

Spatial Policy and Analysis Laboratory




Visualising regional inequalities

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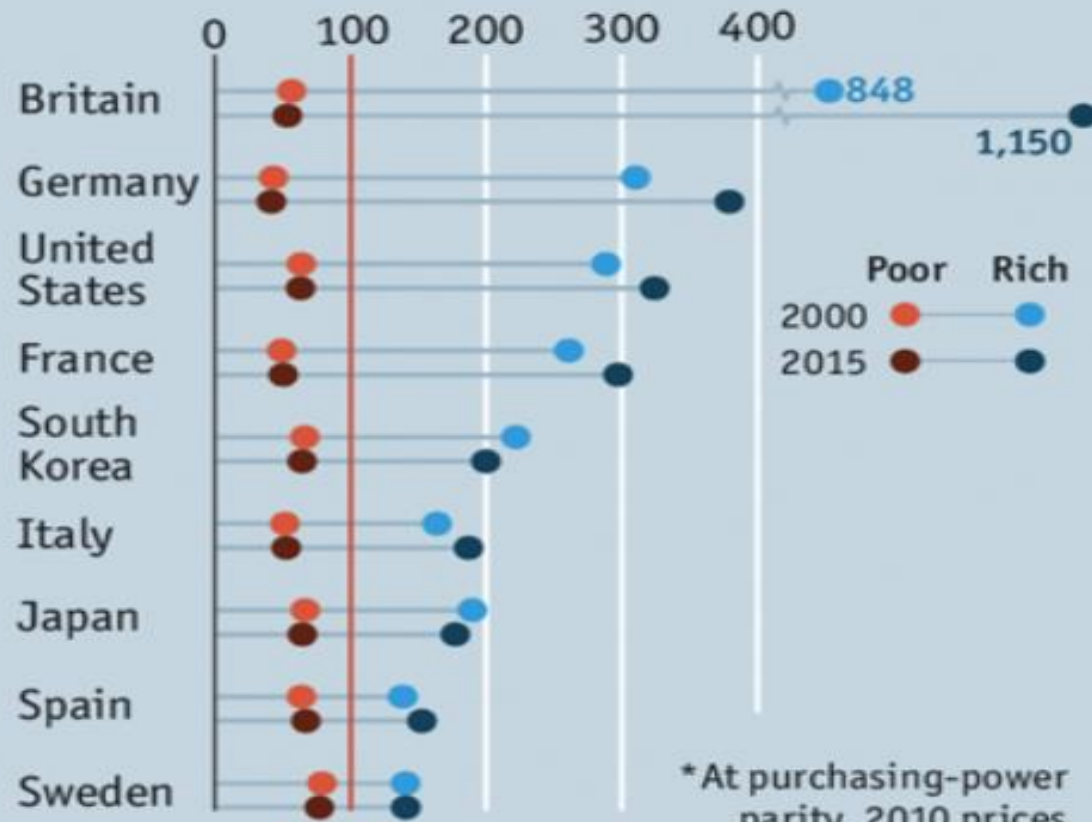
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Where the Story
begins?

The rich get richer

GDP per person* of poorest and richest regions†
National average = 100

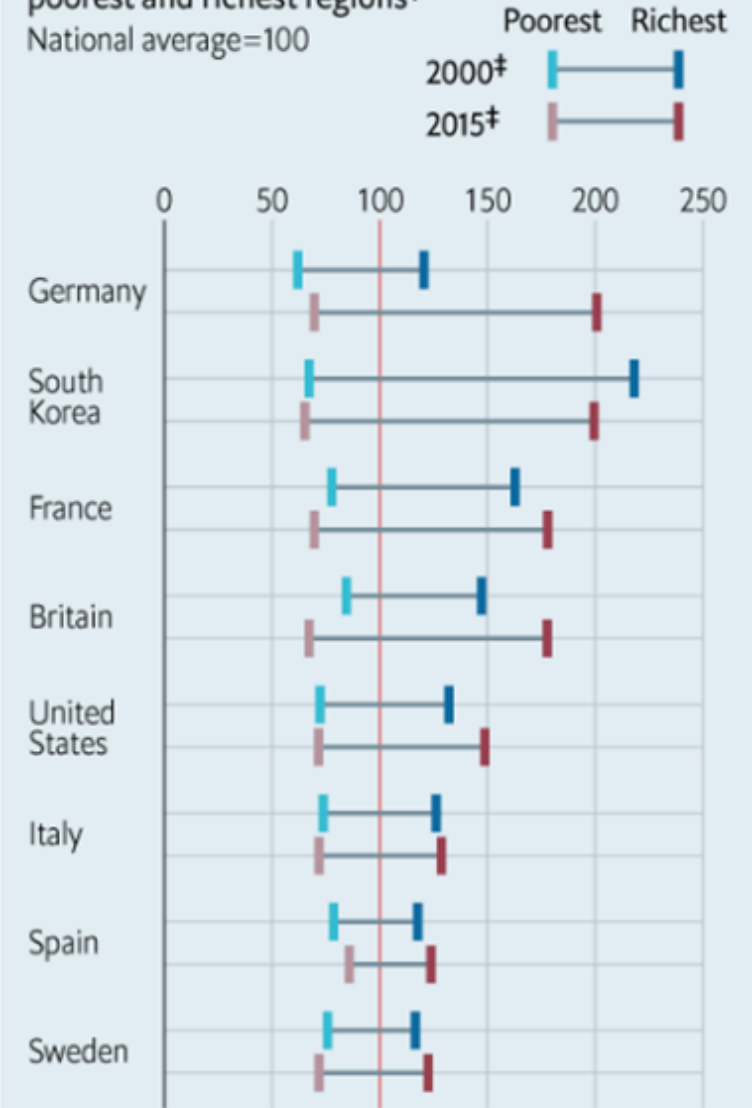


Sources: OECD;
The Economist

*At purchasing-power parity, 2010 prices
†OECD lower-level regions and US states

The rich still get richer

GDP per person* employed of
poorest and richest regions†
National average = 100

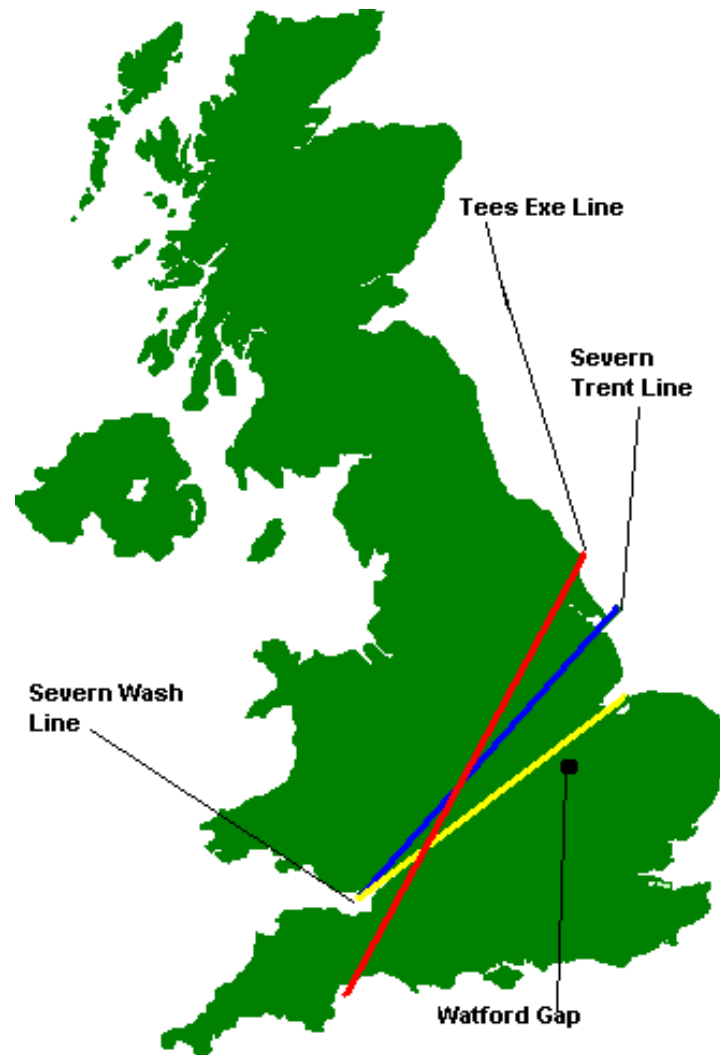


*At purchasing-power parity, 2010 prices
†OECD TL3 lower-level areas, and
US states and District of Columbia
‡Or latest

Sources: OECD;
The Economist

*The challenges of charting regional inequality:
There is no perfect measure, but context is everything*
(Selby-Boothroyd, 2018)

Uneven spatial development





The Aims of the Commission

The UK2070 Commission aims to:

- Reinforce the devolution agenda for cities, regions and nations to maximise their potential for sustainable and inclusive growth;
- Add value to the emerging range of national strategies for planning, housing, industry, land use, environment and infrastructure – through greater integration and clarity in their place-based implications;
- Develop more inclusive and empowering approaches to national and strategic decision-making; and investment for regions, cities, towns and communities; and
- Draw on UK and international experience in tackling issues of spatial inequalities.



“If Government wants to fulfil their ambitions of ‘levelling up’ then the planning service at local authorities must be an integral part of that - if it is restricted, they will fail.”

Lord Kerslake

Former Head of the Civil Service
Chair of the UK2070 Commission

UK2070
COMMISSION

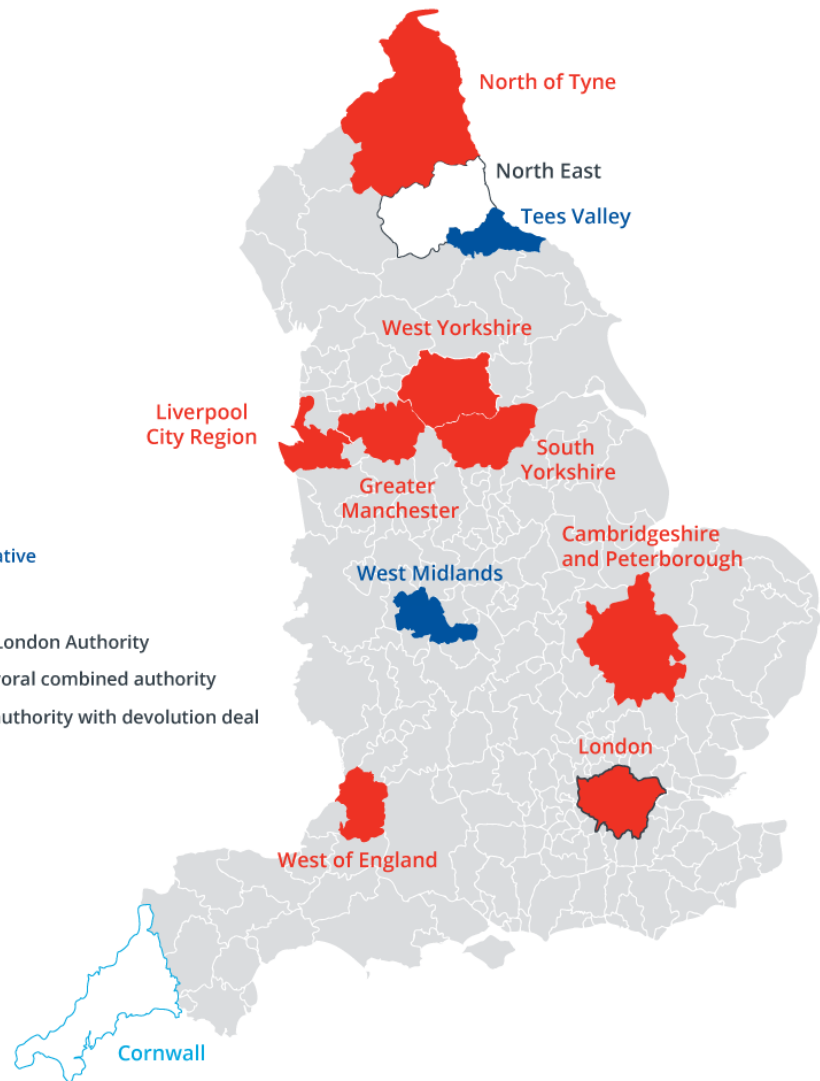


The UK2070 Commission is an independent inquiry into city and regional inequalities in the UK. Chaired by Lord Kerslake, it has been set up to conduct a review of the policy and spatial issues related to the UK's long-term city and regional development.

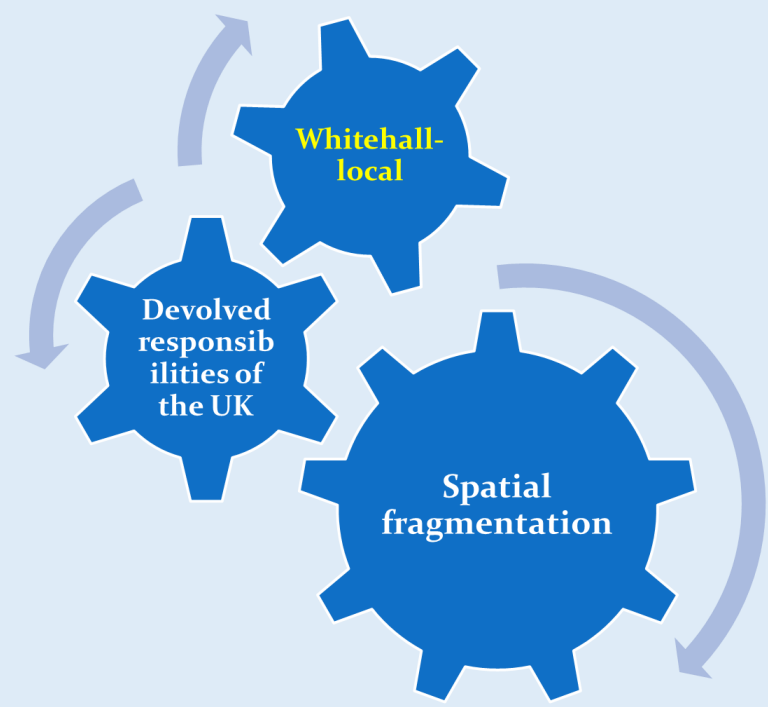
The Commission's formal Call For Evidence remains open, and we are still gladly accepting submissions. We will be publishing our progress report in early 2019.

The work of the UK2070 Commission is being supported by Turner and Townsend, a professional services company headquartered in Leeds.





Source: Institute for Government analysis, May 2021.



A Policy Dilemma

‘the combined result of agglomeration tendencies, the **uneven geography of innovation**, the wider process of geographical **fragmentation of production**, and the recursive feedbacks of these forces to the **geography of institutional capacities**’ (Farole et al. 2009:6)

‘The trade offs between **growth maximization** through spatial unevenness and **growth enhancement** through combating underdevelopment must be rigorously assessed and defined’ (Farole, Rodríguez-Pose & Storper, 2009)

Efficiency (aggregate growth) vs Equity (regional convergence)

- The emphasis on the market has resulted in increased investment in London and the South East at the expense of other parts of the UK (Marshall, 2010)
- The government prefer to adopt a non-spatial approach to infrastructure planning to desensitise the political nature of such development projects (Marshall, 2010)
- The **differential spatial accessibility across the UK was starkly illustrated via the mapping analysis of key indicators, which led to the conclusion that ‘the dominance of the super-London/South East functional area has overshadowed the development of the rest of the UK’ (Wong et al., 2006: 54)**

Labelled “the productivity puzzle”, the UK’s decline in productivity since the 2008-2009 Global Financial Crisis has been called the “defining economic question of our age”

Samiri & Millard, 2022

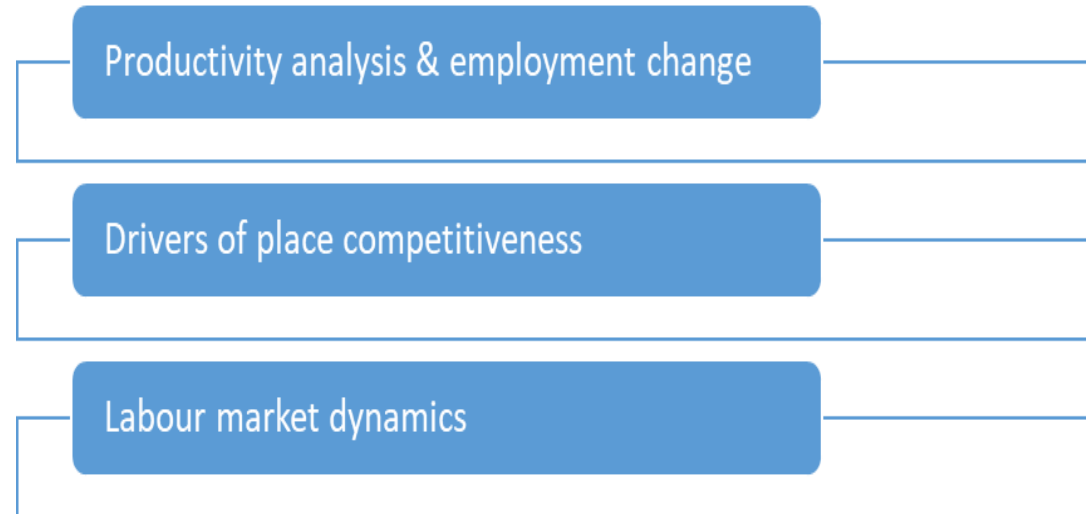
www.niesr.ac.uk/blog/geography-skills-and-productivity

- ❖ relates to significantly lower level of UK productivity growth after its sharp fall at the peak of the global financial crisis in 2008 and 2009 when compared to other advanced economies
- ❖ Based on ONS’ latest 2021 international comparisons of productivity, UK’s output per hour worked growth was the second slowest among the G7 countries and the UK’s output per hour worked was lower than France, Germany and the United States
- ❖ the regional disparities between productivity increases around the London region and stalled or decreasing productivity in some of the northern regions have been particularly apparent over the last two decades

A spatial planning response to macro economic thinking

- *lay bare the spatial patterns of different socio-economic conditions and challenges* faced by different authorities, not setting out to provide a comprehensive account of the underlying reasons for differential local economic performance
- pay specific attention to the *ten combined authority areas*, given that most levelling up debates and devolution deals are focused on these areas

Macro/regional economic analysis VS GIS spatial analysis



What we found?

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UK2070 Commission *Go Local*: The socio-economic landscape of combined and local authority areas in England

Cecilia Wong and Wei Zheng

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University of Manchester

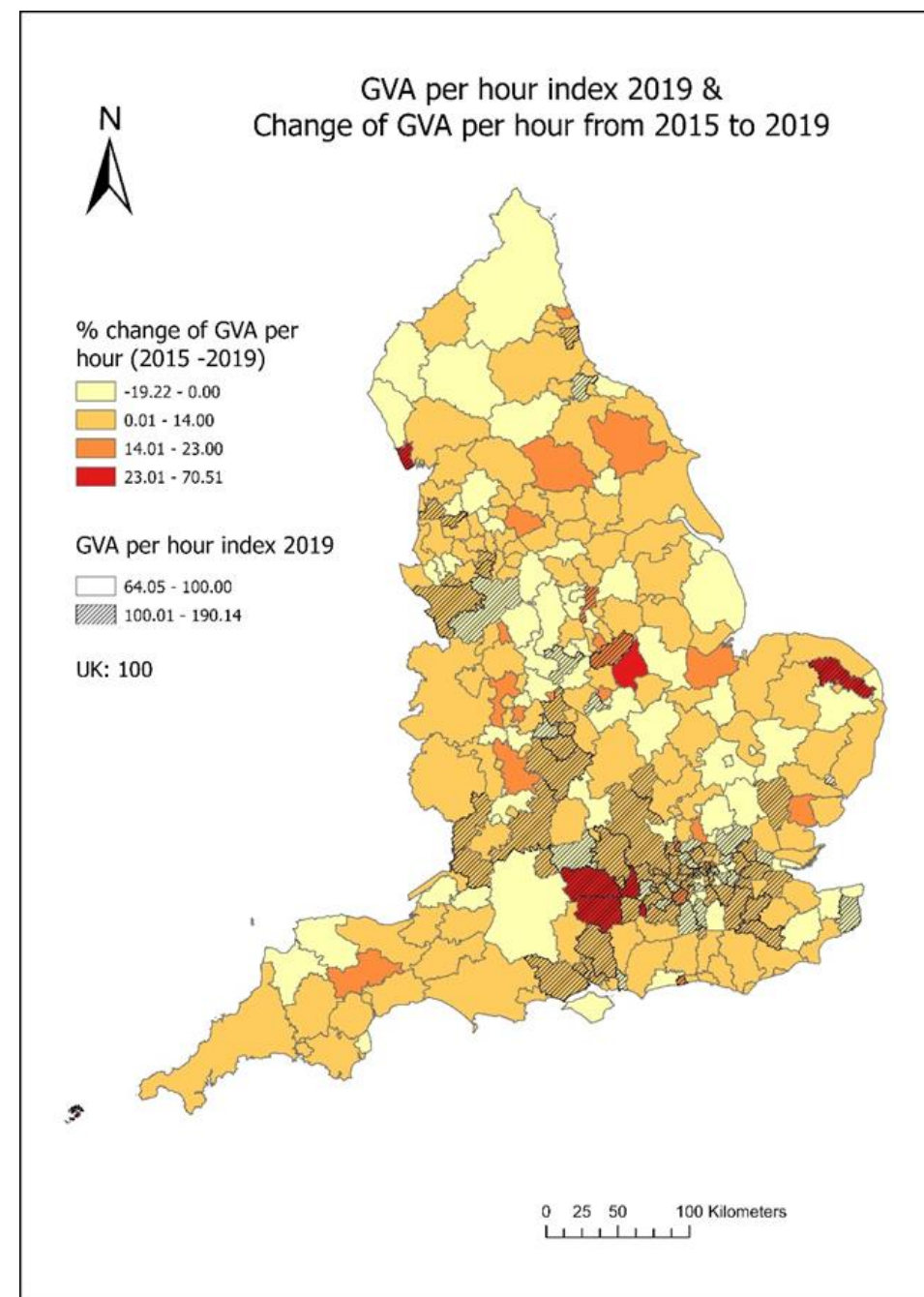
February 2023

Productivity puzzle conceals complex *spatial* puzzle

- very weak statistical correlation between 'GVA per hour worked index' (i.e. labour productivity level) and its change rate ($R=0.242$ for 2019 data & 0.302 for 2020 data)
- productivity puzzle is not just about the broad-brush painting of the successful vs lagging behind regions

GVA per hour worked and compound GVA annual growth rate

| | GVA per Hour Worked (in real price) | | | | | | |
|-------------------------------|-------------------------------------|----------|----------|----------|-------------|-------------|-------------|
| | 2004 (£) | 2015 (£) | 2019 (£) | 2020 (£) | 2004-19 (%) | 2015-19 (%) | 2019-20 (%) |
| Cambridgeshire & Peterborough | 33.67 | 33.59 | 34.25 | 32.31 | 1.71 | 1.96 | -5.66 |
| Greater Manchester | 28.96 | 31.74 | 33.22 | 31.49 | 14.69 | 4.66 | -5.20 |
| Liverpool City Region | 31.37 | 31.94 | 31.95 | 29.91 | 1.84 | 0.04 | -6.39 |
| North East | 28.99 | 30.25 | 31.66 | 29.93 | 9.22 | 4.65 | -5.48 |
| North of Tyne | 28.36 | 29.80 | 31.36 | 29.70 | 10.57 | 5.24 | -5.28 |
| South Yorkshire | 27.72 | 28.91 | 29.36 | 27.33 | 5.90 | 1.56 | -6.93 |
| Tees Valley | 29.52 | 31.86 | 32.39 | 30.70 | 9.72 | 1.68 | -5.23 |
| West Midlands | 30.35 | 31.69 | 33.11 | 31.06 | 9.09 | 4.47 | -6.19 |
| West of England | 33.49 | 36.51 | 36.68 | 34.71 | 9.53 | 0.47 | -5.38 |
| West Yorkshire | 29.38 | 30.34 | 32.00 | 30.33 | 8.92 | 5.47 | -5.21 |
| Greater London | 45.36 | 48.10 | 49.63 | 47.25 | 9.41 | 3.19 | -4.79 |



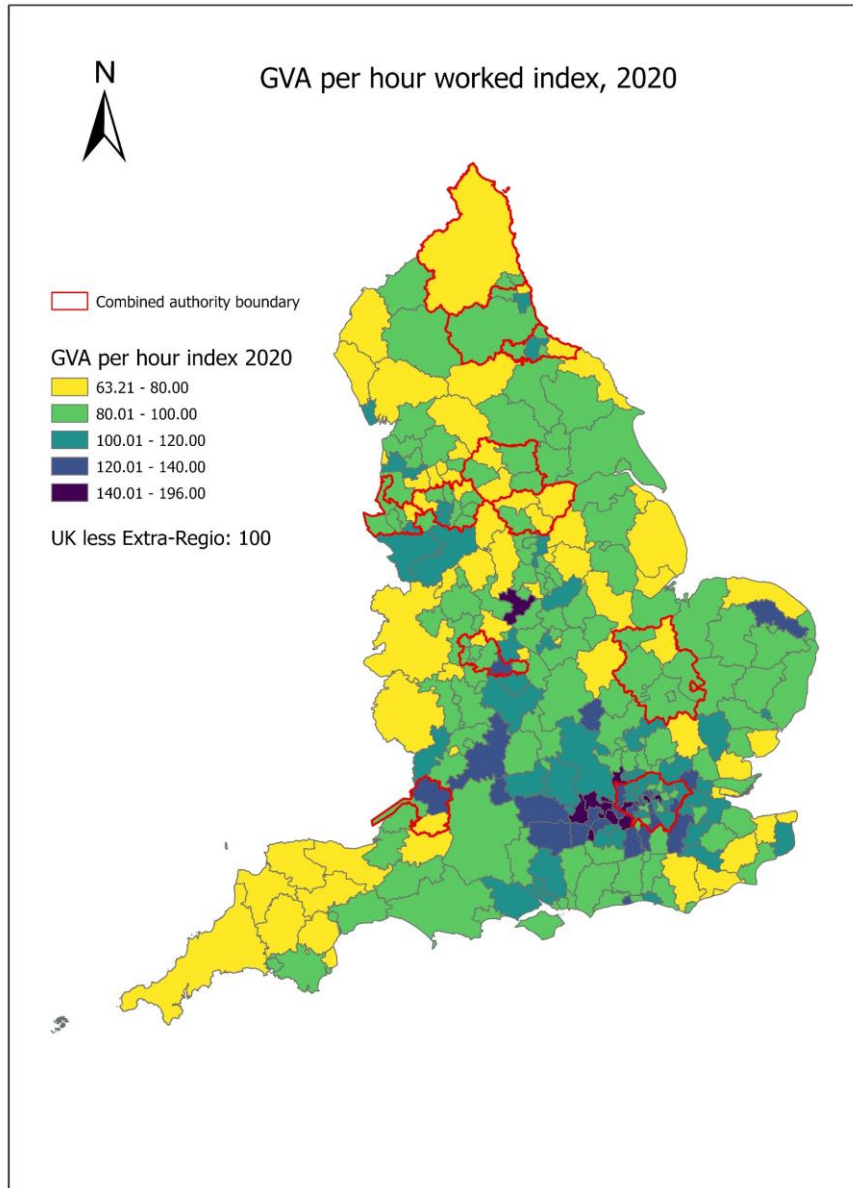
Change in the overall size of economy contributes to labour productivity

Compound annual GVA growth rate

| | 2015-2019 | 2015-2020 |
|-------------------------------|-----------|-----------|
| Cambridgeshire & Peterborough | 2.14% | 0.03% |
| Greater Manchester | 3.16% | 0.54% |
| Liverpool City Region | 1.16% | -1.14% |
| North East | 0.76% | -1.68% |
| North of Tyne | 2.08% | -0.41% |
| South Yorkshire | 1.68% | -0.71% |
| Tees Valley | 0.55% | -1.61% |
| West Midlands | 1.79% | -0.84% |
| West of England | 2.06% | -0.07% |
| West Yorkshire | 2.12% | -0.31% |
| Greater London | 2.54% | 0.11% |

| | |
|---|-------------------------------|
| Compound annual GVA growth rate (2015-2019) & Change in GVA per hour worked (2015-2019) | 0.644*** (41.47% variance) |
| Compound annual GVA growth rate (2015-2020) & Change in GVA per hour worked (2015-2020) | 0.596*** (35.52% variance) |

Labour productivity vs employment growth



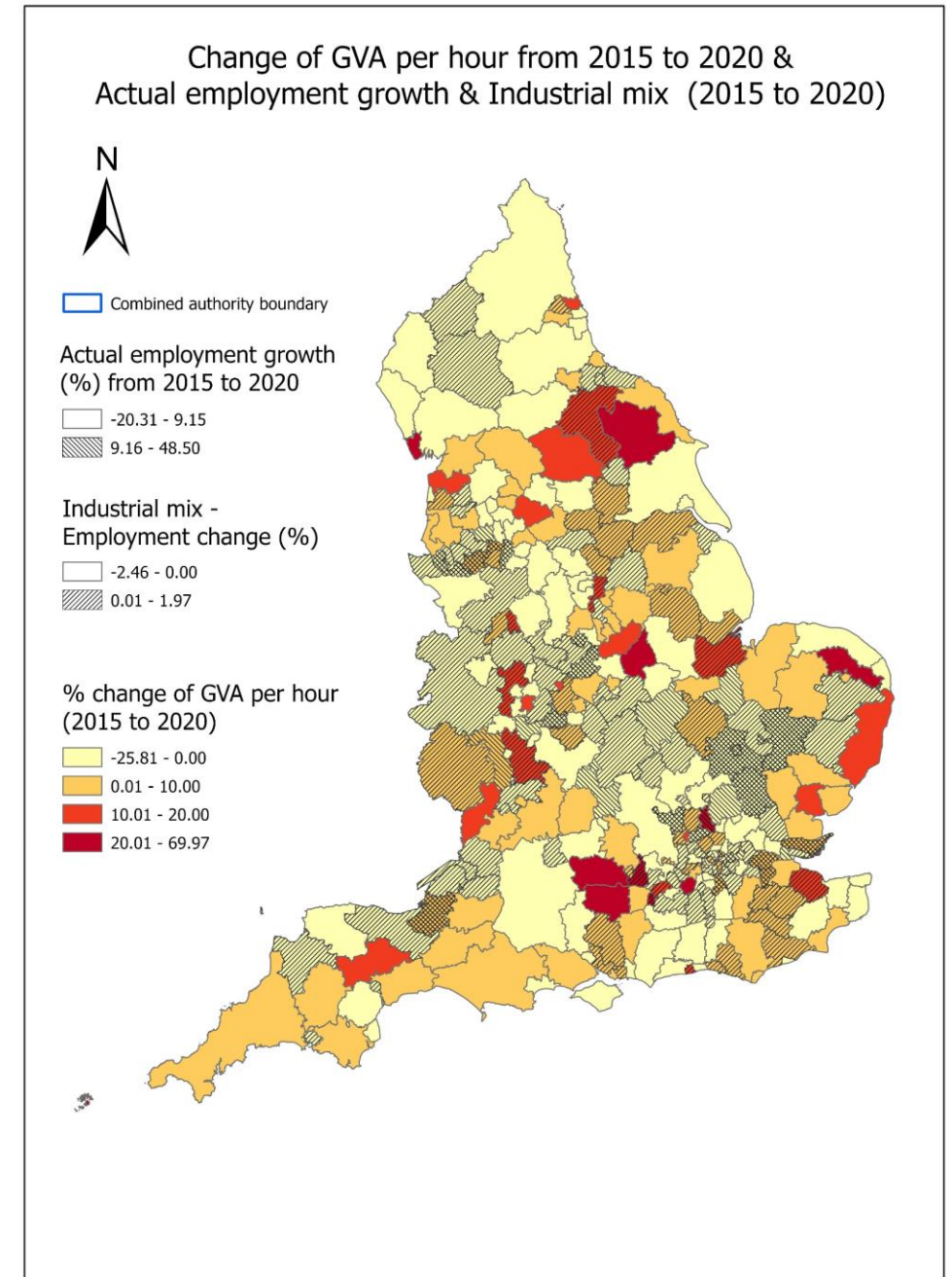
Shift-share analysis of employment change, 2015-2021

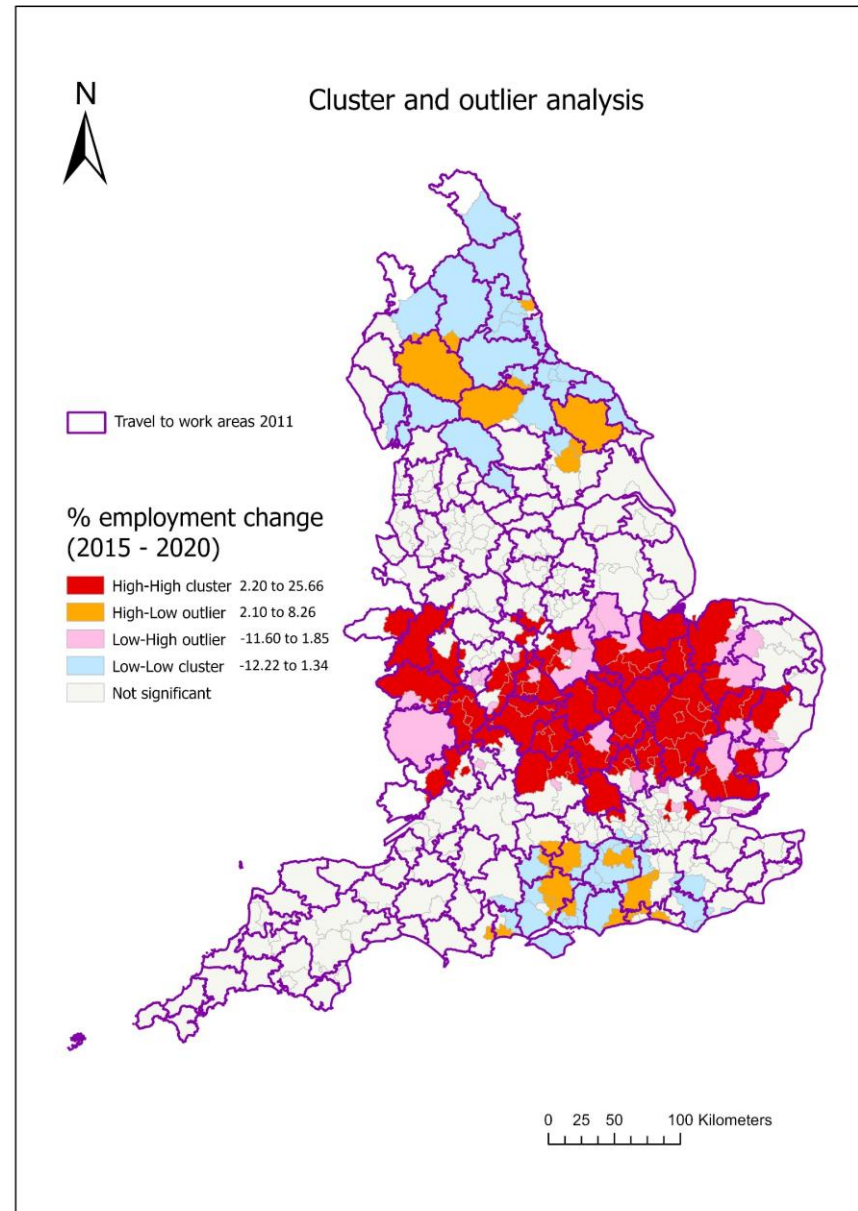
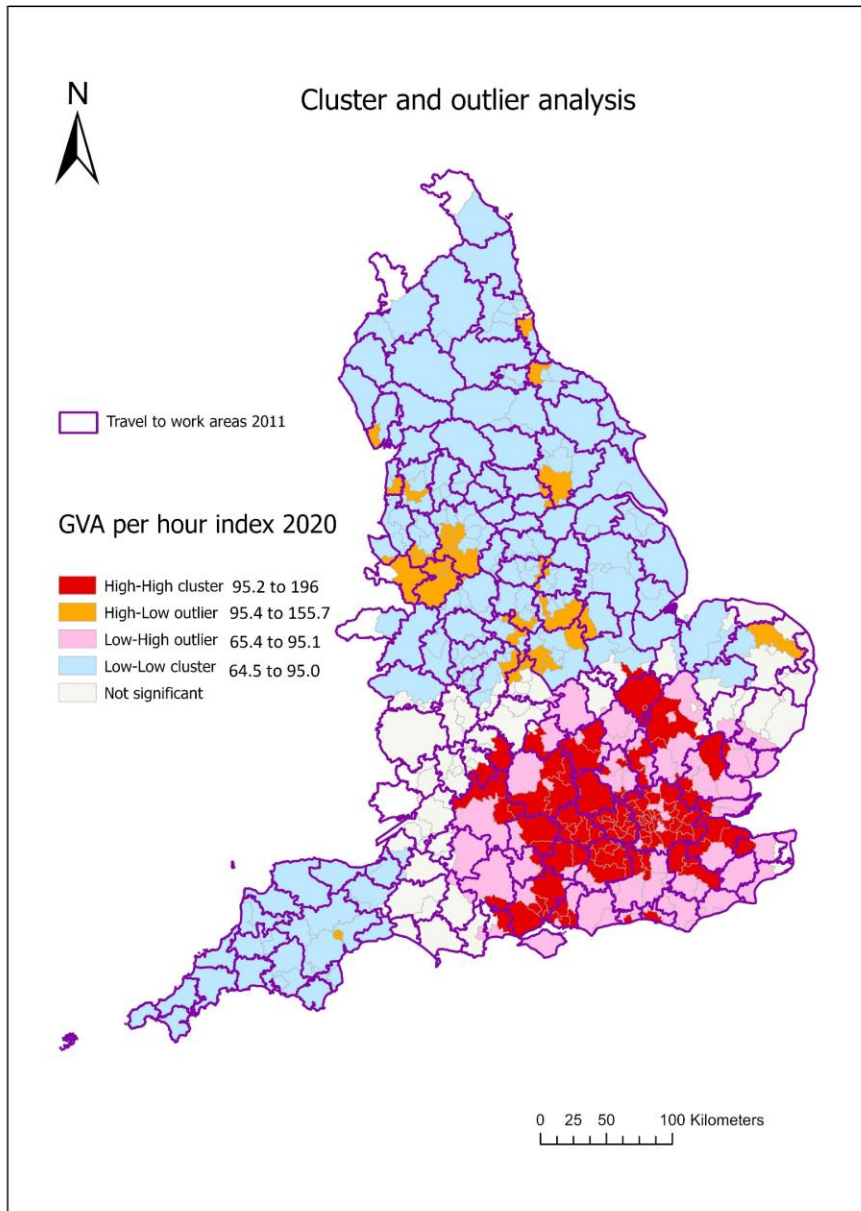
| | Actual Growth Rate (%) | National Growth Rate (%) | Industrial Mix Share (%) | Place Competitiveness Share (%) |
|---------------------------------|------------------------------|--------------------------------|--------------------------------|---------------------------------------|
| Cambridgeshire and Peterborough | 9.09 | 5.19 | 0.12 | 3.78 |
| Greater Manchester | 12.94 | 5.19 | 0.08 | 7.67 |
| Liverpool City Region | 11.04 | 5.19 | 0.37 | 5.48 |
| North East | 0.89 | 5.19 | -0.98 | -3.32 |
| North of Tyne | 5.52 | 5.19 | -0.10 | 0.43 |
| South Yorkshire | 4.53 | 5.19 | -0.14 | -0.52 |
| Tees Valley | 0.24 | 5.19 | 0.11 | -5.07 |
| West Midlands | 5.98 | 5.19 | -0.16 | 0.95 |
| West of England | 12.00 | 5.19 | 0.88 | 5.93 |
| West Yorkshire | 4.94 | 5.19 | -0.31 | 0.07 |
| Greater London | 7.20 | 5.19 | 1.15 | 0.86 |

Paradoxical relationship between labour productivity & employment

- **GVA per hour worked Index** bore no significant statistical relationship with employment change
- **GVA per hour worked Index** is related to labour quality e.g. NVQ4+ and pay levels
- many areas experiencing high employment growth tended to have low or even negative **change in GVA per hour worked**
- no statistical significant relationship between different labour market indicators and **change in GVA per hour worked**

Intertwining forces of BREXIT & COVID-19, though COVID has a sweeping rather than significant differential spatial effect and some areas have negative GVA per hour worked change before COVID struck!

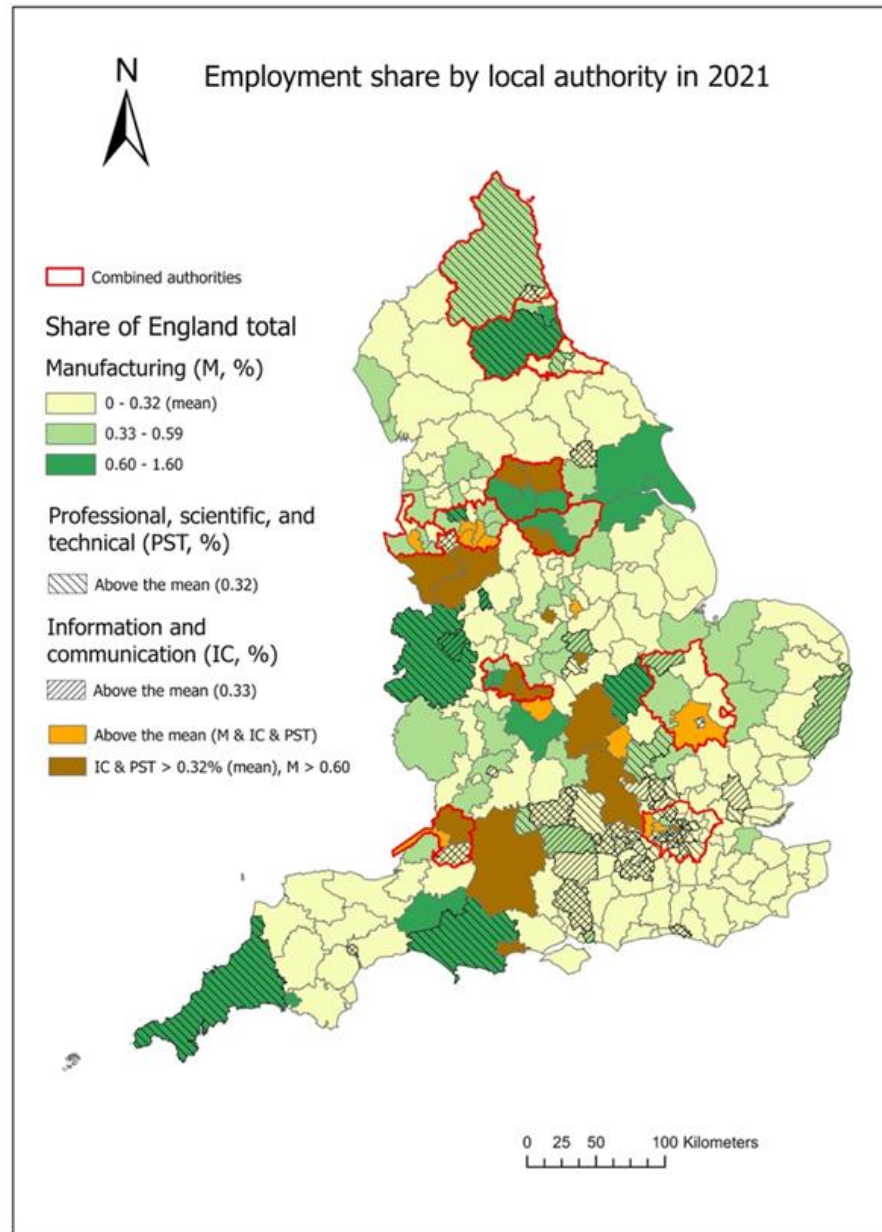




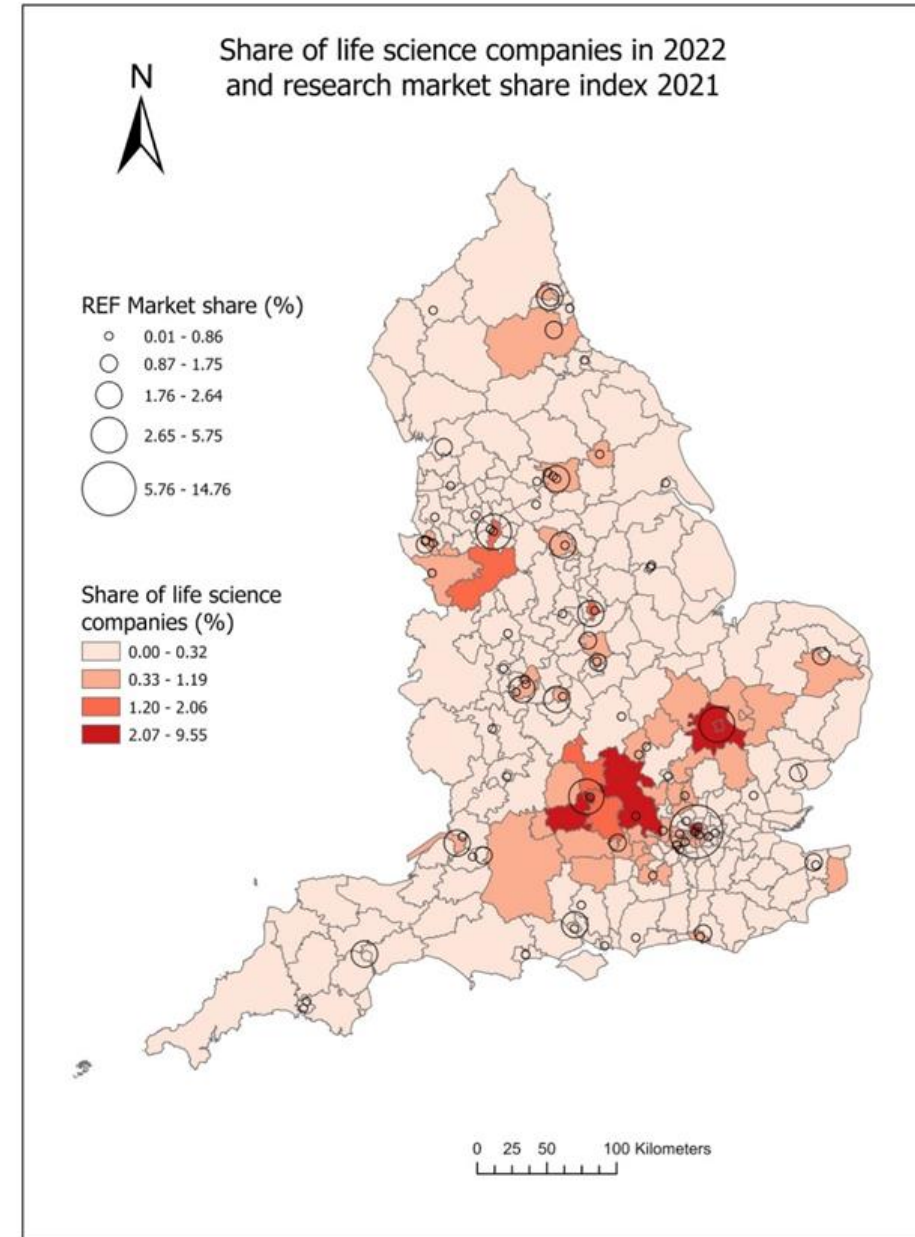
- Decoupling of productivity and employment change
- Functional spatial clusters vs artificial administrative boundaries
- outliers in high and low growth spatial clusters
- complexity of local economic dynamics

Industry matters!

- GVA per hour worked (labour productivity level) bears some weak relationship to the industrial mix
- but stronger with the presence of certain 'sunrise' industrial sectors which tends to cluster in certain locations



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R&D investment matters!

| ENGLAND share (%) | Total | Government & UKRI | Higher Education | Business | Private Non-Profit |
|--------------------------|-------|-------------------|------------------|----------|--------------------|
| North East | 2.17 | 2.06 | 3.38 | 1.75 | 3.8 |
| North West | 8.72 | 7.28 | 9.88 | 8.73 | 2.03 |
| Yorkshire and The Humber | 5.15 | 5.35 | 8.23 | 4.31 | 0.63 |
| East Midlands | 6.94 | 3.7 | 4.76 | 8.18 | 0.38 |
| West Midlands | 8.55 | 3.13 | 6.34 | 10.03 | 1.77 |
| East of England | 20.2 | 12.51 | 13.05 | 22.91 | 30.25 |
| London | 18.61 | 24.32 | 29.61 | 13.61 | 46.33 |
| South East | 22.06 | 30.45 | 18.35 | 22.67 | 12.91 |
| South West | 7.61 | 11.19 | 6.39 | 7.81 | 1.9 |
| England | 100 | 100 | 100 | 100 | 100 |

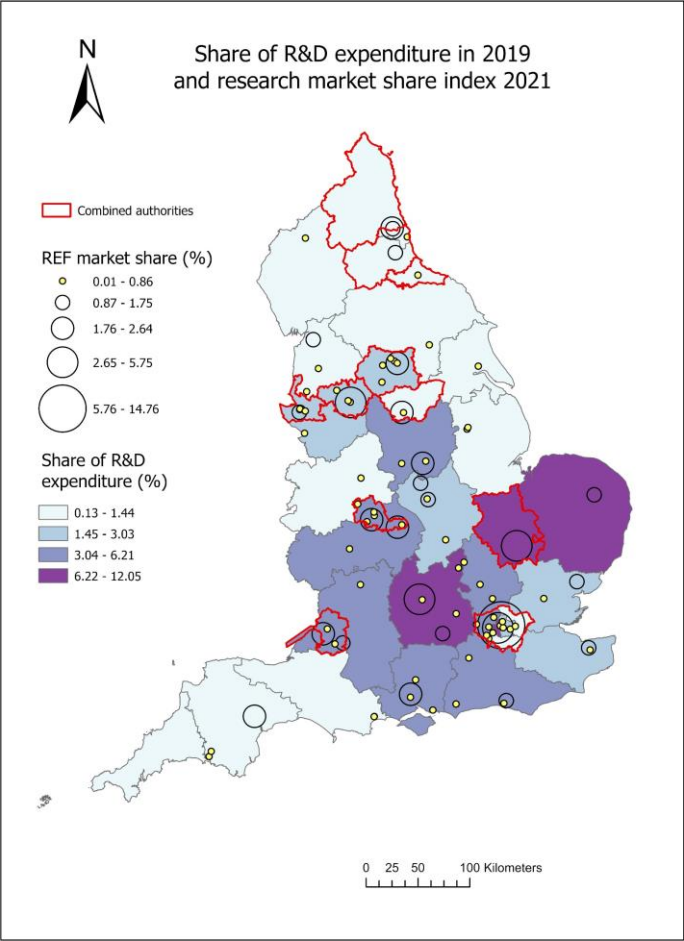
March 2023 budget announcement:

New R&D model

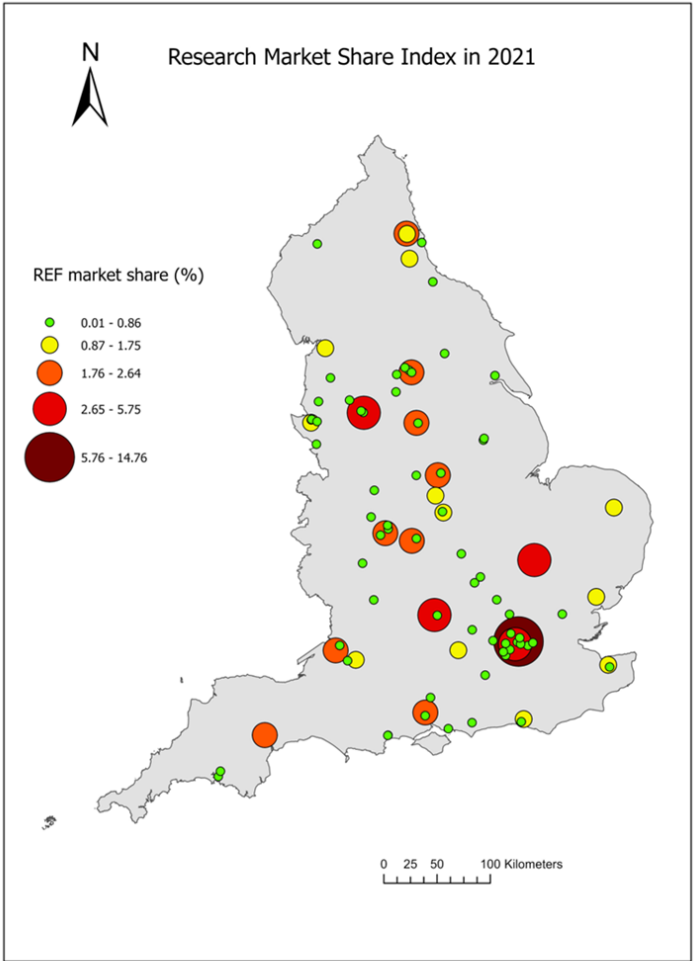
Innovation Accelerators are a pilot approach to supporting three city regions to become major, globally competitive centres for research and innovation.

The programme is pioneering a new model of R&D decision-making that empowers local leaders to harness innovation in support of regional economic growth.

Partnerships of local government, business and R&D institutions in the three city regions have led on selecting the 26 projects, working closely with Innovate UK.



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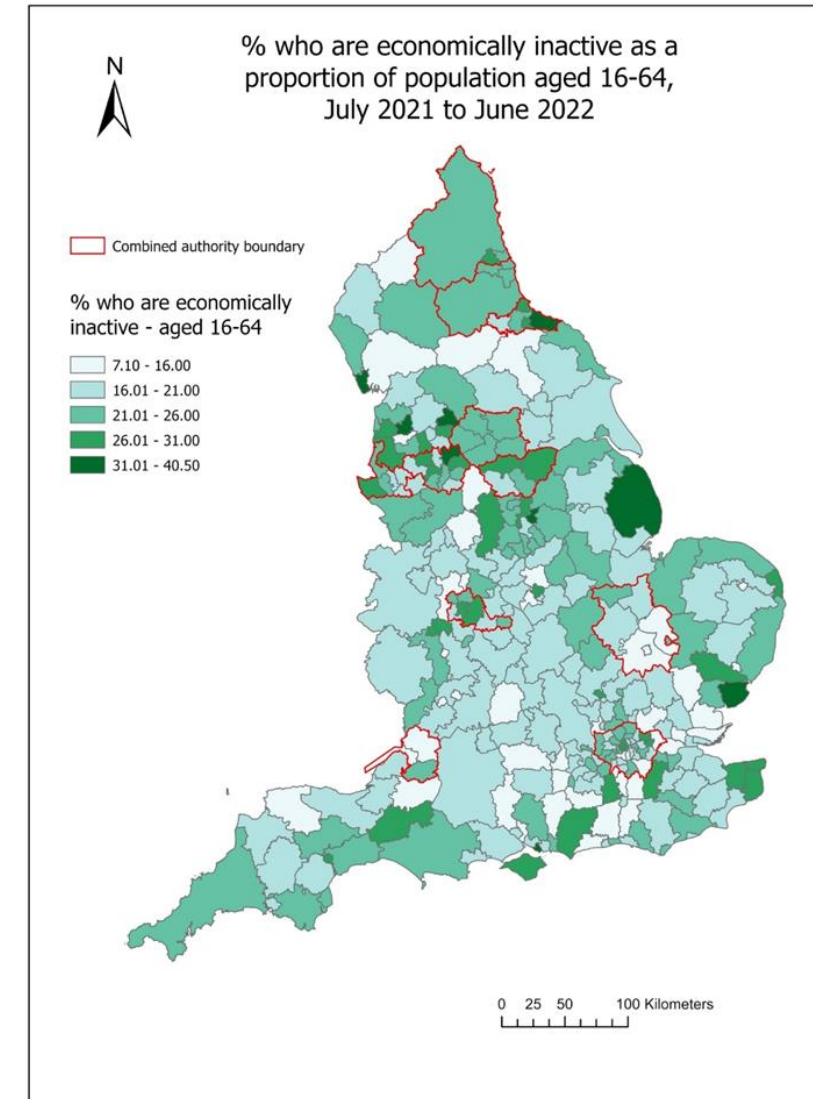
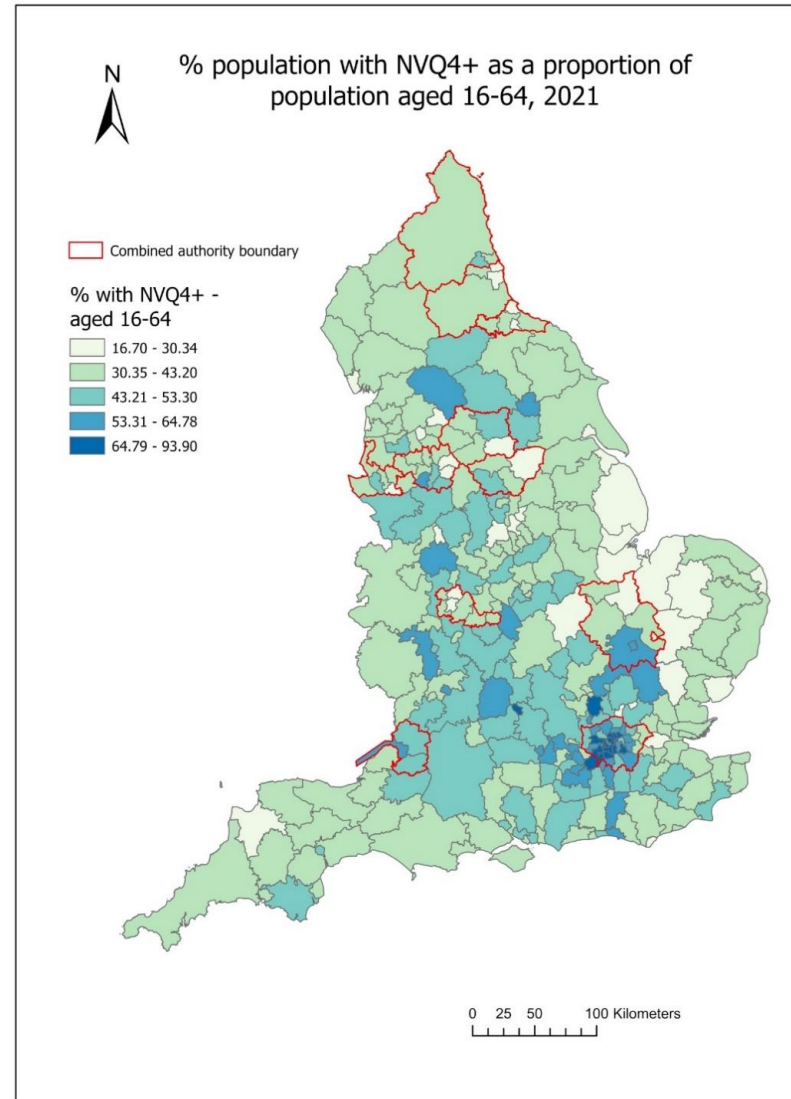
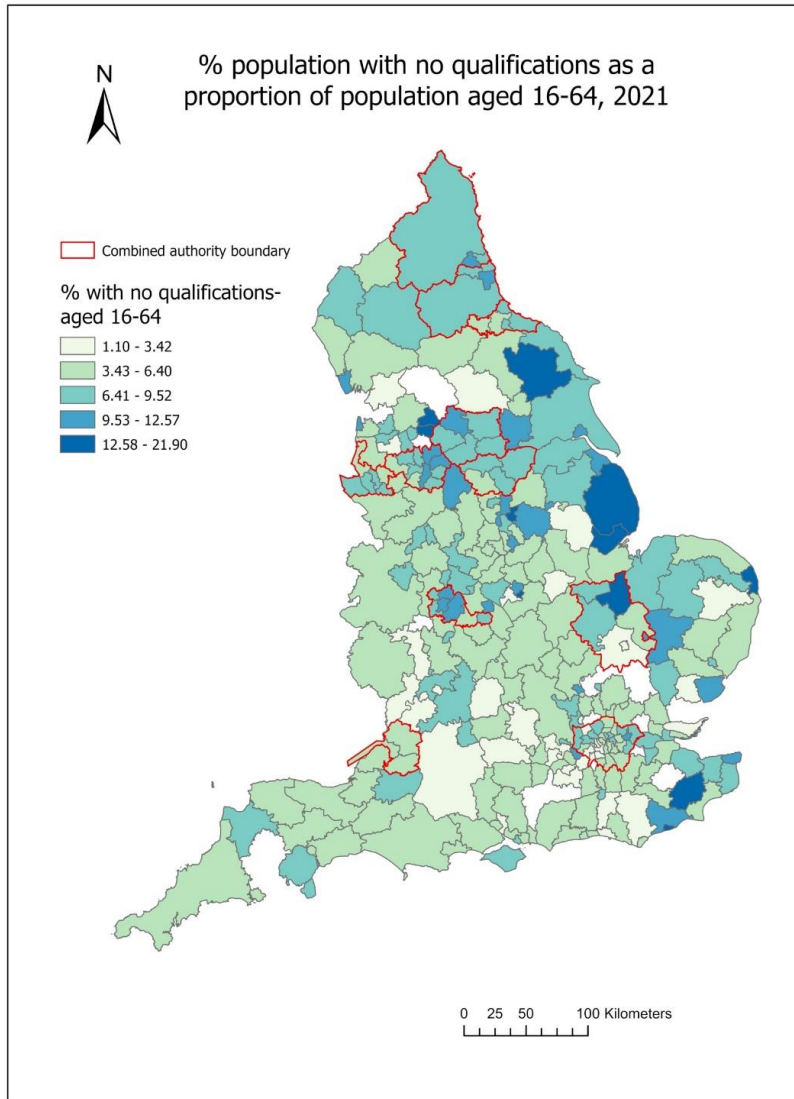
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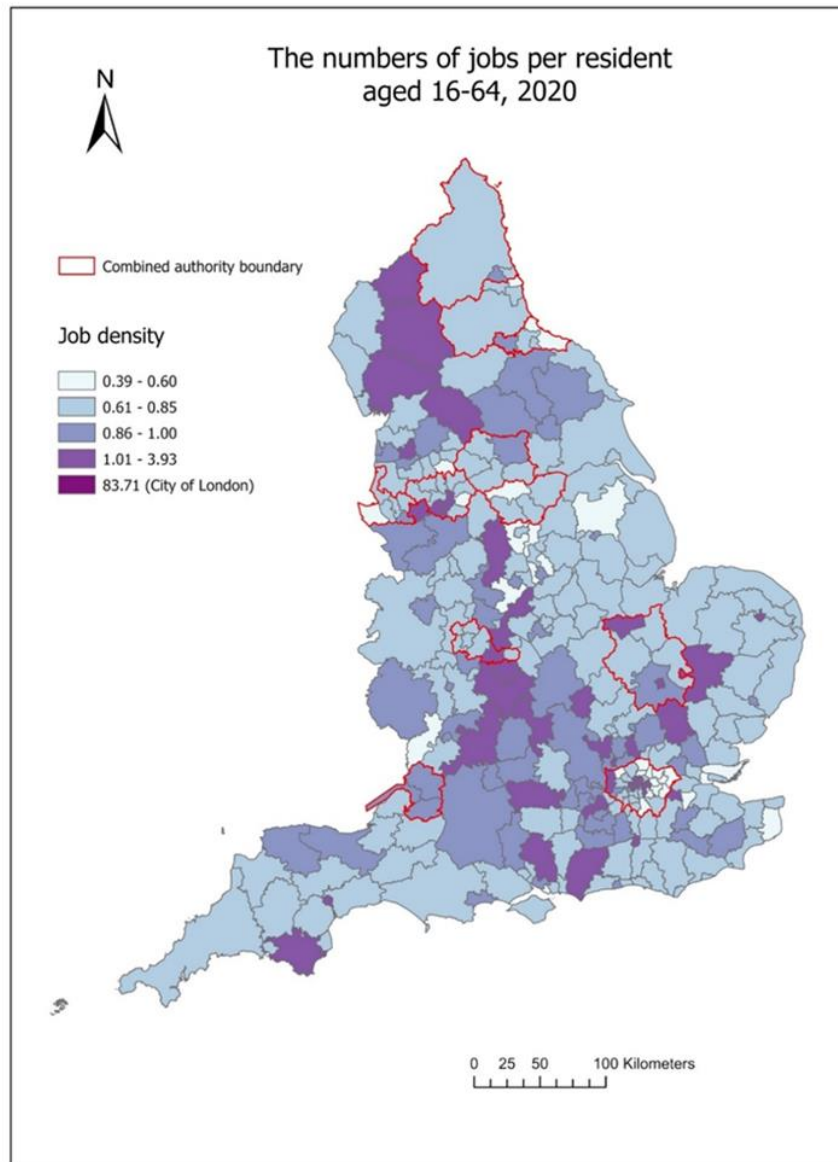
Three city regions

Three city regions in Glasgow, Greater Manchester and West Midlands were chosen to pilot this programme in recognition of their R&D strengths, robust private and public innovation governance and strong local leadership.

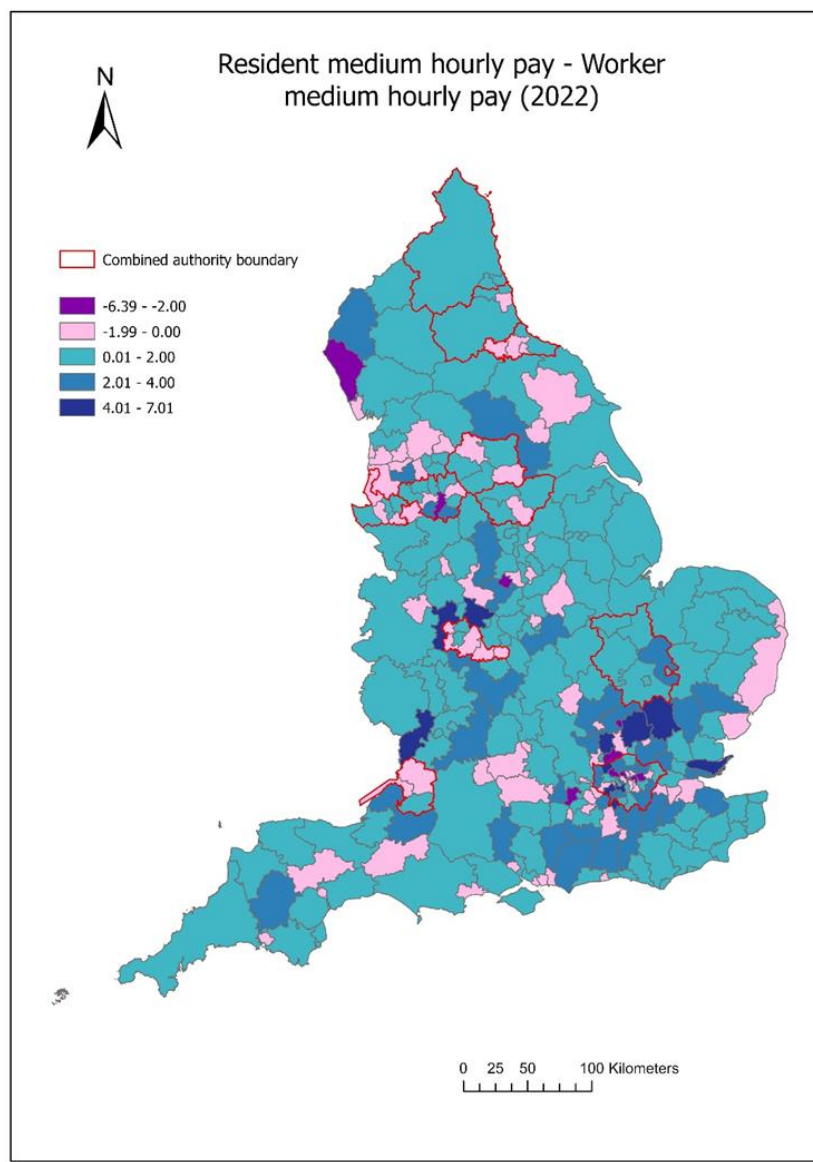
The £100 million funding is being shared across those three regions and has been allocated using a pioneering 'locally-led' approach.

Quality of labour force and labour market mismatch

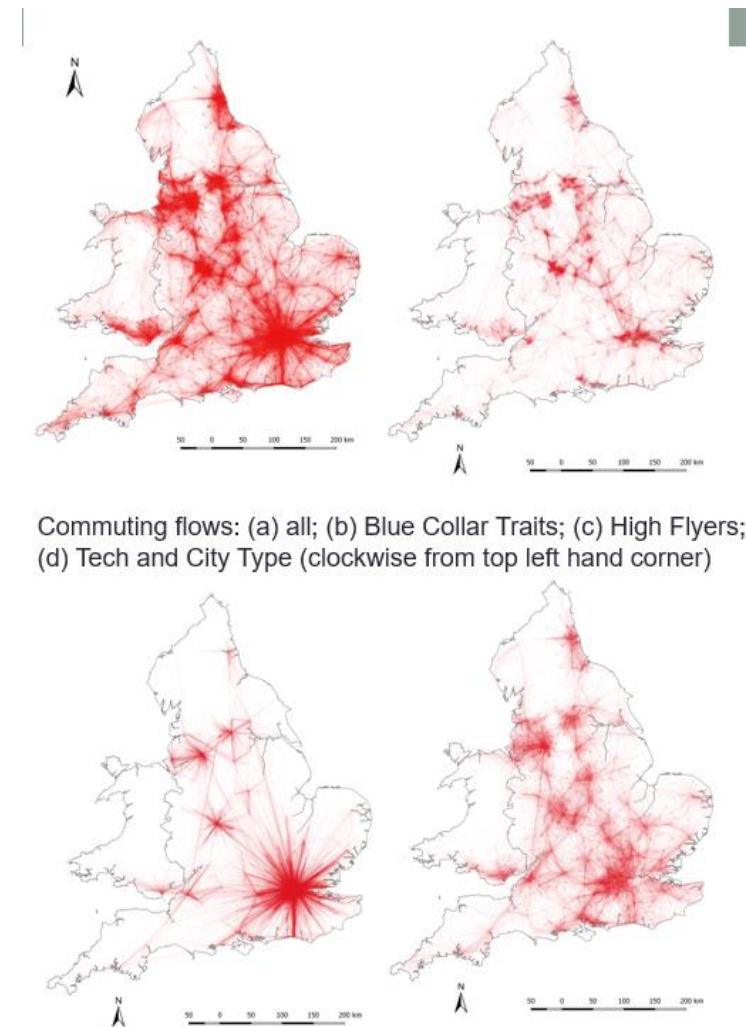




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Deprivation, poor environment and health of population

