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The Yorkshire and The Humber and North East Productivity Challenge

Briefing Paper March 2023

This briefing paper provides an overview of the challenges and opportunities for the North East and Yorkshire and The Humber with a particular focus on productivity. It provides a summary of the key social and economic drivers across both regions, with specific attention paid to the cities and initiatives that are driving growth and development.

Section 1 provides an overview of productivity in the region relative to the UK as a whole.

Section 2 examines various drivers of productivity, using a 'scorecard' approach. Section 3 summarises initiatives that are being taken in different parts of the region that might contribute to future productivity improvements.

The briefing is based on publicly available strategic and economic planning documents from the Local Enterprise Partnerships (LEPs) and Combined Authorities, in addition to other relevant Local Authority documents. Additionally, data from the Office of National Statistics (ONS), including its census

and labour market statistics (NOMIS) have been used. This paper is intended to support the discussion and planning of the Regional Productivity Forum (RPF) rather than to provide an in-depth examination of the data.

The Productivity Picture (2008-19 growth and 2019 levels)

This scatterplot provides information about regional productivity (output per hour worked) and productivity growth over the period 2008-19 compared to the UK average. In general, productivity in the region is below average, although some parts of the region have witnessed productivity growth that exceeds the average for the UK as a whole. The relatively strong productivity growth of the North East compared to the UK average is in part due to Sunderland, which is the only area in the North East with a higher productivity level and a greater percentage increase in productivity than the UK as a whole.

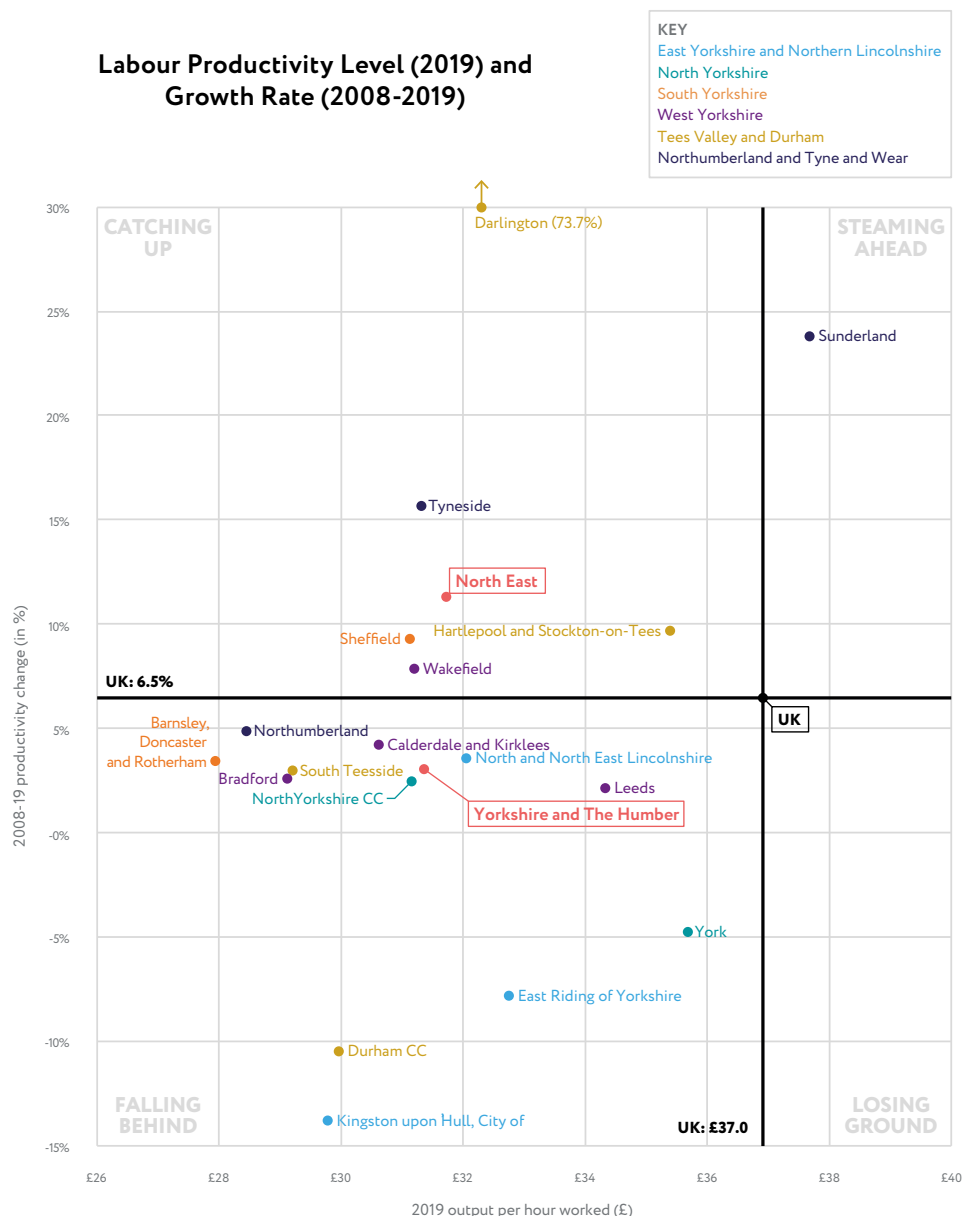
Sunderland is home to a relatively large modern manufacturing base including the UK's largest automotive plant. Darlington and Tyneside have also caught up significantly in terms of productivity with rest of the UK, making the North East as a whole a slightly stronger performer than Yorkshire and the Humber. Notably all cities in Yorkshire and the Humber (Bradford, Leeds, Sheffield and York) have underperformed over the past decade, relative to the UK average. While York is still the most productive of those four cities, due to a large financial and professional services, its productivity growth rate has fallen significantly below the UK's average. In contrast Sheffield's productivity level is lower than that of York, but its productivity growth is more or less at par with the UK average.

Even in the context of very weak national productivity growth, the regions east of the Pennines have been outperformed by other regions in the North and the Midlands since 2008. One factor is the long tail of low productivity firms in the North East and Yorkshire and Humber, with only Wales displaying an even larger share of low-productivity firms. It is also worth noting that the shares of jobs in the manufacturing sector and public services (including education, health and public administration) are relatively high in both regions. While these two sectors have relatively high levels of output per hour, productivity levels have

not much improved since 2008. In contrast, the share of jobs in sectors with relatively high productivity growth rates are either similar to the rest of the nation (for example, in distributive trades) or lower (for example, in business services).

According to the CBI (2020) both the North East region and the Yorkshire and Humber region were the two least resilient of the UK's 12 large regional economies to effect of the 2008 global financial crisis. Both regions have also been heavily affected by Brexit, given that they are both very reliant on EU markets for trade in comparison to other parts of the UK.

The interregional productivity differences are also likely to have been exacerbated by the economic effects of the COVID-19 pandemic, given that low income groups in cities were most at risk of suffering loss of income and job opportunities (CBI 2020). Investment in the North of England is amongst the lowest in the world's most advanced economies. An increase in investment for the North of England is now broadly accepted as something that will need to show improvement as part of the Levelling Up agenda.



Note: While productivity figures have also been published for 2020, they are excluded here because of the extraordinary impact of the pandemic on output and employment. The charts can be updated once the 2021 figures become available, which largely offset the anomalies of 2020. Source: [Office of National Statistics. Subregional productivity: labour productivity indices by UK ITL2 and ITL3 subregions.](#)

Institutional and Policy Context

The institutional and policy context in the North East and Yorkshire and Humberside has undergone some important changes recently. Since 2010, responsibility for local and regional economic development has come to rest primarily with the Local Enterprise Partnerships (LEPs), of which six are located in the two regions. Five of the nation's 10 city-region combined authority institutions are within the North East, Yorkshire and Humber. These follow some of the principles of the London mayoral set-up (though not for the North East Combined Authority) albeit with far fewer powers and resources.

The North East

The North East will have a new governance structure as the devolution deal confirmed in December 2022, will devolve greater powers for the region and abolish both the North of Tyne and south of the Tyne CAs. A new MCA will be created for the for the same area as the LEP in May 2024.

The North East Strategic Economic Plan (SEP) identifies five areas of strategic importance - advanced manufacturing; health and life sciences; energy; tech; and business services with the aim to promote new jobs, investment, growth, and serve as a focus for research and innovation.

Tees Valley is taking a place-based approach to drive long term growth and prosperity. The Tees Valley devolution deal has allowed the former Redcar steelworks site to be reimagined as cluster of excellence in clean energy and net zero manufacturing. The site has been a significant factor in the increase of inward foreign direct investment (FDI) in the Tees Valley, increasing by £86m from £487m in 2018 to

£573m in 2019. The industry-led Net Zero Innovation Centre will be completed in 2023 will utilise expertise in industrial decarbonisation, sustainability and the circular economy to develop new approaches to address the effects of waste and pollution on the environment. Other sustainable approaches include Net Zero Teeside, a major Carbon Capture Project which will help create the UK's first fully decarbonised industrial cluster and prevent 10 million tonnes of carbon dioxide being released into the atmosphere each year, and the SeaH Monopile Facility, an offshore wind turbine monopile manufacturing facility expected to be complete by March 2023.

Opportunities to deploy technologies and increase investment to capture and store carbon could also lift the economy by £1.9 billion (3.4% of 2020 GVA) and create 27,000 new jobs by 2050 if it reaches their Net Zero targets. This number includes 13,500 jobs in the energy and electricity industry, which represents the North East's greatest net opportunity (North East SEP, 2022).

Hull and East Yorkshire

There are four Local Authority areas in The Humber region including Hull City Council and East Riding of Yorkshire. The Humber Local Enterprise Partnership covers the four Humber Local Authorities. This includes Hull and the East Riding of Yorkshire, North Lincolnshire and North East Lincolnshire.

The area has several industrial sectors that have the potential to significantly boost productivity, innovation, and the creation of higher-skilled jobs in the UK, including:

- Medicare
- Health & Social Care
- Agri-tech and Food
- Ports & Logistics
- Manufacturing and Engineering;
- Construction
- Digital and Creative Industries
- Tourism & the Visitor Economy

There is recognition of the potential for wider cross-border sectoral specialisation, which include low carbon technologies, ports and logistics, and agri-tech/agri-food. The area supports a wide range of cutting-edge agricultural, coastal, agritech, food

manufacturing, and processing companies that are tightly connected to the global food system. Utilising the region's digital capability the digital sector, with a strong cluster in Hull, is expanding quickly from a base of smaller businesses. The urban, rural, and coastal communities provide employment in these fields to businesses and organisations of various sizes. While this spatial and sectoral diversity is advantageous for resilience, it can also impede business to business collaboration and knowledge transfer. Although there are some good examples, like the Local Food and Rural Tourism Networks, the current business networks do not completely span the larger territory, and access to specialised training can be difficult for smaller and rural firms.

The Hull and the East Riding of Yorkshire (HEY) LEP Economic Growth and Workforce Wellbeing Strategy prioritises four key priorities; productive & innovative economy, clean growth economy, skilled and inclusive economy and Competitive and Resilient Locations. Finally, Hull's City of Culture initiatives increased the local economy's GVA by almost £22 million, adding to the £300 million in current tourism revenue.

West Yorkshire

West Yorkshire has a Combined Authority whose membership includes Bradford, Calderdale, Kirklees, Leeds, Wakefield and York. West Yorkshire has a population of 2.3 million people, has an elected Mayor. It spans the Leeds City Region (LCR) Enterprise Partnership and the York and North Yorkshire Local Enterprise Partnership. Leeds is the largest city in the region with a population of 809,000. Recent funding arrangements for Yorkshire and The Humber include £830 million for West Yorkshire.

With its experience in creative media, data analytics, cyber security, FinTech, telecoms, health, and education technologies, LCR has established itself as a major centre for financial and professional services outside of London with more than 30 national and international banks as well as a rapidly growing legal sector.

LCR also earns more than £7 billion annually from advanced manufacturing, R&D, and product development. The NHS Digital Head Office and some of the biggest healthcare data platforms, world-class life sciences clusters of academic excellence, and commercial innovation are all located in the area.

The LCR Enterprise Partnership identifies four growth key sectors: healthcare and innovation; manufacturing; financial and professional services; and digital technologies.

The region would benefit from higher levels of both public and private investment in R&D and has identified the following strategic priorities: boosting productivity; enabling Inclusive growth; tackling the climate emergency; delivering 21st century transport; and securing money and powers.

Sheffield and South Yorkshire

South Yorkshire has a Mayoral Authority (SYMCA) with an elected Mayor and a LEP. The Mayoral Combined Authority covers Barnsley, Doncaster, Rotherham and Sheffield, with Sheffield the major city. In 2022, Doncaster was awarded city status.

Sheffield and South Yorkshire has specialisations in advanced manufacturing, health and life sciences and an emerging creative sector. Recent funding arrangements for the Yorkshire and The Humber include £570 million to South Yorkshire allocated through the City Region Sustainable Transport Settlements.

Despite the closing of Doncaster Sheffield Airport, the Gateway East remains a strategically important initiative in the Sheffield City Region. Based in Doncaster, it has numerous connected locations across the North and the Midlands with specialisms including advanced manufacturing and logistics. Increased investment is required to create the enabling conditions that will grow productivity.

The SYMCA sets out a vision for the region that is centred on growth, inclusion, and environmental sustainability. To achieve this, the region will need to maximise the potential for clusters, improve urban areas, and ensure the availability of sufficient land in the appropriate locations. The region needs a longer term, strategic and complete plan and it will need to work with stakeholders to implement place-based policies that improve economic growth, inclusion, and environmental sustainability.

York and North Yorkshire

York and North Yorkshire has the vision to be a fairer, greener and stronger economy. The plan, overseen by the York and North Yorkshire LEP identifies four strategic priorities to achieve this: place and infrastructure; people and communities; business and innovation; and a low carbon and environment.

Pay in York is higher than much of Yorkshire and The Humber and is close to the national median (across full-time and part-time roles), with York ranking 97th out of 204 authorities for full-time weekly pay and 58th out of 203 authorities for part-time hourly pay. The majority of the working-age population in York has an education equivalent to or higher than NVQ Level 4, placing York in the top 10% of local authorities on this metric according to the most recent data. Since 2004, 21,000 high-skilled jobs have been created in York, demonstrating a strength in this area.

In the last 20 years, York has consistently put an emphasis on expanding well-paid jobs as a result of sector expansion that is led by universities. The Science City York plan has increased the number of science-related jobs in the city; the emphasis on media arts has opened new business prospects across industries; and knowledge-based industries have experienced significant growth and completely changed York's economy.

Primary Drivers and Bottlenecks

The Productivity Institute's Productivity Lab has produced regional score cards (see page 6 and 7) based on harmonised productivity metrics that allow each region to be compared to each other, including the devolved nations.

The metrics are related to 5 key drivers of productivity: business performance, skills and training, policy and institutions, health and well-being, and investments and infrastructures. The drivers are described below and further information can be found on The Productivity Institute website.

Business Performance is analysed through export intensity (exports as % of GDP), R&D intensity (R&D per job) and innovative businesses (Innovation active businesses), SME finance (% of SMEs where finance is a major obstacle) and business creation (Business births as % of all active enterprises).

Skills and Training at the regional level includes information on tertiary education (% of the population with tertiary education, NVQ4+), unskilled population (% of the population with no or low skills, NVQ1 or lower), training opportunities (% of employers providing training in the past 12 months), and regional skill mismatches (% of vacancies which are skill shortage vacancies).

Policy and Institutions are evaluated by including measures on political uncertainty (% of SMEs where political uncertainty and government policy is a major obstacle) and red tape (% of SMEs where legislation & regulation is a major obstacle).

Health and Well-being are described with measures of economic inactivity (economic inactivity rate), long-term ill health (% of economic inactivity due to long-term ill health), and active population (% of the population aged 16-64).

Investment and Infrastructure are evaluated by including data on Foreign Direct Investment intensity (FDI per job), regional infrastructure intensity (Gross fixed capital formation per job) and measures of regional connectivity (access to Gigabit-capable internet services).

As demonstrated by the scorecards, there are various factors driving and inhibiting productivity across the North East, Yorkshire and Humber.




















































The **North East** scores exceptionally well on exports, new businesses, business training and skill-related vacancies. Yorkshire and The Humber show strength in innovation intensity and the percentage of SMEs identifying legislative and regulatory policy obstacles, but are weak on exports, R&D and Foreign Direct Investment (FDI). Other productivity inhibitors include access to venture capital and angel investment and less investment in infrastructure. A low level of investment is a significant issue for the North of England as a whole.








In terms of skills shortages, the report for **Yorkshire and The Humber** suggests fewer and less intense shortages than other English regions, but it still has challenges with the local availability of electrical engineers and IT operations technicians. A lack of both interregional connectivity as well as major transport modes to the rest of the nation are an important challenge for both regions.

The planned HS2 rail eastern leg to Leeds is no longer to be built and the Transpennine route will receive upgrades instead of a new line. The scrapping of both plans has brought into question the Government's commitment to levelling up the north of England. Doncaster and Sheffield Airport (DSA) also confirmed its closure as of November 2022.

TPI Yorkshire & Humber Productivity Scorecard

84.9% Yorkshire and the Humber's productivity relative to UK average
10th of the UK's twelve regions for productivity performance




















































Category	Driver of productivity	Relative to UK median	Change over time	
			Short-term	Long-term
Business performance & characteristics	Exports as % of GDP			
	R&D per job			
	Innovation active businesses			
	% of SMEs where finance is a major obstacle			
	Business births as % of all active enterprises			
Skills & training	% of population with tertiary education (NVQ4+)			
	% of population with no or low skills (NVQ1 or lower)			
	% of employers providing training in past 12 months			
	% of vacancies which are skill shortage vacancies			
Policy & institutions	% of SMEs where political uncertainty & government policy is a major obstacle			
	% of SMEs where legislation & regulation is a major obstacle			
Health & wellbeing	Economic inactivity rate			
	% of economic inactivity due to long-term ill health			
	% of population aged 16-64			
Investment, infrastructure & connectivity	FDI per job			
	Gross fixed capital formation per job			
	Access to Gigabit-capable internet services			

	Better: higher than 105% of UK ITL1 median		Improvement over time		Data unavailable
	Equal: within 95% - 105% of UK ITL1 median		No change over time		Worsening over time
	Worse: lower than 95% of UK ITL1 median				

TPI North East Productivity Scorecard

86.4% North East's productivity relative to UK average

9th of the UK's twelve regions for productivity performance

Category	Driver of productivity	Relative to UK median	Change over time	
			Short-term	Long-term
Business performance & characteristics	Exports as % of GDP			
	R&D per job			
	Innovation active businesses			
	% of SMEs where finance is a major obstacle			
	Business births as % of all active enterprises			
Skills & training	% of population with tertiary education (NVQ4+)			
	% of population with no or low skills (NVQ1 or lower)			
	% of employers providing training in past 12 months			
	% of vacancies which are skill shortage vacancies			
Policy & institutions	% of SMEs where political uncertainty & government policy is a major obstacle			
	% of SMEs where legislation & regulation is a major obstacle			
Health & wellbeing	Economic inactivity rate			
	% of economic inactivity due to long-term ill health			
	% of population aged 16-64			
Investment, infrastructure & connectivity	FDI per job			
	Gross fixed capital formation per job			
	Access to Gigabit-capable internet services			

Key	Color	Description	Arrow	Description	Color	Description
		Better: higher than 105% of UK ITL1 median		Improvement over time		Data unavailable
		Equal: within 95% - 105% of UK ITL1 median		No change over time		
		Worse: lower than 95% of UK ITL1 median		Worsening over time		

Looking to the future

Despite many challenges, the North East and Yorkshire and The Humber are currently home to a number of transformative projects that are opening up new commercial prospects. The North East's devolution agreement is worth £1.4 billion to the region and will give the newly elected mayor and other regional leaders authority over housing, transportation, and skills development.

The area is currently engaged in a number of ambitious projects that will promote learning not just in the area but also nationally and worldwide. Many of these projects will focus on sustainability goals through innovation and cooperation. For example, the **Sustainable, Smart Port** at the Port of Tyne, is a project funded by the North East LEP and a partnership between Siemens, Connected Places Catapult, Newcastle University, and funded by the Department of Transport, aimed at providing a blueprint for the North East transition to Net Zero to be used nationally.

The **Deep Water Test Tank**, which is situated on the Neptune Enterprise Zone on the North Bank of the Tyne in Newcastle, is another initiative

demonstrating the commitment for a sustainable economy. This has proven to be a driver for other projects, including the construction of the test towers and floating gravity-based foundations for the **EDF Blyth Offshore Demonstrator**.

With the help of the **ULEV Taxi Scheme** and **Clean Bus** technology, West Yorkshire has low emission vehicles, and South Yorkshire is home to a number of energy research projects that include offshore wind turbine technology, battery technology, hydrogen, and mine water - some of the most notable innovations of their kind in the country.

Both regions are making progress on several fronts to raise public investment. For instance, a new National Infrastructure Strategy (HMT 2020) was recently created, Leeds has been selected as the location of a new National Infrastructure Bank's headquarters, Teeside and the Humber both received Freeport status, and Darlington will house some of HM Treasury. It is too early to gauge the effects of those investments on overall productivity and growth trajectory of the regions east of the

Pennines is still uncertain.

Positive examples of cooperation to meet common needs can be seen across the region, however, several important challenges remain. For example, how can places collaborate to develop a compelling narrative that will draw investment to the area? How can collaboration address the need to upskill both the existing and future workforces and skill gaps? And how can the region encourage corporate and green growth by boosting new venture formation, innovation, and trade?

The primary purpose of this briefing paper has been to inform and stimulate discussions around those questions. The commitment and expertise by The Productivity Institute's North East, Yorkshire and the Humber Regional Productivity Forum offers an opportunity to build on the success and progress already made and jointly realise the goal to turn those initiatives into the creation of a more productive and prosperous region.

The Productivity Institute

The Productivity Institute is a UK-wide five-year research organisation, which began in September 2020 and is funded by a £26 million grant from the Economic Social Research Council in the UK – the largest single grant in its history and supported by £6 million from partner institutions.

It explores what productivity means for business, for workers and for communities – how it is measured and how it truly contributes to

increased living standards and well-being. Productivity is key to a more prosperous and equitable society.

We aim to pinpoint the causes of the stagnation in UK productivity and focus energies to laying the foundations for a new era of sustained and inclusive productivity growth, which will improve our material standard of living. Our world-class research draws on expertise from social sciences, engineering, physics, political

science, business management, innovation research and data science. Our research activities and outputs are developed in collaboration, and in some instances through co-production, with business and policy users. For more information and insights, please visit our website at www.productivity.ac.uk where you can also sign up to receive our regular newsletters.



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