The Geography of the Tees Valley Economy

April 2016

Executive Summary

Previous work by Centre for Cities has shown that city centres have become increasingly important to the performance of the UK economy as a whole, particularly when looking at the growth of higher-paid, knowledge-based activities. Given the probability that the UK economy will continue to specialise in these types of activities, and the preference that these activities have for a central location, city centres are likely to become ever more important to the national economy in the future.

Central Middlesbrough plays the role of the primary city centre of the wider Tees Valley economy. While accounting for just 0.2 per cent of all land, it accounts for 5.9 per cent of all jobs in the Tees Valley, and 12.8 per cent of all knowledge-based services jobs.

The problem is that Middlesbrough city centre performs poorly compared to other British city centre economies. This is to the detriment to the wider Tees Valley economy, which has a share of jobs in knowledge-based services that is below the national average and below average productivity too.

If the Tees Valley is to attract investment in more knowledge-based activities in the future, it needs to improve the attractiveness of Middlesbrough city centre, in particular as a place to invest in and do business. This will require the forthcoming mayor and combined authority for the Tees Valley to take a spatial approach to economic development policy in order to improve the economic performance of the Tees Valley and the opportunities available to the residents who live in and around it.

Introduction

Despite predictions that ever-advancing communications technologies would lead to the ‘death of distance’, the location of jobs is becoming increasingly important for the performance of our city economies. More knowledge-focused types of economic activity tend to value the benefits that proximity and face-to-face interaction brings, and analysis shows that these types of jobs have increasingly been clustering in city centres.¹

¹ Swinney P and Sivaev D (2013) Beyond the high street: Why our city centres really matter, London: Centre for Cities
This means that understanding the geography of jobs in and around cities, and the role that different employment sites play is of growing importance to cities and the local enterprise partnerships that they sit within. Not only does it have implications for the types of jobs that these areas are able to attract, but it also has knock-on impacts on the performance of the high street and access to jobs.

The purpose of this paper is to look at the geography of jobs across the Tees Valley local enterprise partnership (LEP) area, compare this to other cities and LEPs in the UK and set out what this is likely to mean for the future economic performance of the area.2

The purpose of this paper is to look at the geography of jobs across the Tees Valley local enterprise partnership (LEP) area, compare this to other cities and LEPs in the UK and set out what this is likely to mean for the future economic performance of the area.2

The geography of jobs across the Tees Valley LEP

The economy of the Tees Valley has a number of important employment sites. As Figure 1 shows, in 2014 the large stretch of land from the fringes of Eaglescliffe through to the Portrack industrial estate (15,800) and Middlesbrough city centre (15,500) were home to the largest number of jobs, followed by the area including Morton Park in Darlington (10,400) and Wilton (10,100). Of these sites, Middlesbrough city centre was by far the most concentrated – despite accounting for just 0.2 per cent of all land in Tees Valley, it accounted for 5.9 per cent of the total number of jobs. This was equivalent to 99 jobs for every hectare of land. By way of comparison, the Eaglescliffe to Portrack industrial estate area had 20 jobs per hectare.

Figure 1: The geography of jobs in Tees Valley by medium super output area (MSOA), 2014

![Map showing the geography of jobs in Tees Valley](image)

Source: ONS Business Structure Database. Contains Ordinance Survey Data © Crown copyright and database right 2015

The patterns seen for all jobs mask significant variation by sector. The geography of private sector knowledge intensive business services (KIBS) jobs, which include jobs in law, architecture and finance, are concentrated in a handful of sites, as shown in Figure 2. Middlesbrough city centre had the largest share of these jobs, accounting for 12.8 per cent of all of the Tees Valley jobs in this sector.3 It was followed by Thornaby, which contains Teesdale Park, which was home to 9.8 per cent of all private KIBS jobs.

---

2 This work contains statistical data from ONS which is Crown Copyright. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

3 This is supported by Census data, which showed that in 2011 Middlesbrough city centre accounted for 7.2 per cent of jobs in higher-skilled occupations and 7.6 per cent of Tees Valley’s graduate workers worked in the city centre.
This is in contrast to the location of its manufacturing jobs. As Figure 3 shows, jobs in manufacturing tended to be dispersed across Tees Valley. Wilton was the area with the largest number of jobs (3,700), but Middlehaven, the wider Portrack area and North Darlington were also home to a combined total of 4,700 jobs in this sector.

**Figure 3: The geography of manufacturing jobs in Tees Valley by MSOA, 2014**

---

**The industrial structure of Middlesbrough city centre**

As the above analysis suggests, the industrial structure of Middlesbrough city centre differs to the rest of the Tees Valley. Figure 4 compares the relative size of different industries in the city centre, the LEP area and the UK. The industrial structures of Tees Valley and the UK as a whole are broadly similar, with the former having a greater share of public sector jobs and a smaller share of private KIBS jobs. But the industrial structure of the city centre looks very different. Of all the jobs based in Middlesbrough city centre, around one in four were in a KIBS industry, compared to a Tees Valley average of around one in 10. On the flip side, manufacturing played...
a much smaller role in the city centre compared to the LEP as a whole – just 1 per cent of all jobs in the city centre were in this sector, compared to the Tees Valley average of 9 per cent.

**Figure 4:** Share of jobs by sector in Middlesbrough city centre and the wider Tees Valley, 2014

![Bar chart showing share of jobs by sector in Middlesbrough city centre and the wider Tees Valley, 2014](chart.png)

*Source: ONS Business Structure Database*

**Box 1: Definition of Middlesbrough city centre**

Unless otherwise stated, Middlesbrough city centre is defined as:

Contains Ordinance Survey Data © Crown copyright and database right 2015

This definition has been built using workplace zones in order to make data from the ONS Business Structure Database comparable to data from the 2011 Census.
Why do we see this happen?

The importance of cities generally, and city centres in particular, in the national economy has endured in spite of the invention of ever more sophisticated telecommunications technologies. There are three main benefits to businesses that result from locating in a city, known as ‘agglomeration’ benefits. These are:

- The ability to share inputs, supply chains and infrastructure, such as roads, rail and street lights
- The ability to recruit from a deep pool of workers with relevant skills
- The ability to exchange ideas and information, known as ‘knowledge spillovers’

These benefits operate over different geographies. While the first two benefits operate over a city-wide level – a business based on a business park has access to the same potential recruits as a city-centre business – the third operates over a much smaller geographic area.4

This is because knowledge – more specifically tacit knowledge (see Box 2) – 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. Within a city, this area is the city centre.

Box 2: Why knowledge is important5

New knowledge is what allows innovation to occur. Innovation allows us to produce new products and services and create more with fewer resources. This increases productivity, which drives long run economic growth.

There are two broad types of knowledge – codified and tacit. Codified knowledge can be easily communicated through books or the internet and so can be spread without the need for face-to-face interaction. Tacit knowledge, on the other hand, is much harder to embed in people, and so things such as learning a new language or learning how to run a business are much better spread through face-to-face interaction. This is an important distinction. If tacit knowledge flowed easily across the world then it would be very easy for less developed countries to catch up to the most developed ones. And within countries it would be easy for poorly performing cities to catch up with the stronger performers. This does not occur, and so the ability for cities to spread knowledge and ideas is an important part of their long-run performance.

There is a large body of evidence to support this. For the advertising industry in Manhattan for example, it has been estimated that these knowledge spillovers operate over a distance of just over 750 metres,6 while other research finds that these agglomeration effects are strongest over a distance of one mile.7 This spread of tacit knowledge supports innovation – in the US patent rates have been found to be positively associated with employment densities in the urbanised parts of metro areas, suggesting that density helps spur innovation. The citations of patents are also more likely to come from the same area as the patent itself.8 It also boosts productivity – a number of studies have found that productivity increases with employment density.9 This means that concentrating economic activity makes cities more productive, and increases in productivity that drive long-run economic growth.

---

In England and Wales this can be seen by looking at the concentration of degree-educated workers in city centres. As Figure 5 shows, the share of all workers in a city centre who hold a degree increases as the density of all jobs in a city centre increases. Assuming that workers holding a degree get paid more than non-graduates, this would suggest that average wages in city centres are higher where the concentration of economic activity, and face-to-face interaction, is greater.

**Figure 5: Density of workers and share of graduates in city centres, 2011**

This doesn’t hold for all sectors of the economy. Those businesses that are knowledge-based tend to benefit the most from the knowledge spillovers that occur in dense city centres. It is for this reason that we see them concentrate in these areas. Of all the private-sector jobs in British cities, 25 per cent are located in city centres. For KIBS jobs this rises to 40 per cent. And for financial services, a subset of the KIBS definition, half of all urban jobs in this sector are based in city centres.\(^{10}\)

It is worth noting here that city centres are important sources for lower-skilled jobs as well as higher-skilled ones. The increased footfall that high-skilled jobs create increases the size of the market that retail and leisure businesses can sell to, which is likely to have a positive knock-on impact on the performance of the high street. Emerging evidence suggests that the presence of high-skilled ‘tradable’ jobs has a multiplying impact on those service jobs such as retailers and food outlets that sell to local markets.\(^{11}\) The result is that a strongly performing city centre economy is likely to create jobs for a range of skill levels.

Of course, not all businesses prefer city centre locations, as shown by the location of manufacturing businesses away from Middlesbrough city centre, for example. This is because these businesses on these sites tend to require cheap land and good transport links more than they require access to knowledge and information.

But the UK’s likely continued specialisation in knowledge-based economic activity, and the ever-growing competitive pressures on more routinised types of work such as more traditional manufacturing and call centres, means that city centres are likely to become ever more important to their wider cities and the national economy as a whole. This means that the ability of city centres to attract and retain more knowledge-focused

---

10 Swinney P and Sivaev D (2013) Beyond the high street: Why our city centres really matter, London: Centre for Cities
jobs will become increasingly important in determining the future economic performance of cities and their surrounding areas and the sustainability of any future growth.

**Commuting patterns**

The concentration of not only total jobs but also high-skilled jobs makes Middlesbrough city centre an important source of job opportunities not only for the residents of Middlesbrough local authority but the wider LEP area too. This means that, despite its small size, the city centre sees a significant inflow of people from the wider area each day.12

Figure 6 sets out where workers in and around Middlesbrough city centre lived in 2011. Three in five workers who worked in the city centre lived outside Middlesbrough local authority. Two in five lived either in Stockton-on-Tees or Redcar and Cleveland. Ingleby Barwick and South Bank were particularly popular – around 10 per cent of all working residents in the former worked in Middlesbrough city centre, while it was 15 per cent in the latter.

**Figure 6: Where Middlesbrough city-centre workers live**

![Map showing commuting patterns](source)

These patterns are more pronounced for people working in higher-skilled occupations. An estimated 70 per cent of all workers in high-skilled occupations lived outside of Middlesbrough local authority, with Ingleby Barwick being the most popular place to live for these workers. And 20 per cent of all high-skilled workers in the city

12 Because commuting data is only available to medium super output area, Middlesbrough city centre is defined as Middlesbrough 001 when using this data.
centre lived outside of Tees Valley, compared to 12 per cent of all workers overall. The areas around Stokesley and Great Ayton in Hambleton were popular choices for city-centre workers who lived outside of Tees Valley.

**Middlesbrough city centre lags behind other city centres, to the detriment of the wider Tees Valley area**

While Middlesbrough city centre is an important source of high-skilled jobs in particular within the wider Tees Valley area, it underperforms relative to other city centres across the country.

The Tees Valley area has historically struggled to attract higher-skilled, more knowledge-focused work. This meant that in 2014, 11.3 per cent of jobs in the LEP were in KIBS, compared to the national average of 16 per cent (see Figure 6). And at £44,300, GVA per worker was below the national average of £51,800 in 2013.

This is reflected in the structure of the city centre. On average, 30 per cent of jobs in city centres were private sector KIBS jobs. In Middlesbrough city centre, as shown above, this figure was 24 per cent.13 And as Figure 5 shows, it has a lower share of graduates in its city-centre workforce than many other city-centre economies.

Its job creation performance has been weak in recent years too, in line with the wider performance of the Tees Valley. Between 1998 and 2008, the city centre saw an increase in private-sector jobs at a time when the wider LEP area saw a decline. The result was that the share of all jobs in Tees Valley that were in the city centre increased from 6.4 per cent to 6.8 per cent. But it has been hit harder than the wider LEP area since 2008 – the city centre had 2,700 fewer private sector jobs in 2014 than it did in 2008, meaning that the share of jobs in the city centre fell to 5.8 per cent. Box 3 discusses the private-sector job creation performance of Tees Valley since 1998 in more detail.

**Figure 7: Private sector jobs in Middlesbrough city centre and Tees Valley**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Middlesbrough city centre</td>
<td>550</td>
<td>-2,700</td>
</tr>
<tr>
<td>Tees Valley</td>
<td>-700</td>
<td>-13,800</td>
</tr>
</tbody>
</table>

Source: ONS Business Structure Database

---

13 These trends are reflected in figures for high-skilled occupations. In England and Wales, 41 per cent of jobs were classed as high-skilled in 2011. And for city centres this increased to more than half of all jobs. In Middlesbrough, in contrast, this figure was 40 per cent. Source: Census 2011
Box 3: Private-sector jobs changes in the Tees Valley, 1998-2014

The private-sector job creation performance across the Tees Valley has varied in recent years. Many areas saw a decline in private sector jobs. This was most severe in Wilton and Billingham, where there was a reduction of over 3,000 jobs, driven by the shrinking of the manufacturing sector. Darlington, Hartlepool and Stockton town centres also saw declines. The largest gain was the area to the north of Darlington, which saw an increase of over 5,000 jobs, mainly as a result of construction and transport and communications.

Since 2008, the area north of Darlington went from the Tees Valley’s strongest to weakest performer, and had the largest decrease in private-sector jobs (4,000), mainly led by the construction sector. Middlesbrough city centre was second hardest hit. Morton Park saw the largest increase, principally driven by construction.

Figure 8: Private-sector job creation in the Tees Valley, 1998-2008 and 2008-2014

Source: ONS Business Structure Database. Contains Ordnance Survey Data © Crown copyright and database right 2015
This weak performance poses a large challenge for the future economic performance of the Tees Valley as a whole. The basic economic challenge for places is to offset declines in jobs in more traditional industries – such as the steel industry in Middlesbrough’s case – with jobs growth in new areas. As discussed above, city centres are likely to become ever more important to the economic performance of the wider economies that they sit at the centre of because of the benefits they offer to knowledge-based businesses. If Middlesbrough city centre struggles to attract this type of work then this will have implications for the future economic performance of the wider Tees Valley and the job opportunities for the people that live within it.

Box 4: The steel industry in the Tees Valley

The steel industry has played a central role in shaping Middlesbrough’s economy over the last 150 years. But its decline underlines the importance of places adapting to the constant changes of the global economy.

In 1911, the steel industry accounted for around 17,500 jobs – 15 per cent of all jobs in Middlesbrough.14 But rising global competition has affected steel making on Teesside in the same way that it has affected UK manufacturing as a whole. Metal manufacturing employment on Teesside has declined sharply in recent decades, falling from 14,800 (8.5 per cent of all jobs) in 1981 to 5,500 jobs (3 per cent of all jobs) in 2014 – a fall of 63 per cent.15

The recent announcement that the steel works in Redcar has once again been mothballed is a huge blow to the economy. This shock is more acute because of the Middlesbrough economy’s struggle to reinvent itself, creating jobs in new industries to offset job losses elsewhere.

A number of places have grappled with their industrial legacy, and few have been able to sufficiently deal with this. But those that have, such as London, Leeds and Manchester, have seen the focus of their economies shift from factories and dockyards to offices in their city centres.16 Their ability to reinvent their economies on an ongoing basis puts them in a strong position to continue to create jobs growth in new industries as older industries decline.

---

14 Source: Census 1911
15 Source: Census of Employment, Business Register of Employment Survey
Why does Middlesbrough city centre underperform?

To understand the underperformance of Middlesbrough city centre, it’s important to look at the main drivers of business location decisions. These are skills – and the role that transport plays within this – and the supply of commercial space. Decisions about the location of public-sector functions, the quality of public realm and cultural and leisure amenities also have a role to play.

A deep pool of appropriately skilled workers

The ability to recruit the right workers is a key factor for businesses. For high-skilled businesses this means that the number of graduates living within a commutable distance will be an important consideration.

In 2011, around 96,000 graduates lived within 18 kilometres of Middlesbrough city centre. This represented 16.9 per cent of all people over the age of 16, the 10th lowest share of all British cities. Meanwhile a large share of residents have no formal qualifications at all. Around one in 10 do not hold even a basic qualification – the seventh highest of all LEP areas. Not only is this likely to make the Tees Valley a less attractive place for knowledge-based businesses to invest in, it will also act as a barrier to getting these people into work. This partly explains why Tees Valley has the highest claimant count rate of all LEPs.

Given the greater mobility of graduates, the role that local government has in encouraging people to take graduate-level qualifications is not clear. But there is a much clearer rationale for local politicians to use skills budgets to help those who have no qualifications to attain one, and for those with low-level qualifications to gain higher qualifications. Not only would this increase the pool of more highly qualified workers for businesses in the city centre to choose from, it would also make Tees Valley a more attractive place for business investment more generally.

Transport has an important role to play within this, as good transport links increase the number of people who can feasibly commute into the city centre. The city centre’s good road connections via the A66 and A19, as well as recent announcements around the introduction of direct train services to London, mean that transport connections are unlikely to be a limiting factor in the performance of the city centre. That said, any improvements that can be made to the current structure of public transport in the Tees Valley, including deregulation of bus services in light of the Tees Valley’s devolution deal, should be given due consideration.

Appropriate space to do business

A second factor that plays a role in business location decisions is the availability of appropriate office space. Figure 9 compares the make-up of commercial space in Middlesbrough city centre to that in Leeds city centre. The city centre of Leeds has driven the growth of the city overall in recent years, and the majority of this growth has been knowledge based. The composition of its commercial space is reflective of this – 59 per cent of space is given over to offices. Meanwhile retail accounts for 28 per cent. The opposite is seen in Middlesbrough city centre – just 27 per cent is office space, while almost half is given over to retail.

Retail in Leeds city centre thrives as a result of the strong performance of the rest of the city-centre economy, which pulls in over 70,000 commuters who in turn support the retail sector, as well as bars and restaurants. As shown above, this is in contrast to Middlesbrough. Given the relatively sluggish performance of Middlesbrough’s city-centre economy, Figure 9 suggests that the commercial property available in the city centre may be too heavily skewed towards retail.

---

17 Eighteen kilometres was defined as the upper quartile of commuting distances by managers and senior officials in Green A (2009) Geography matters: The importance of sub-national perspectives on employment and skills, Wath-Upon-Dearne: UK Commission for Employment and Skills p.14-15
19 Source: NOMIS
21 Source: Census 2011
The lack of supply of office space in the city centre does not appear to be an issue. The average rateable value of office space – a proxy for rents – is £65. In Leeds it is £186. Despite rents being an estimated three times higher in Leeds city centre than in Middlesbrough, businesses have shown a clear preference to locate in the former than the latter. Further increasing the supply of office space in Middlesbrough city centre would most likely push rents down further when demand is weak, and would not make it a more attractive place to do business.

However, there may be a case for improving the quality of office stock in the centre. The success of Teesdale Park, discussed in more detail in Box 4, is an indication of this. Both this site and the city centre have similar attributes – both have good access to the A66, and both draw on the same pool of workers. Teesdale Park has been able to attract many thousands of office-based jobs in recent years, and one factor in making this happen is likely to have been the newer office stock built there.

But this is likely to involve reducing the total amount of office stock, as well as improving the quality of what remains. A review of current commercial space would give a better picture on the current size and condition of offices available and whether or not they are fit for purpose, and any subsequent policy response should be informed by this. Analysis undertaken by Middlesbrough Borough Council to date suggests that much of the vacant office stock has been empty for some time, and would not be appropriate for conversion. This suggests that demolition and construction of new Grade A space may be more appropriate than seeking to refurbish or convert what is currently in place.
Box 5: Teesdale Park and Teesside Park

Teesdale Park – a business park – was built by the Teesside Development Corporation on the site of the former Head Wrightsons engineering works. It was the location of Margaret Thatcher’s famous, ‘walk in the wilderness’, and the building of the business park was a response to this event.

The business park has around 78,000 square metres of office space, not far short of the 102,000 square metres available in Middlesbrough city centre. It is home to Barclaycard, HMRC and the DVLA among others.

Next to the site stands the retail and leisure development called Teesside Park, which was also developed by the Teesside Development Corporation. It stands on the former Stockton racecourse, and has around 56,000 square metres of retail and restaurant space.

Meanwhile any future plans to subsidise office space on out-of-town sites should not be pursued. Both Teesdale Park and Teesside Park have been successes in their own right, leading to the creation of many thousands of jobs. But their creation may have undermined Middlesbrough’s city centre economy, and this poses questions about how the performance of the city centre may have been different today if the public money used to subsidise the creation of the two parks had instead been used to improve the attractiveness of Middlesbrough city centre as a place to do business. The evidence above suggests that not only would this have increased the number of KIBS jobs in the city centre (Figure 2 shows that Thornaby had the second highest number of KIBS jobs in Tees Valley in 2014), the greater concentration of these jobs would likely have increased the knowledge spillovers and so the productivity of city centre knowledge-based businesses as well as having a knock-on impact on the high street. The future subsidisation of any office space should consider the impact that this is likely to have in other areas of Tees Valley.

Location of the public sector

Consolidating appropriate public sector activities in Middlesbrough city centre is a more direct way of increasing the concentration of jobs in the area. This will impact the private sector directly by increasing footfall for retailers, bars and restaurants. Indirectly it could help change the view of Middlesbrough city centre as a place to do business by increasing the amount of activity in the area. Where possible, this should be considered as a means of improving the performance of the city-centre economy.

Public realm and the location of cultural and leisure amenities

While neither public realm or the location of cultural and leisure amenities will drive economic growth, the quality of these and how they integrate with and link to other parts of the city centre is likely to have some impact on the attractiveness of Middlesbrough city centre as a location to do business.

Middlesbrough has a number of cultural and leisure institutions in its city centre, including the Middlesbrough Institute Of Modern Art and the Town Hall, which pull people in. When looking to remodel the supply of office space within the city centre, due regard should also be given to the other roles that the city centre also plays in the wider Tees Valley area, for example as a place of learning and for entertainment, and how these buildings are linked together by public realm.

24 Source: VOA
27 Source: VOA
Conclusion

Middlesbrough city centre is at the centre of the Tees Valley economy. It has the highest share of total jobs – 5.9 per cent – despite accounting for only 0.2 per cent of all land. And at 12.8 per cent it has an even higher share of knowledge intensive business services jobs, which tend to be higher skilled and better paid.

However, the city centre underperforms when compared to other city centres in Britain. Its industrial structure tends to be much less knowledge-focused than other city centres, and it had fewer private-sector jobs in 2014 than it did in 2008.

This underperformance presents a threat to the future growth on the Tees Valley economy as a whole. The basic challenge for cities is to replace jobs lost in declining industries with jobs in new, knowledge-based areas. The increasing preference for these knowledge jobs to be based in city centres means that city centres will become ever more important to the performance of a city and its surrounding area and the sustainability of any future growth.

If the Tees Valley – which also has below-average shares of these types of jobs – is to attract such activity in the future, it needs a city centre that is attractive to such activity. This means that improving the attractiveness of Middlesbrough city centre – primarily through improving the skills levels of residents, but also through transport, commercial space and the location of the public sector – should be a key aim of local policymakers if they not only want to increase the number of jobs overall, but crucially also increase the number of higher-paid jobs available. The economic policies that the forthcoming mayor adopts will therefore need to have a spatial focus if they are to improve the performance of the Tees Valley economy.

Contact

Paul Swinney  Senior Economist
p.swinney@centreforcities.org  /  020 7803 4305