per cent of the surrounding towns' populations.

Figure 17: Towns near Birmingham underperform because the city economy underperforms



Source: Census, 2011; VOA, 2018; MHCLG, 2019

The problem is that, unlike London for example, Birmingham's underperformance means that there is not enough prosperity available to improve the outcomes of most of the nearby towns. London provides 385,000 skilled jobs to its hinterlands, equivalent to every single working age person in Leicester having a high skilled job. For Birmingham, it is 81,000. This puts the surrounding towns in competition for a relatively small pool of commuters. Those that decide to live in a town (many choose to live in smaller places) tend to choose Lichfield or Bromsgrove because of the quality of life that they offer over other towns.

04

Why do cities and large towns in the Midlands not reach their productivity potential?

The Midlands Engine cities – in particular, the city centres – are a key driver of the underperformance in the region. The analysis above suggests that they are not offering the agglomeration benefits that they should be.

As outlined earlier, the main agglomeration benefits that cities provide to service exports are matching (the ability to recruit from a larger pool of workers with relevant skills), sharing (the ability to share inputs, supply chains and infrastructure, such as roads, rail and street lights) and learning (the ability to exchange ideas and information between co-operating and competing firms).

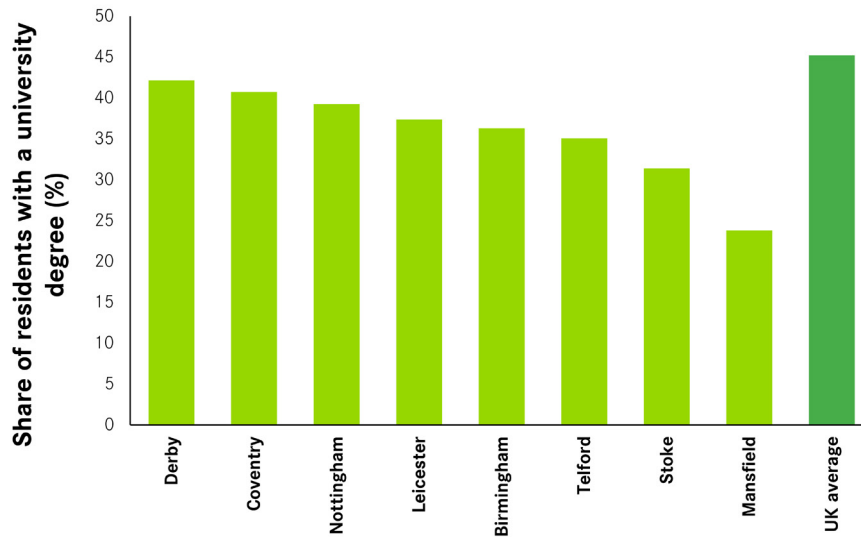
This section looks at how well the cities offer these benefits. It finds that, compared to the rest of the country, the skills base, commercial space, and the density of the built environment of the cities and large towns of the Midlands Engine all could be improved, especially within biggest urban areas.

The Midlands Engine's urban economies have a skills problem

Figure 18 demonstrates that all the Midlands Engine urban economies have fewer graduates than on average in the UK. Derby and Coventry, two of the best performers in the Midlands Engine, have the highest share of graduates in their population, while Mansfield has the least.

Figure 18: Midlands Engine cities and large towns have below average share of graduates

Share of graduates

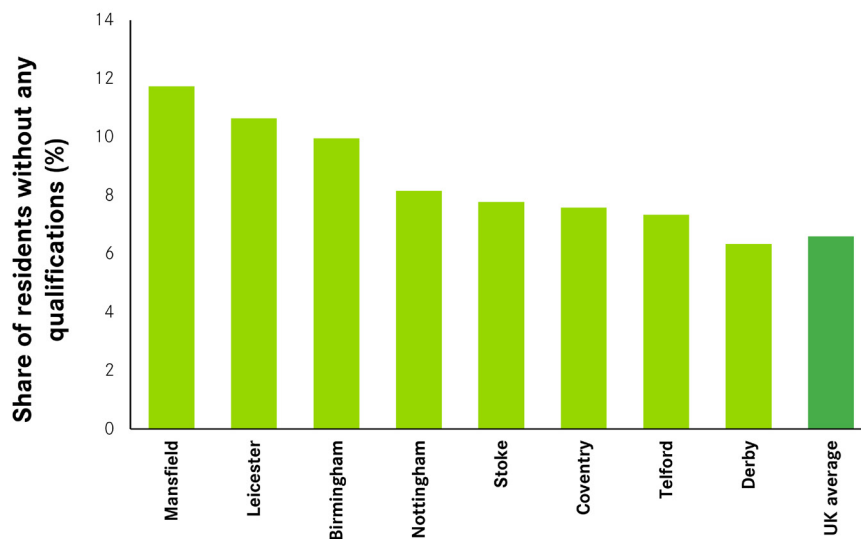


Source: ONS Annual Population Survey (2021)

The lack of skills is not limited to the graduate labour market. Figure 19 shows that, except for Derby, all the Midlands Engine's urban economies have a higher share of the population without any qualifications than the national average. The Birmingham conurbation performs particularly poorly on this point, with 10 per cent of the workforce lacking any qualifications.

Figure 19: Most Midlands Engine cities and large towns have a higher proportion of residents without qualifications

Share of residents without qualifications



Source: ONS Annual Population Survey (2021)

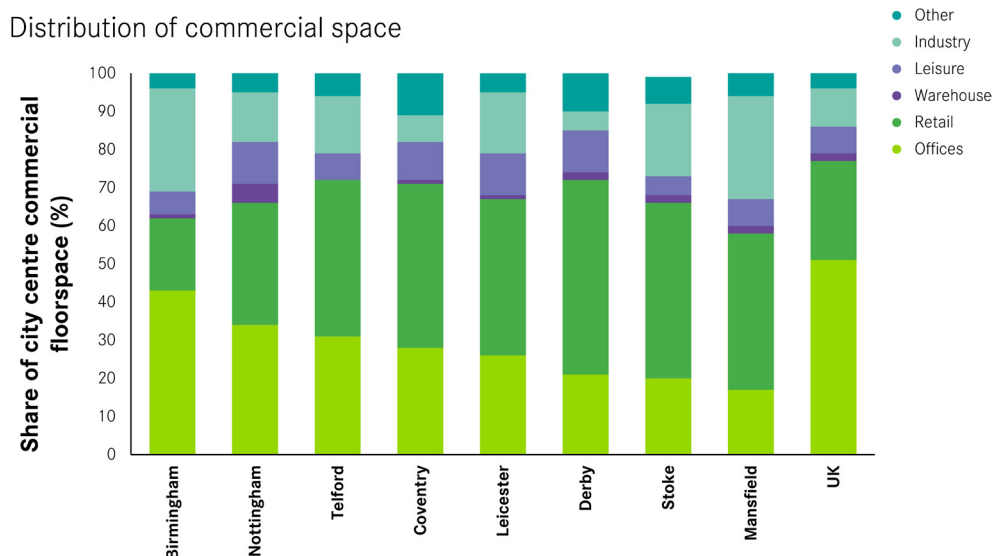
Together, the lack of graduates and the high number of people without qualifications indicates that improving the skills base of the Midlands Engine's urban economies is important to ensure service export firms are able to match to the relevantly skilled workers. More training and attracting in skilled people will both be important for this.

The Midlands Engine's city centres lack office space

Skills are not the whole story though. City centre commercial space may also be a potential limitation to service export work, as it requires office space and trends towards city centre locations.

Figure 20 shows that all the Midlands Engine city centres have a smaller proportion of office space than the UK city centre average of 51 per cent. And almost all the city centres have much more retail than the national average, despite falling demand for retail space. Given the ongoing change on the high street this suggests that many centres may have too much space given over to retail.

Figure 20: Midlands Engine city centres lack commercial office space compared to the UK average



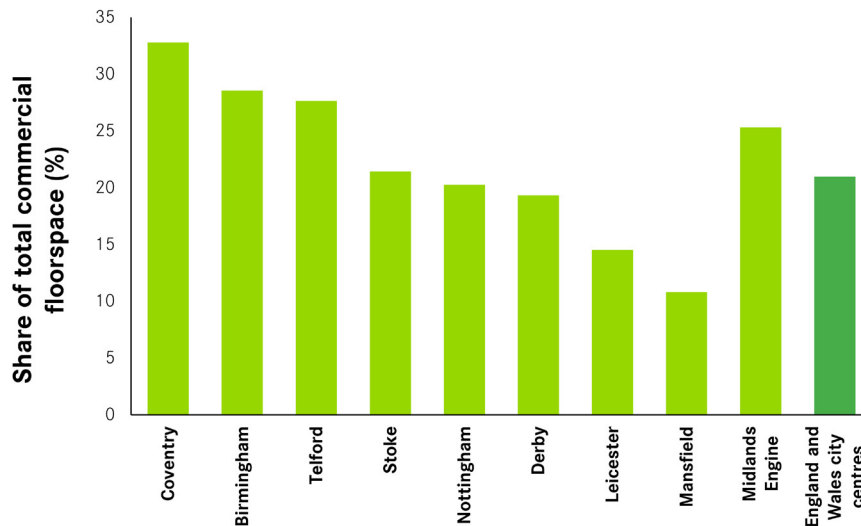
Source: Valuation Office Agency (2023)

The exception is Birmingham city centre, which has a below average share of retail space, but a high share of industrial space, primarily around Digbeth.

The quality of office space in the Midlands Engine's city centres is more mixed. Using Energy Performance Certificate ratings as a proxy for quality, Figure 21 indicates that Coventry, Telford, and Birmingham all have above average quality of office space compared to the country and the Midlands Engine as a whole.

Figure 21: The quality of office space is better in the centres of Birmingham, Coventry and Telford than elsewhere

Share of high quality city centre office space



Source: Energy Performance Certificate Non-Domestic Register, DHLUC 2022

In comparison, the relatively low quality of commercial office space in the city centre may be a potential barrier to attracting in high skilled service export work into the centres of Nottingham, Derby, Leicester and Mansfield.

Nottingham and Birmingham have poor transport accessibility

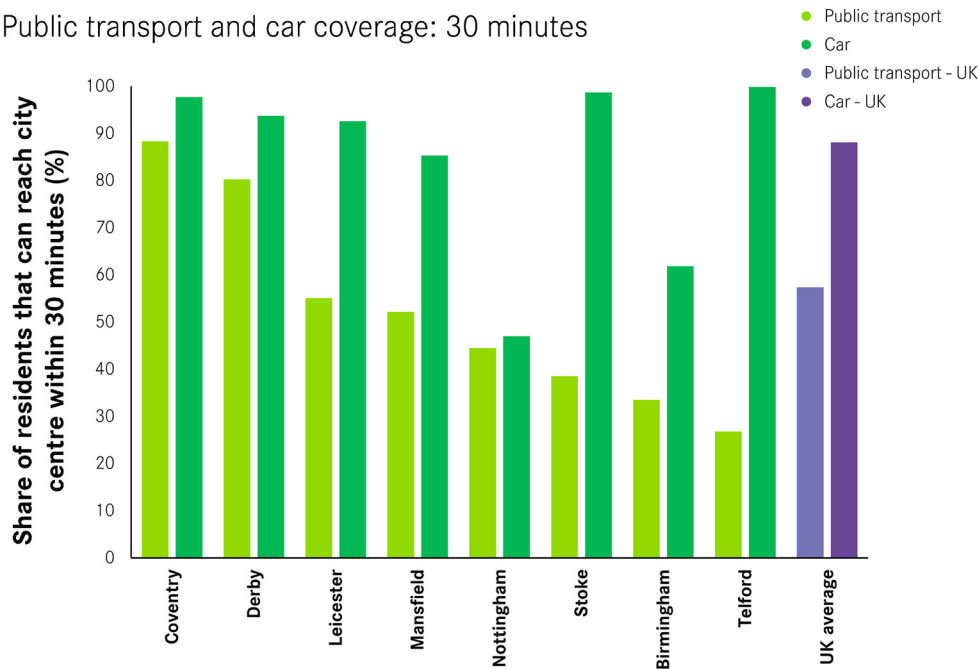
Transport is also a plausible constraint on local economic growth in the Midlands Engine's urban areas. Better transport increases the effective size of the local economy market and this matters for economic growth because it connects pools of workers to businesses, and businesses to suppliers and clients. This deepens agglomeration effects and means that urban economies should be able to reach higher levels of productivity.

An implication of this is that the mode of transport used within the urban economy is less important than the number of people who can access the city centre in a reasonable commute, as it is the latter that determines the size of the local labour market.

Figure 22 shows the share of the urban population of the Midlands Engine that can reach their urban area's city centre within 30 minutes. It demonstrates that, for most of the region's cities and large towns, accessibility is good. For Coventry and Derby, an above average share of the population can reach the centre by both car and public transport. All other urban areas have below average accessibility by public transport.

Figure 22: Nottingham and Birmingham city centres have poorer transport accessibility than elsewhere

Public transport and car coverage: 30 minutes



Source: Traveltime, ONS, Eurostat, Centre for Cities' calculations

The poor public transport accessibility for most Midlands Engine urban areas is counteracted by their high levels of accessibility by car, except for the Nottingham and the Birmingham conurbations. Even though they both have tram systems, the two largest cities have below average accessibility in both public transport and by car, reducing the size of their labour market.

This result implies that, while improvements in public transport across the Midlands Engine may be desired for social or environmental benefits, they are unlikely to improve the economic performance of the region unless they are associated with increased commuting into the city centres of Nottingham and Birmingham. Commuting by car into these large city centres is challenging due to the distances and physical capacity of the road network (and will become a bigger challenge if their city centre economies grow), and public transport can enhance productivity by overcoming these constraints and increasing the total amount of commutes.

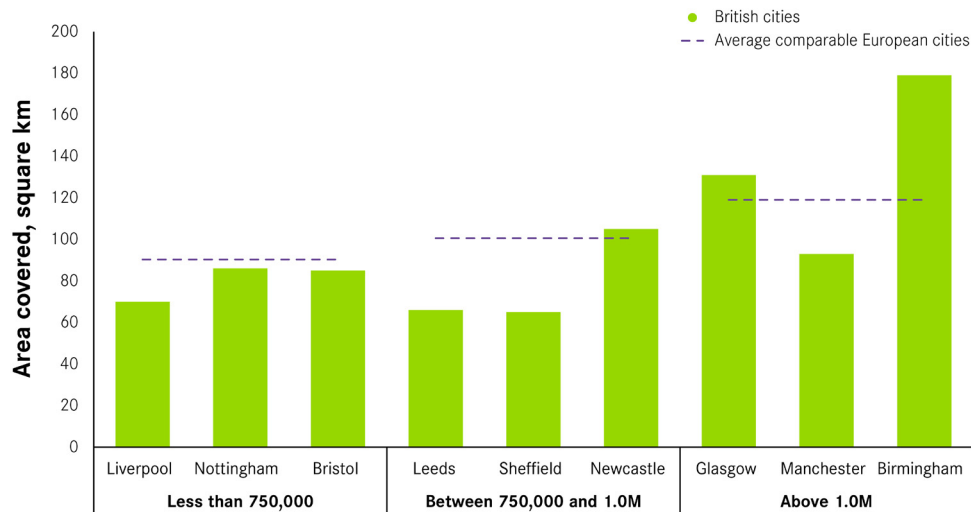
Birmingham and Nottingham lack mid-rise housing, not transport infrastructure

However, this problem is not solely due to a lack of public transport infrastructure. Figure 23 shows that the large cities of the Midlands Engine have public transport networks that cover a comparable or greater physical area in 30

minutes compared to European cities of a similar population.¹⁴ The Birmingham conurbation's public transport network covers an area greater in 30 minutes distance than any city outside of London.

Figure 23: Birmingham's transport network is greater than its European peers

Public transport network: 30 minutes travel time from the city centre



Source: TravelTime; ONS; Eurostat; Centre for Cities' calculations

The explanation for Nottingham and Birmingham's poor accessibility is not just a lack of infrastructure, but also their urban form. Previous research by Centre for Cities has shown that British cities are unusual in Europe for not increasing in population density as their population grows. Away from the city centres, they maintain a low-rise urban form throughout their built-up area, which constrains the number of people who can live in walking distance of transport stops and therefore within 30 minutes of the city centre.

As a result, the density of the built environment needs to change in those neighbourhoods with transport stops in Nottingham and the Birmingham urban area for public transport accessibility and the economic performance of the Midlands Engine to improve.

¹⁴ Rodrigues G, Breach A, and Evans J, (2021), Measuring up: Comparing public transport in the UK and Europe's biggest cities, London: Centre for Cities

05

What needs to change

Addressing the underperformance of the Midlands Engine is not just important for the local economy, but for the success of the national economy. This is reflected in the Chancellor's recent spring Budget, and the Government's Levelling Up white paper that recognises the city regions need to be at "the centre of any plan to raise living standards" and to "benefit surrounding towns and communities."¹⁵

To ensure the Midlands Engine can reach its economic potential, policy should look to maximise the benefits that cities and large towns, and in particular city centres, offer to service exporting companies. It should take advantage of the benefits that those places offer by:

- 1. Improving the skills of residents.** The Midlands Engine has a higher share of residents without qualifications and a lower share of graduates compared to the UK as a whole. Policy in the area should focus on getting those who currently don't have the equivalent of five good GCSEs up to this level by targeting skills money from the area's allocation in the Shared Prosperity Fund towards supporting these people.
- 2. Making city centres more attractive places to do business.** Midlands Engine city centres have below average shares of office space. New, high-quality city centre office space that meets the needs of occupiers, in particular service exporters, should remain a priority even in a world of hybrid working. Policy should focus on helping to bring forward appropriate office space in these centres through planning policy and the use of central government funds designated for this purpose. For example, placing the region's investment zones, which were announced in the Spring Budget 2023, in Birmingham, Nottingham and Leicester city centres would be one way to do this.

¹⁵ Department for Levelling Up, Housing and Communities (2022), Levelling Up the United Kingdom: missions and metrics Technical Annex, London

3. Improving public transport infrastructure and density within the big cities. The Birmingham and Nottingham conurbations have the poorest transport accessibility in the region, shrinking their labour market and damaging their economic performance. Policy makers should look to align brownfield regeneration funds that are available from central government together with the current City Region Sustainable Transport Settlement for Birmingham (and any future settlement for Nottingham to develop transport and housing) in tandem, increasing the number of people who live around public transport stops.

It should also continue to support a competitive manufacturing sector, which is more likely to be found in the suburbs of or hinterlands around cities. The Midlands Engine manufacturing sector is currently performing close to the average for Great Britain. Policy makers should set out how to meet future manufacturing demand by ensuring suitable sites, in particular greenfield sites, with access to large pools of workers are available in the suburbs and urban hinterlands, where the manufacturing sector has enjoyed the benefits offered by the Midlands Engine so far.

Finally, national and local policymakers should look to better match economic policy with the geography it operates over **by striking devolution deals that together cover the whole of the Midlands Engine** by 2030. The West Midlands Combined Authority area has already benefited from the greater control it has had over policy, and this will likely increase with its recently-announced trailblazer deal. The East Midlands is also looking to benefit with the proposed deal now waiting for approval. The parts of the Midlands Engine without one should begin working on their own devolution deal with Government to take advantage of the Government's intention to give all parts of England a deal by 2030.



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