



**Economic Development and Regeneration Advisory Board**

Tuesday 24th October 2017 at 2.00 pm

**Presentation delivered at the meeting for the agenda item 6**

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# UNLOCKING REGIONAL GROWTH

UNDERSTANDING THE DRIVERS OF PRODUCTIVITY  
ACROSS THE UK'S REGIONS AND NATIONS

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OCTOBER 2017

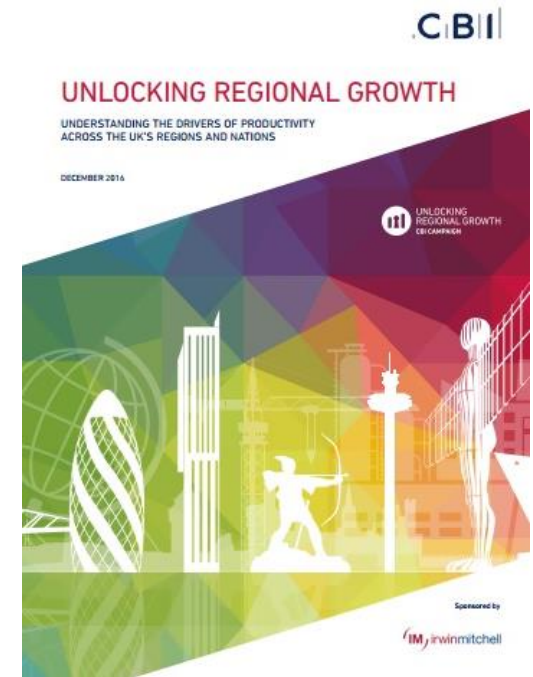


Driven by our members across the UK's regions and nations, the CBI in 2016 embarked on a project to understand what drives growth and productivity in the UK and what can be done to fix the disparity.

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In partnership with McKinsey, by combining special access to the Office of National Statistics' (ONS) micro data with the voice and knowledge of our members and a panel of experts and stakeholders, we have been able to analyse regional data at an unprecedented level of detail.

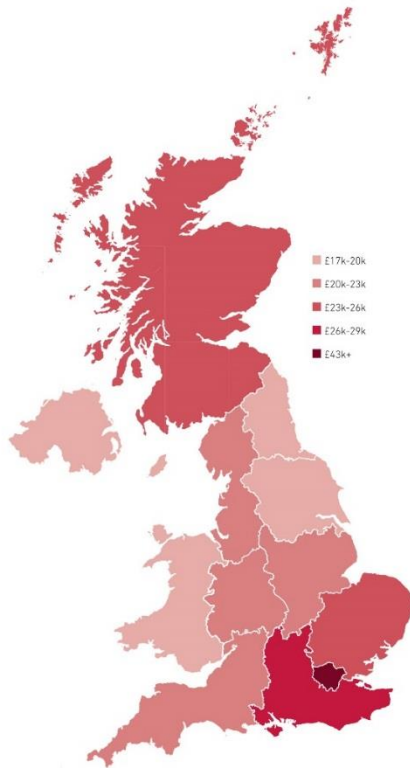
We can now produce data on up to 173 regions and local areas of the UK and, in some cases, we can even go right down to postcode level.



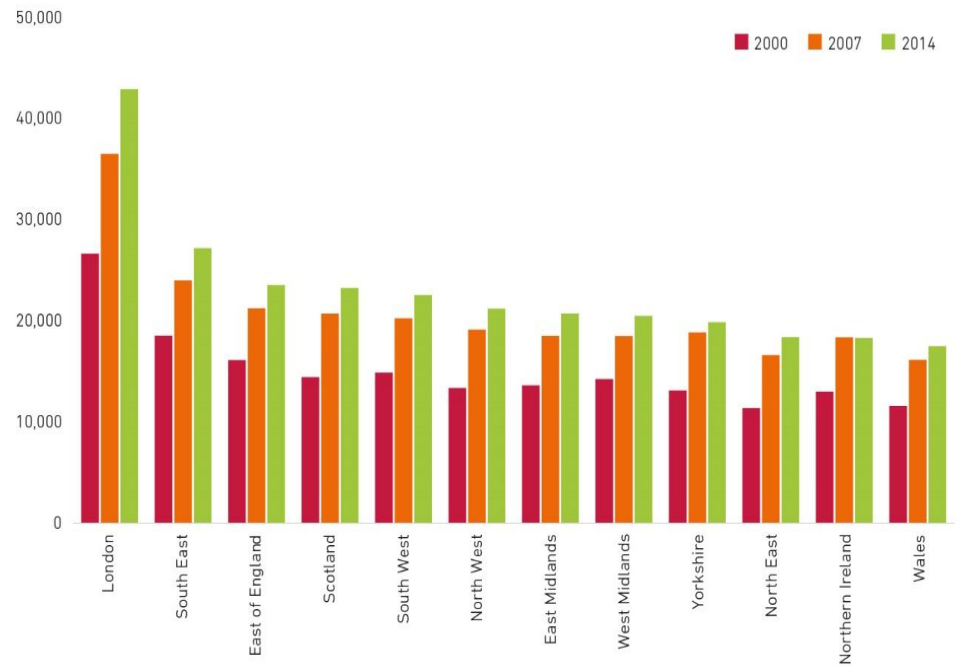
There is significant variation in productivity across the regions and devolved nations of the UK and this has persisted over time



Nominal GVA per head (£)\*



Nominal GVA per head (£) since 2000\*



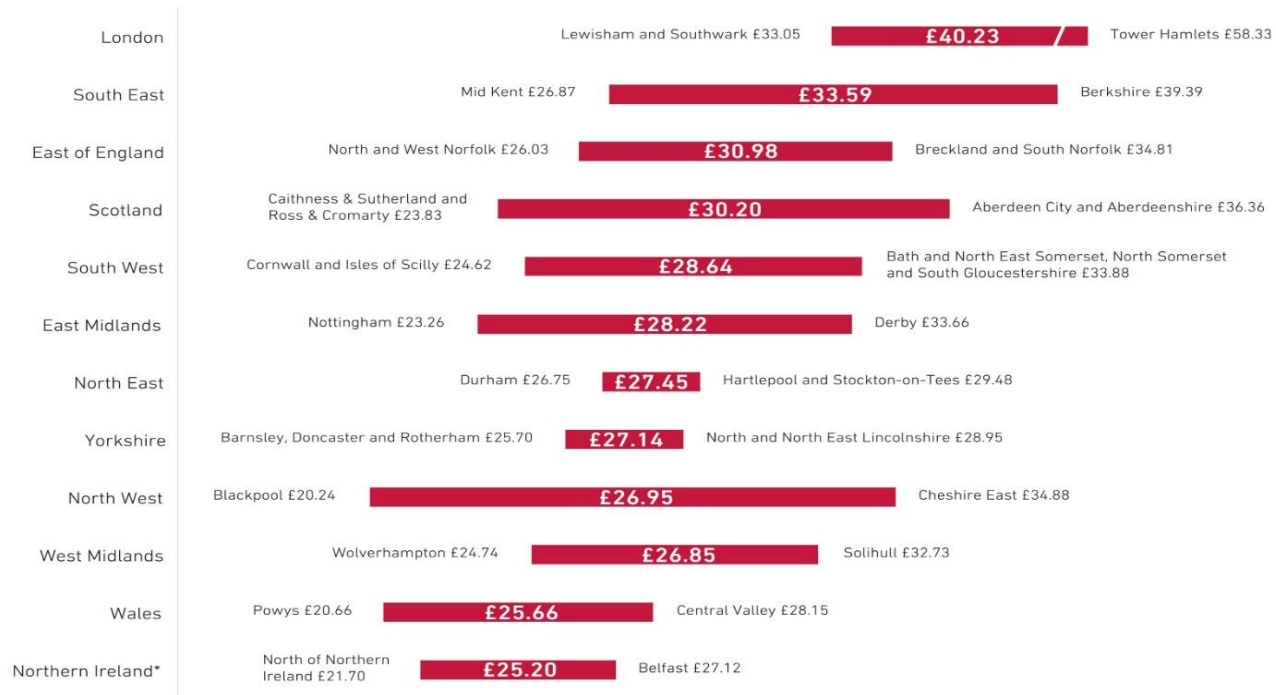
\* Measured as gross value added at basic prices which does not account for differences in inflation rates across the regions

SOURCE: ONS (2014)

# ...and almost as much variation in productivity within the regions and devolved nations

## Local productivity variation within the UK (GVA per hour)

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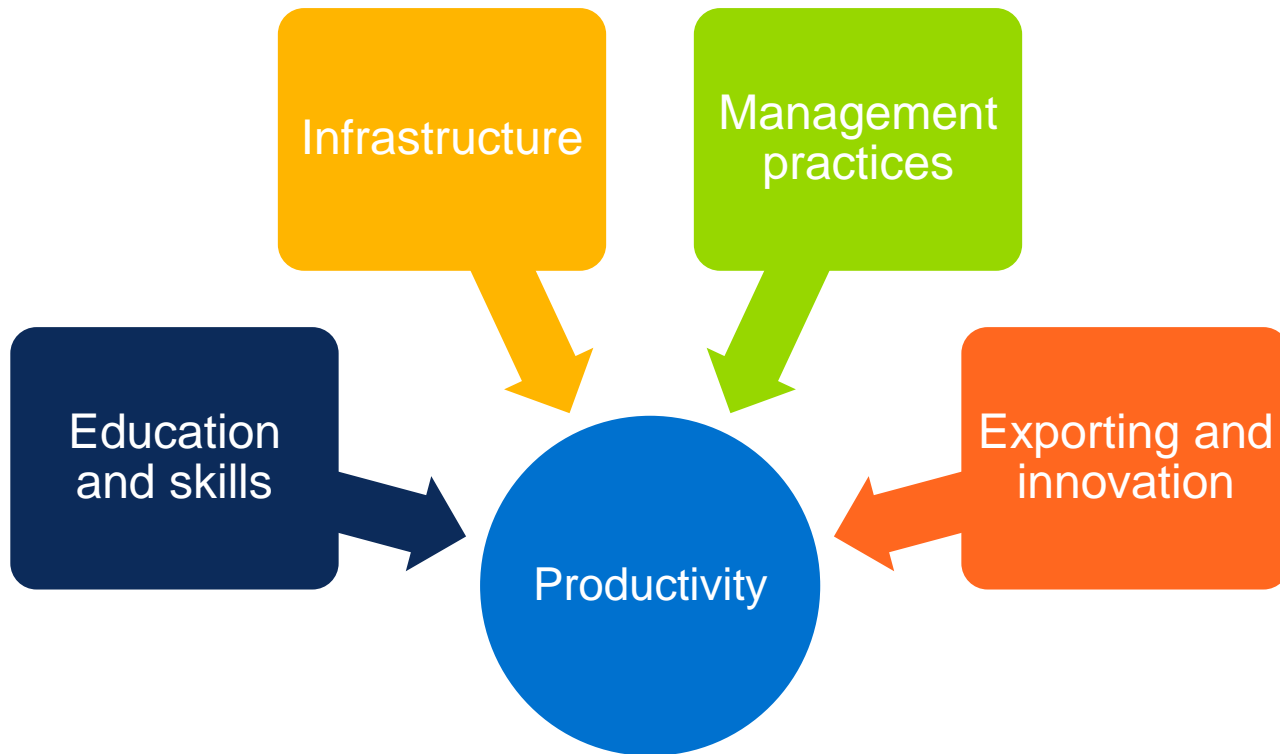


■ Regional/national average

\* Northern Ireland NUTS3 figures are based on 2013 data for GVA per job filled and hours worked

SOURCE: ONS (2014)

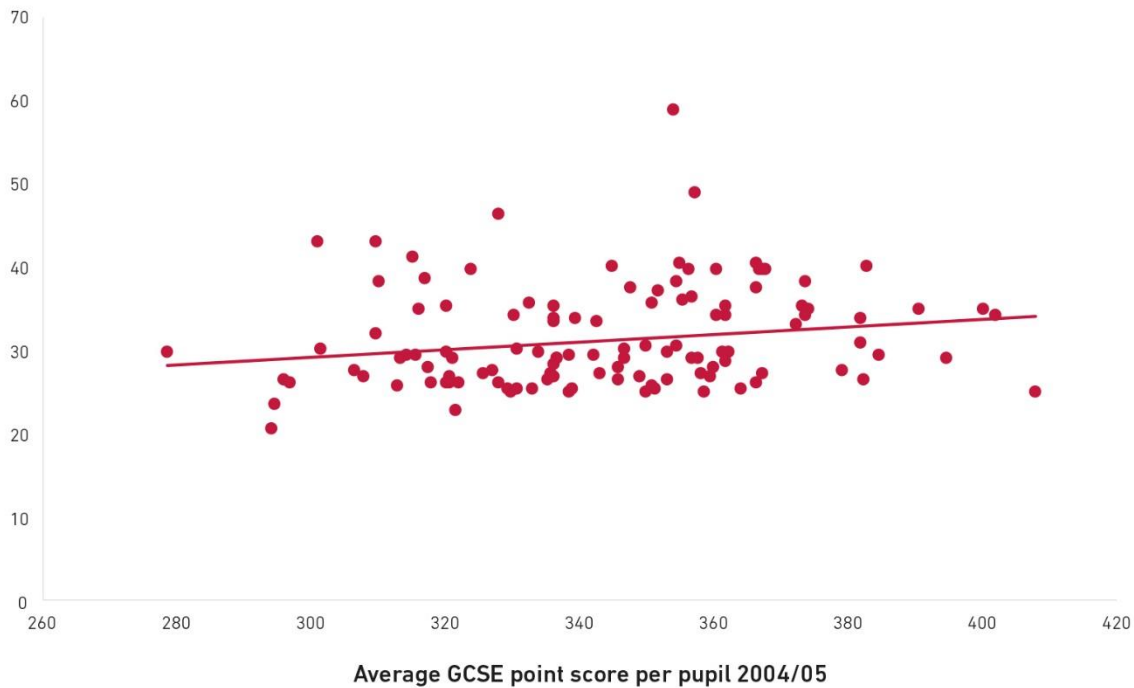
# Four main drivers of regional productivity



# Productivity in local area is linked to achievement of secondary school leavers

Average GCSE point score in 2004/05 vs productivity in 2014 by NUTS3\*

GVA per hour (£)



\* Includes GCE/VCE and other equivalent examinations

SOURCE: Department for Education, WalesStat; ONS (2014)



# Better links between businesses and schools pays dividends for local productivity (1/2)

A: Businesses offering work experience placements vs productivity by LEP

GVA per hour (£)

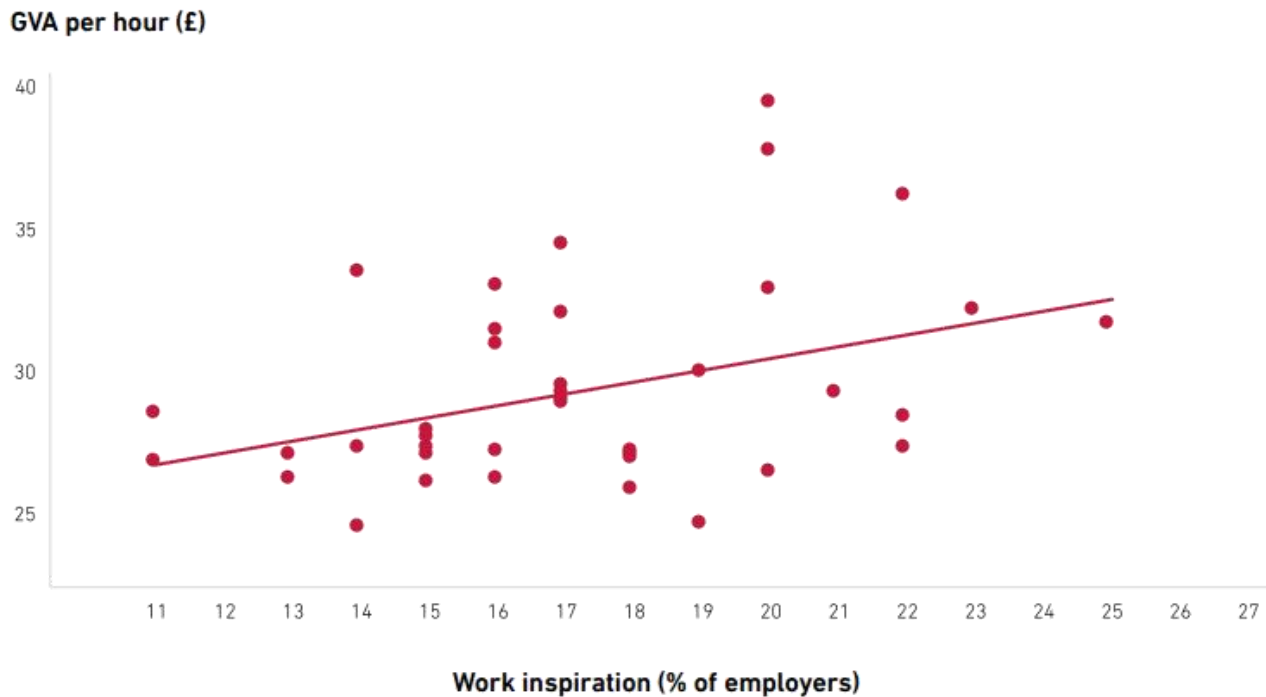


SOURCE: UKCES EPS 2014; ONS (2014)

# Better links between businesses and schools pays dividends for local productivity (2/2)

## B: Businesses offering work inspiration vs productivity by LEP\*

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\* Work inspiration is the aim of instilling a passion in students to plan for their future careers, through means such as site visits, mentoring, mock interviews and enterprise competitions.

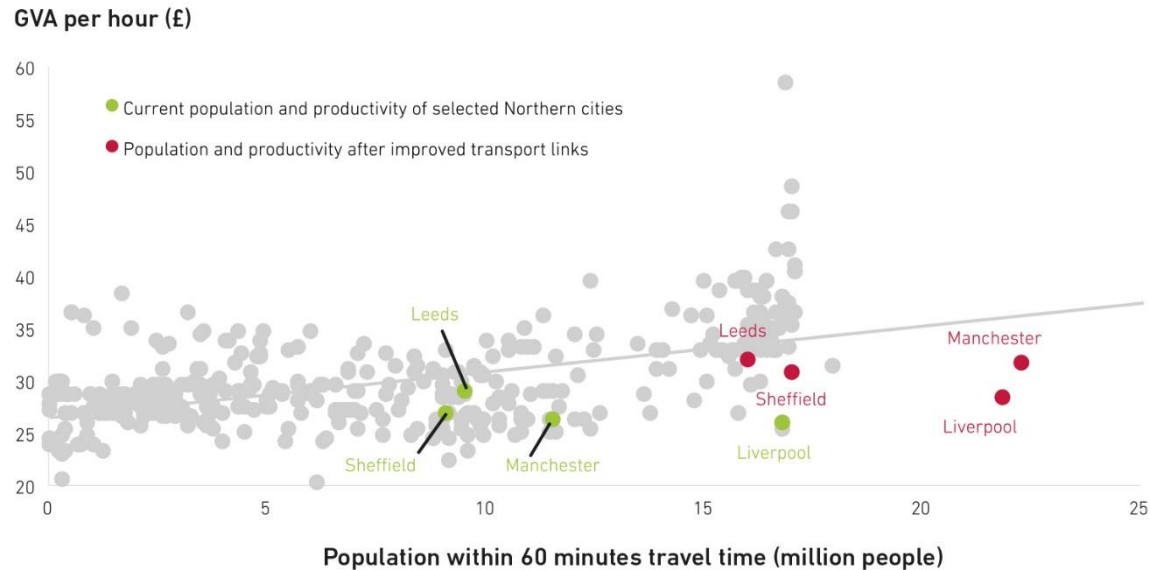
SOURCE: UKCES EPS 2014; ONS (2014)

If some Northern cities became more connected we could see a significant increase in productivity due to agglomeration



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### Population within 60 minutes of the centre of a Local Authority vs productivity of the Local Authority

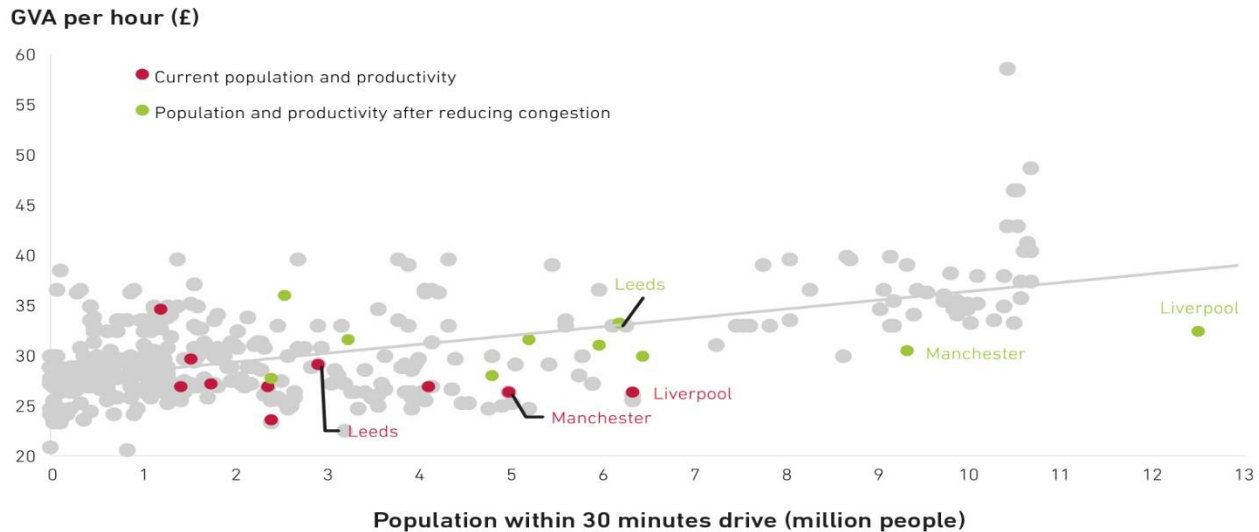


We have used a proxy metric for inter-regional agglomeration: the population that lives within 60 minutes of a particular Local Authority. For every 1,000,000 increase in population we see a £0.50 increase in GVA per hour. We have modelled the impact of increasing the 'catchment areas' for some Northern cities by reducing travel times between the cities to 30 minutes

SOURCE: ONS, Census, Postcode Sector to Sector data (XYZ maps)

# Reducing congestion within large cities could boost productivity (1/2)

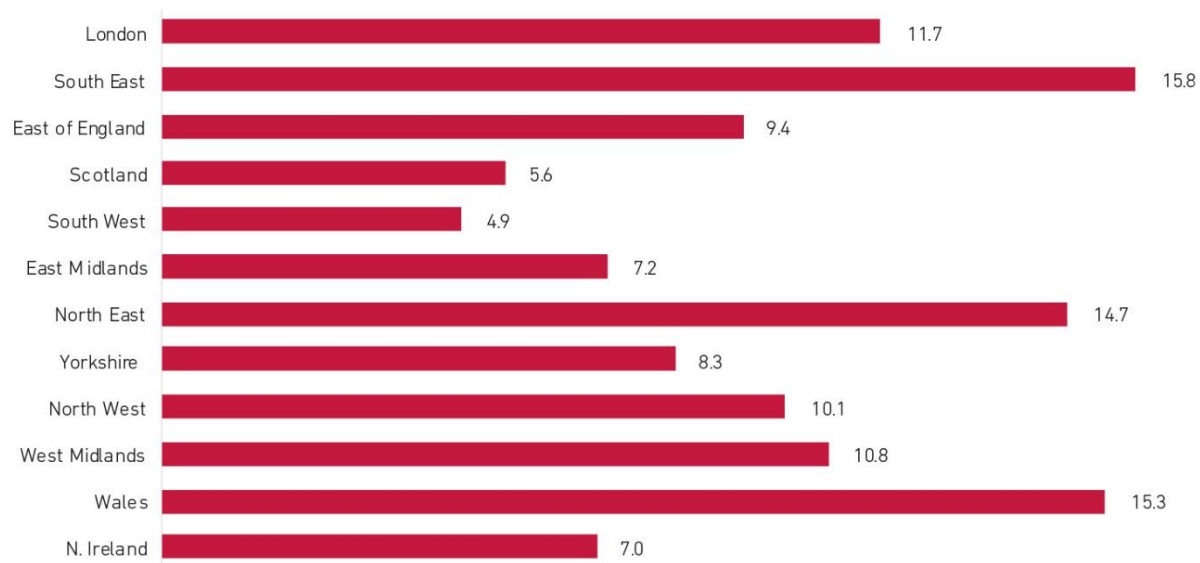
A: Population within 30 minutes vs productivity by Local Authority



We have used the population that lives within 30 minutes of a particular Local Authority as a proxy for local agglomeration. For every 1 million increase in an area's population, there is an additional £0.60 in GVA per hour. We have modelled the impact increasing the speed of travel within cities by 50% (so that people within 45 minutes of the centre can travel into it within 30 minutes).

# Innovation matters for productivity and varies across the UK

## Turnover attributable to new, improved, and novel products (%)



In a firm level regression of productivity, two proxies of innovation were found to be statistically significant factors for predicting productivity

- Firms planning to invest in R&D were significantly more productive than firms that were not
- Firms that spent a higher share of their turnover on software development were also significantly more productive

SOURCE: Community Innovation Survey (2008); ONS Microdata (2014)

# Across all regions of the UK, there is a large amount of potential exporters that are not exporting today

Proportion of non-exporting firms that are “potential exporters” by NUTS1\* (%)



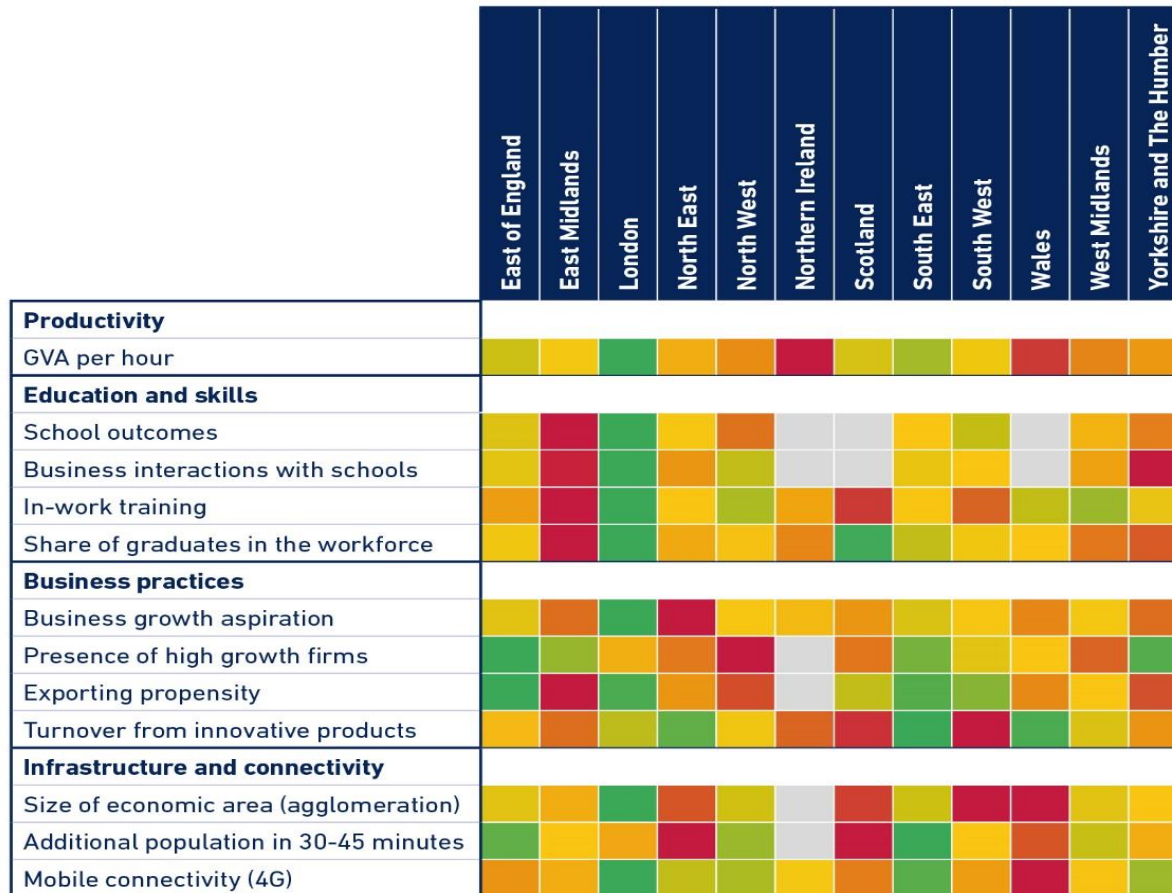
\* Average value for 2004 - 2010

SOURCE: Harris and Moffat (2013)

# Each region and nation has its own unique set of strengths and opportunities when it comes to productivity



Heatmap of productivity drivers by NUTS1\*



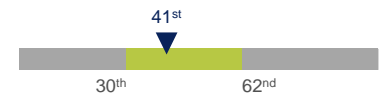
\* Grey shading indicates where data is unavailable (Northern Ireland, Scotland and Wales only)

SOURCE: CBI calculations

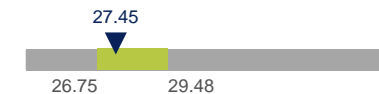
Recommendation levels: ● High priority ● Medium priority ● Low priority

## Productivity

GVA per hour – percentiles



GVA per hour – £



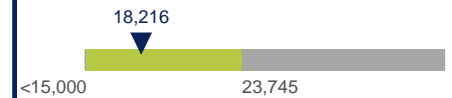
Productivity in North East is in the 41<sup>st</sup> percentile for the UK, meaning it is less productive than 59% of NUTS3 areas in the UK.

Productivity of NUTS3 areas in North East ranges between the 30<sup>th</sup> to 62<sup>nd</sup> percentiles in the UK.

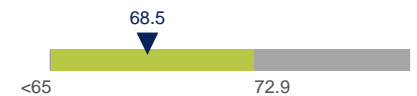
Productivity range of all NUTS3 areas in the UK.<sup>1</sup>

## Economic outcomes<sup>2</sup>

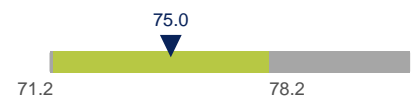
GVA per head – £ per person



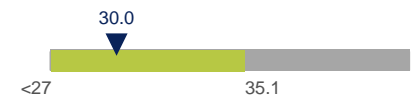
Employment rate – %



Participation rate – %



Average hours worked per week

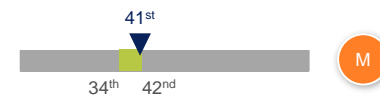


## Education & skills

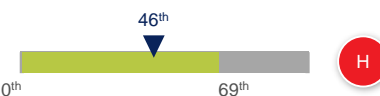
School outcomes



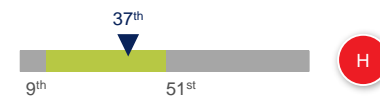
Business interaction with schools



In-work training



Share of graduates in the workforce

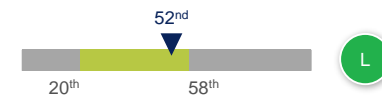


## Business practices

Business growth aspiration



Presence of high-growth firms



Exporting propensity



Turnover from innovative products<sup>2</sup>

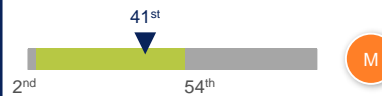


## Infrastructure & connectivity

Mobile connectivity (4G)



Size of economic area (agglomeration)



Additional population within 30-45min commute time



1,359,586

<sup>1</sup> Economic outcomes are plotted on an absolute scale showing the 5<sup>th</sup> – 95<sup>th</sup> percentile of NUTS3 areas in the UK. Productivity drivers are plotted on a percentile scale of all NUTS3 areas in the UK.

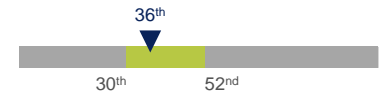
<sup>2</sup> Available on a NUTS1 level only.



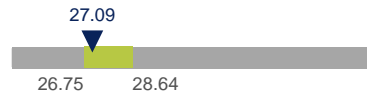
Recommendation levels: ● H High priority ● M Medium priority ● L Low priority

## Productivity

GVA per hour – percentiles



GVA per hour – £



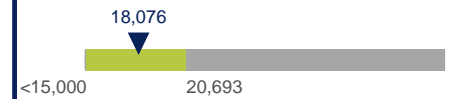
▼ Productivity in North Eastern is in the 36<sup>th</sup> percentile for the UK, meaning it is less productive than 64% of NUTS3 areas in the UK.

■ Productivity of NUTS3 areas in North Eastern ranges between the 30<sup>th</sup> to 52<sup>nd</sup> percentiles in the UK.

■ Productivity range of all NUTS3 areas in the UK.<sup>1</sup>

## Economic outcomes<sup>2</sup>

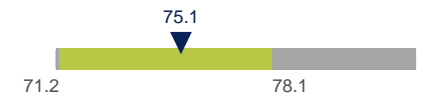
GVA per head – £ per person



Employment rate – %



Participation rate – %



Average hours worked per week



## Education & skills

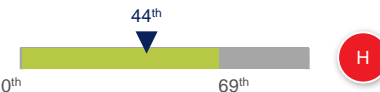
School outcomes



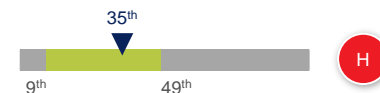
Business interaction with schools



In-work training

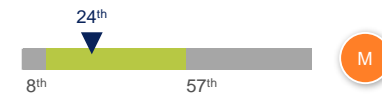


Share of graduates in the workforce

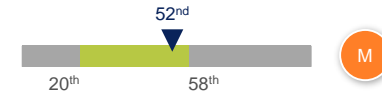


## Business practices

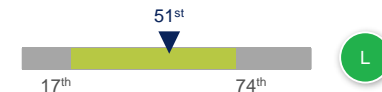
Business growth aspiration



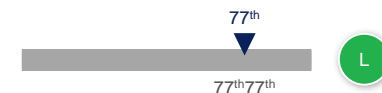
Presence of high-growth firms



Exporting propensity

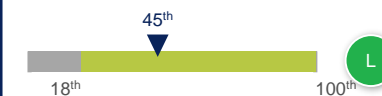


Turnover from innovative products

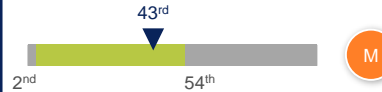


## Infrastructure & connectivity

Mobile connectivity (4G)



Size of economic area (agglomeration)



Additional population within 30-45min commute time



681,417

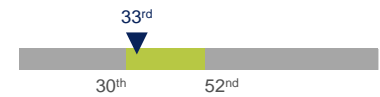
<sup>1</sup> Outside England, special sub-regions have been created to capture economic ecosystems, approximating the geographical idea of the 39 LEPs in England.

<sup>2</sup> Economic outcomes are plotted on an absolute scale showing the 5<sup>th</sup> – 95<sup>th</sup> percentile of NUTS3 areas in the UK. Productivity drivers are plotted on a percentile scale of all NUTS3 areas in the UK.

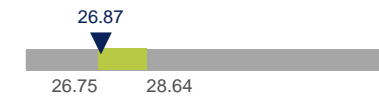
Recommendation levels: ● High priority ● Medium priority ● Low priority

### Productivity

GVA per hour – percentiles



GVA per hour – £



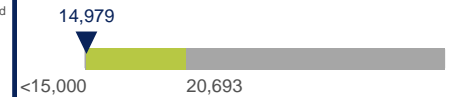
▼ Productivity in Northumberland is in the 33<sup>rd</sup> percentile for the UK, meaning it is less productive than 67% of NUTS3 areas in the UK.

■ Productivity in North Eastern ranges between the 30<sup>th</sup> to 52<sup>nd</sup> percentiles in the UK.

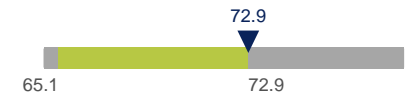
■ Productivity range of all NUTS3 areas in the UK.<sup>1</sup>

### Economic outcomes<sup>2</sup>

GVA per head – £ per person



Employment rate – %



Participation rate – %



Average hours worked per week



<sup>1</sup> Outside England, special sub-regions have been created to capture economic ecosystems, approximating the geographical idea of the 39 LEPs in England.

<sup>2</sup> Economic outcomes are plotted on an absolute scale showing the 5<sup>th</sup> – 95<sup>th</sup> percentile of NUTS3 areas in the UK. Productivity drivers are plotted on a percentile scale of all NUTS3 areas in the UK.

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### Education & skills

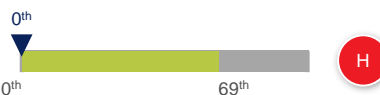
School outcomes



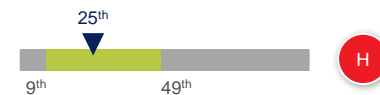
Business interaction with schools



In-work training

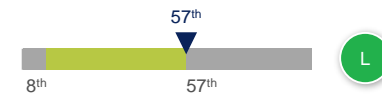


Share of graduates in the workforce

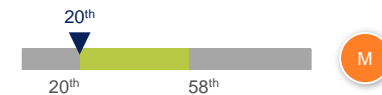


### Business practices

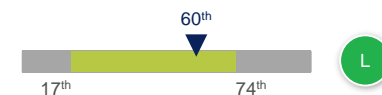
Business growth aspiration



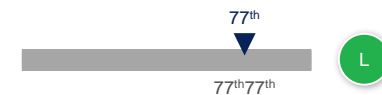
Presence of high-growth firms



Exporting propensity



Turnover from innovative products

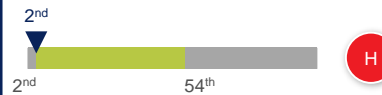


### Infrastructure & connectivity

Mobile connectivity (4G)



Size of economic area (agglomeration)



Additional population within 30-45min commute time



580,636

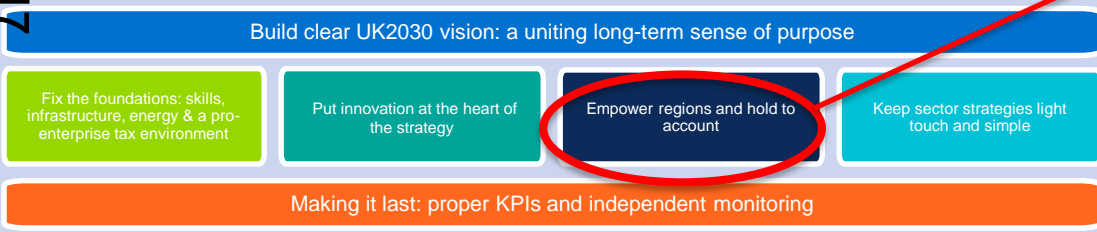
# Next step: focus on place

## Green paper 10 pillars



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## CBI recommendations



- Following the release of the industrial strategy green paper, Government now has the key elements of a successful industrial strategy in its sights: **people, innovation, infrastructure, enterprise and place.**
- CBI will with the information from the regional scorecards, run a series of workshops which looks to voice business priorities when it comes to a place based approach to industrial strategy.
- **Key success criteria includes:** practical solutions to local productivity drivers, strong and effective local leadership, collaboration between government/local stakeholders and businesses to ensure sustainability and long-term success.

## Overview

The CBI regional growth scorecard provides a snapshot of the economic health of a region highlight where business leaders, devolved administrations, central and local governments leaders should concentrate their efforts.

## Interpreting the scorecard

On each scorecard, the four economic outcomes metrics are shown in the column on the far right. Whereas the three columns on the left-hand side show the relative performance of the area against the drivers of productivity.

▼ indicates the average value for the area selected.

■ shows the minimum and maximum values of the local areas within the LEP/sub-region.

■ shows the whole range of the UK.

## Sub-regions

For the devolved nations, we have created 11 additional sub-regions to capture the geographical idea of Local Economic Partnerships (LEPs) in England. The sub-regions and their constituent local areas (NUTS3) are:

### Wales

- North Wales (UKL11-UKL13, UKL23)
- Central Wales (UKL24)
- Swansea Bay (UKL14, UKL18)
- Cardiff Capital Region (UKL15-UKL17, UKL21, UKL22)

### Scotland

- Highland and Islands (UKM61-UKM66, part of UKM63)
- Aberdeen (UKM50)
- Edinburgh, South East Dundee (UKM21-UKM28)
- Glasgow and the South West (UKM31, UKM33-UKM38, part of UKM63)
- Dumfries and Galloway (UKM32)

### Northern Ireland

- Belfast (UKN01-UKN03)
- West of Northern Ireland (UKN04, UKN05)

## Education and skills

### School outcomes

Percentage of schools that are above the floor standard. Data available for England only.<sup>2</sup>

Source: Department for Education (2014)

### Business interaction with schools

Percentage of employers offering work experience placements. Data available for England only and solely on a LEP level.

Source: Commission for Employment and Skills (2014)

### In-work training

Percentage of employers offering management training.<sup>1</sup> For Wales, Scotland and Northern Ireland data is only available at a NUTS1 level.

Source: Commission for Employment and Skills (2014)

### Share of graduates in the workforce

Percentage of population with an NVQ 4 qualification (Bachelor's degree equivalent) or higher.<sup>2</sup>

Source: ONS (2014), Census (2011)

## Infrastructure and connectivity

### Mobile connectivity (4G)

Percentage of premises with 4G coverage from three operators.<sup>1</sup>

Source: Ofcom (2016)

### Size of economic area (agglomeration)

Maximum number of residents living within 30 minutes travel time of a central postcode.<sup>1</sup>

Source: ONS (2014), Census (2011), XYZ maps

### Additional population within 30-45min commute time (congestion)

Maximum working-age population gain in a 30 to 45 minute commute zone from a central postcode.

Source: ONS (2014), Census (2011), XYZ maps

## Business practices

### Business growth aspiration

Percentage of 18 to 64-year-olds who are "ambitious early-stage entrepreneurs" (new businesses who expect to employ at least 10 people in five years' time).

Source: Global Entrepreneurship Monitor (2003-15)

### Presence of high-growth firms

Firms with turnover that is greater than £1m and growing more than 20% annually, per 1,000 local firms.<sup>2</sup> Data not available for Northern Ireland.

Source: ONS (2014), Founders4Schools (2014)

### Exporting propensity

Difference in share of firms that export, controlling for sector.<sup>4</sup> Data not available for Northern Ireland.

Source ONS Microdata (2012)

### Turnover from innovative products

Percentage of total turnover attributable to new, improved and novel products. Only available on a NUTS1 level.

Source: Community Innovation Survey (2008)

## Economic outcomes

### GVA per head – £

GVA per resident.<sup>1</sup>

Source: ONS (2014)

### Employment rate – %

Employment rate for 16 to 64 year-old residents.<sup>1</sup>

Source: ONS (2014)

### Participation rate – %

Workforce participation rate for 16 to 64-year-old residents.<sup>1</sup>

Source: ONS (2014)

### Average hours worked per week

Average hours worked by local employees.<sup>1</sup>

Source: ONS (2014)

<sup>1</sup> LEP/sub-region values are derived from NUTS3 level data weighted by working-age population.

<sup>2</sup> LEP/sub-region values are derived from local authority level data weighted by working-age population.

<sup>3</sup> NUTS3 areas take the value of the LEP they are part of. Where a NUTS3 belongs to multiple LEPs, it assumes the value of the LEP with the smallest population.

<sup>4</sup> NUTS3, LEP/sub-region values and NUTS1 values are weighted by number of local firms in each sector.