

MANUFACTURING RENAISSANCE IN INDUSTRIAL REGIONS?

THE CHANGING GEOGRAPHY OF BRITISH MANUFACTURING

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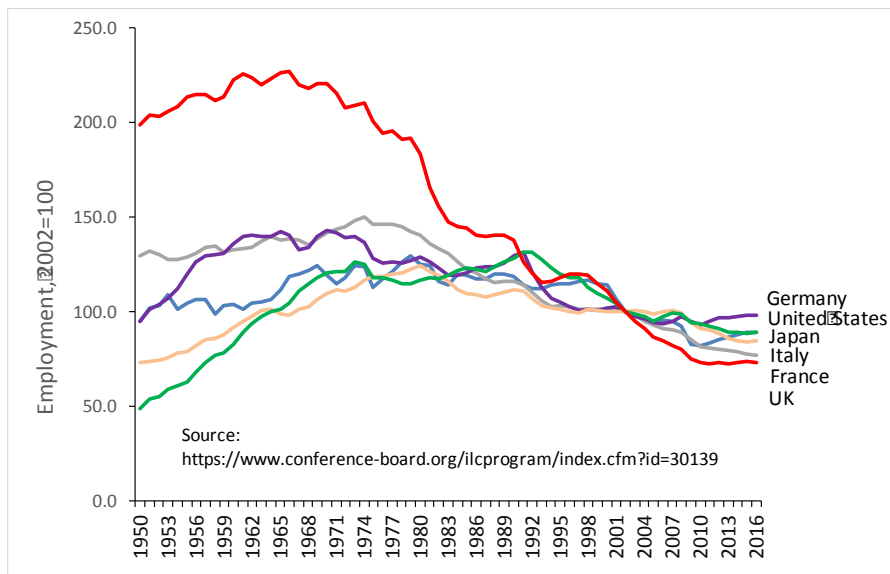


Outline

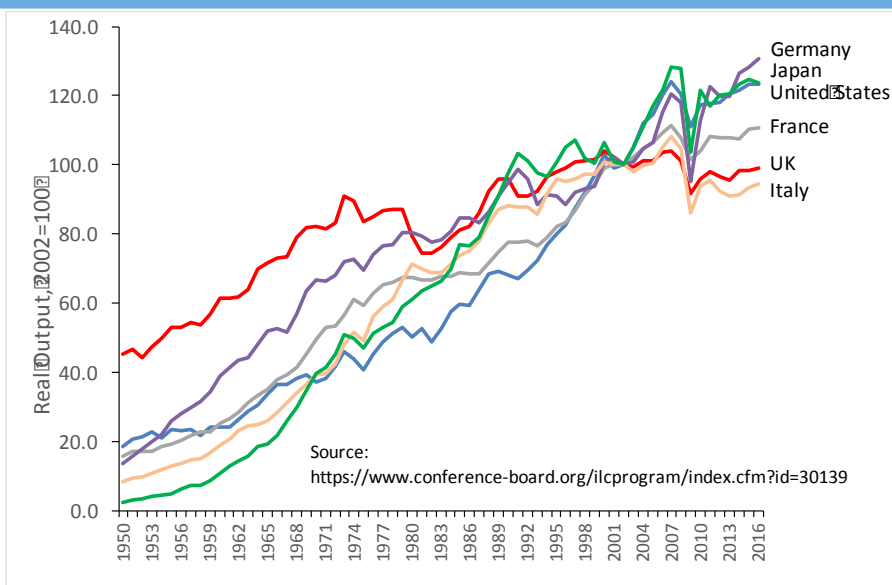
1. Context – deindustrialisation and the ‘new industrial strategy’
2. Aims of our research project
3. Some early results - manufacturing dispersal and productivity growth
4. Planned research on clusters and future work



UK Manufacturing in International Context: Employment (2002=100)



UK Manufacturing in International Context: Real Output (2002=100)



‘New Industrial Strategy’

- International return of industrial policy focused on decentralised support networks
- UK variant of this – tackle local barriers to raise productivity, build most dynamic local economies, and ensure more sectorally and spatially balanced growth
- Tensions between ambitious aims and limited measures and resources (infrastructure and R and D), weak engagement with geography
- Place ‘pillar’ appears relatively weak - aim to use clusters and centres to connect local institutions with sectoral and innovation support
- *“We will prioritise areas with potential to drive wider regional growth, focusing on clusters of expertise and centres of economic activity” (HM Government, 2018, p 221)*



Place and ‘New Industrial Strategy’

- Unclear intersection of Sector deals with place – is this through local industrial strategies?
- Local industrial strategies (Combined Authorities and LEPs) leading to competitive funding of clusters?
- Questionable assumptions about geography –
- *“The most knowledge-intensive jobs, industries and research are increasingly concentrated in particular economic clusters” (2018, p. 227)*
- *“Every part of the UK has strong clusters and particular strengths” (2017, 199)*
- HMG and local ambitions for place need a more serious engagement with manufacturing geography



Research project Aims

1. Overall objective – investigating the evolution of manufacturing across Britain
2. What's the potential for sectoral and spatial re-balancing?
3. Understand differential performance of advanced manufacturing industries
4. Do traditional industrial regions provide a conducive context for 're-industrialisation'?



Five Research Questions

1. How has the geography of manufacturing (especially advanced manufacturing) industries changed and where have they grown and declined?
2. What are the key causes of performance and productivity of firms, and do these vary significantly by region?
 - Specialized manufacturing clusters
 - Horizontal and cross-sectoral agglomeration economies (urban and related diversity)
 - Functional and task specializations



Five Research Questions

3. How has path dependence in industrial regions operated, and has it been enabling or constraining?
4. Are manufacturing industries showing development of localized/regionalized 'ecosystems', if so where and why?
5. What are implications for the local and regional institutional support and the industrial strategy?

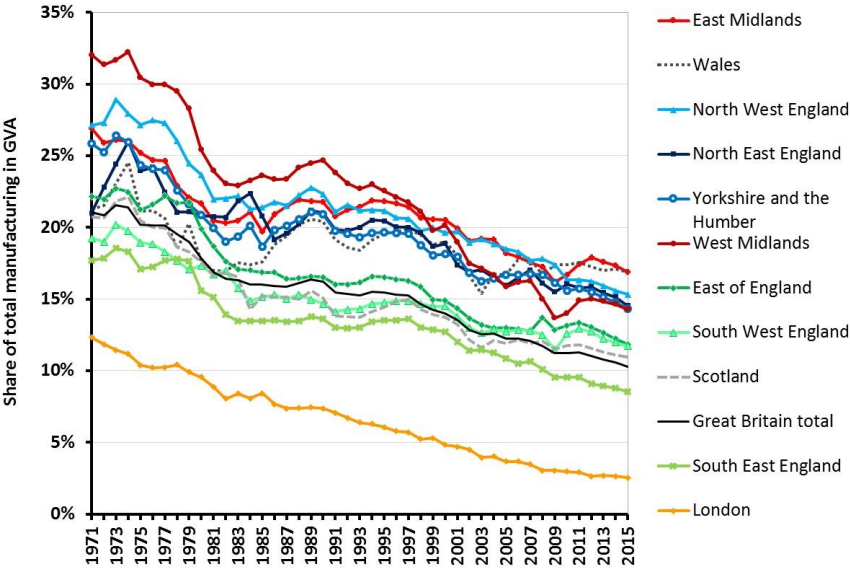


Research Design and Data Construction

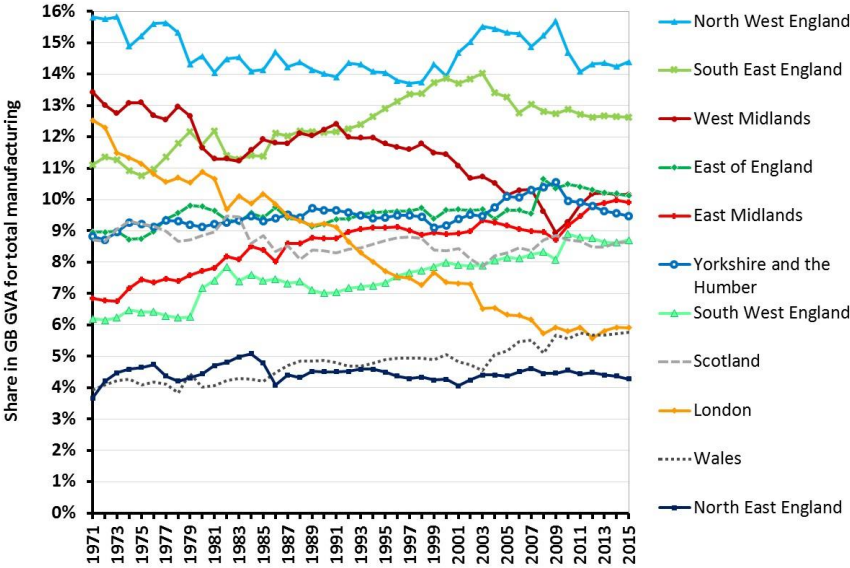
1. New data sources - NUTS2 and 85 Travel to Work Areas database – 45 industry sectors, 1971-2015
2. Main micro-data source: Annual Respondents Database manufacturing 1973-2014 – firm productivity and location
3. Online survey of firms in four industries (aerospace, pharmaceuticals, electronics and motor vehicles)
4. Firm interviews in four industrial regions



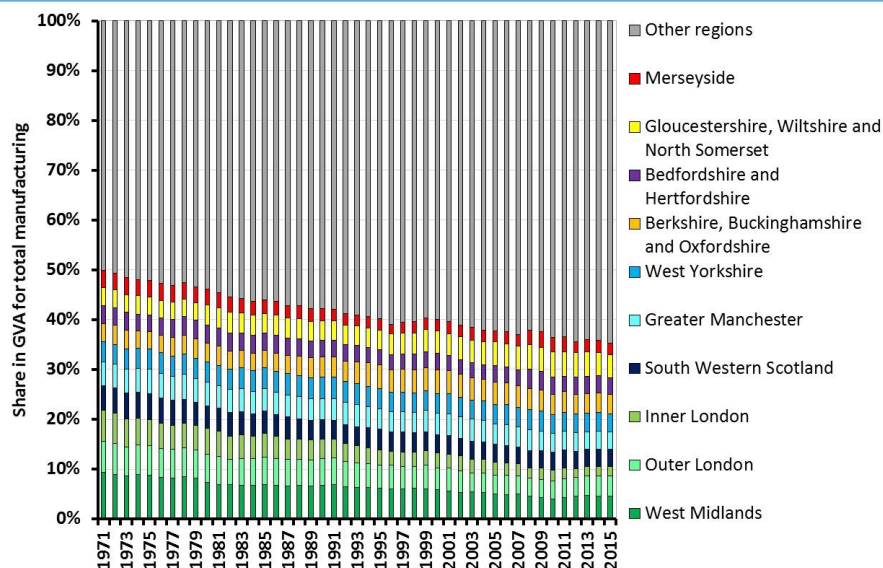
Manufacturing Share in Total GVA by Region



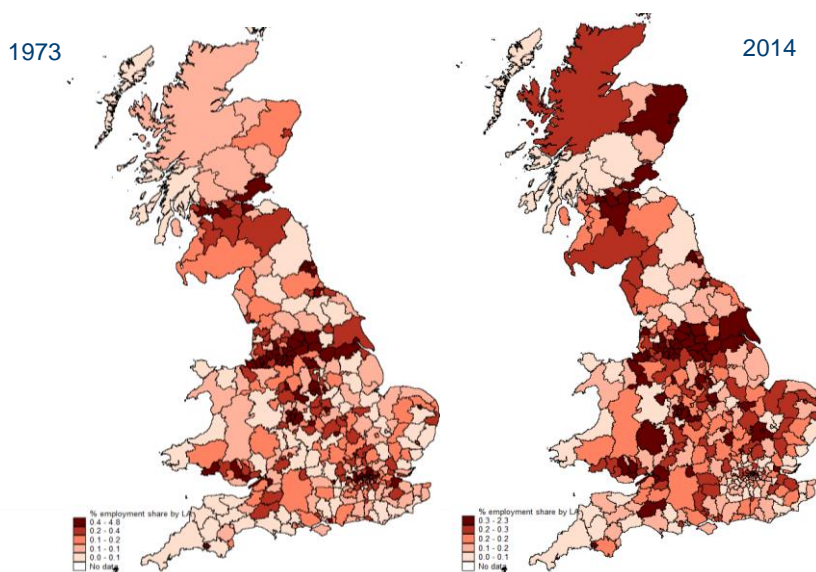
Regional Shares of Total Manufacturing GVA



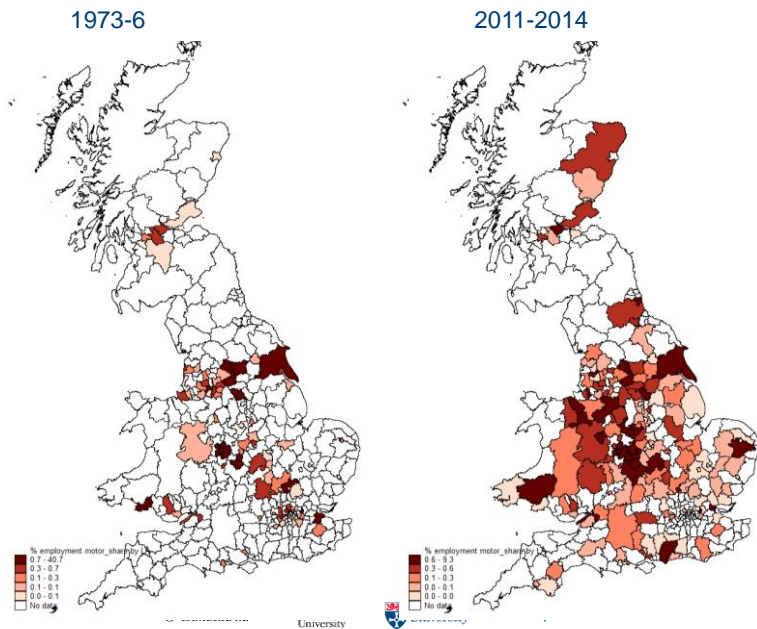
Shares of 1971 Top 10 regions (NUTS2-level) in total manufacturing GVA



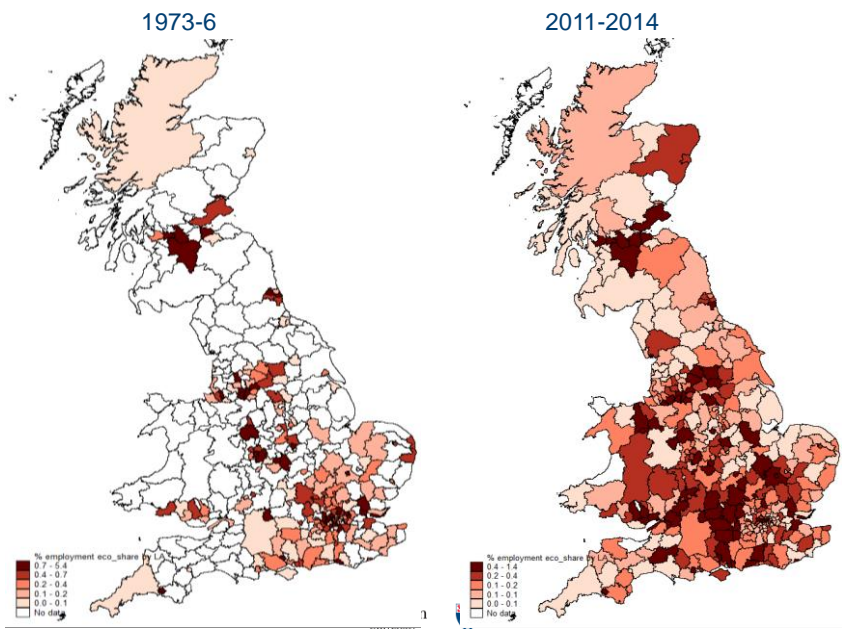
Share of Total GB Manufacturing Employment by LA



Share of Total Motor Vehicles Employment by Local Authority

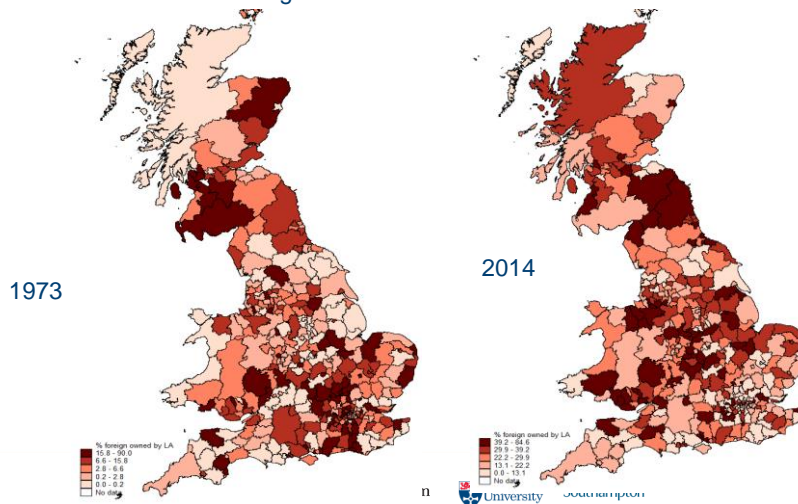


Share of Total Electrical, Computing and Optical employment by LA



Dispersal of dependence on FDI in Manufacturing

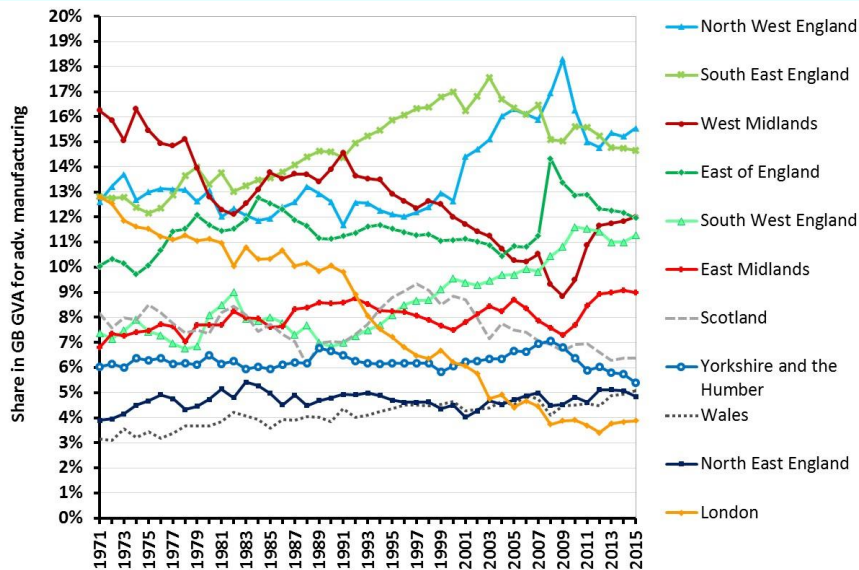
Percentage of manufacturing employment in each LA attributable to foreign-owned firms



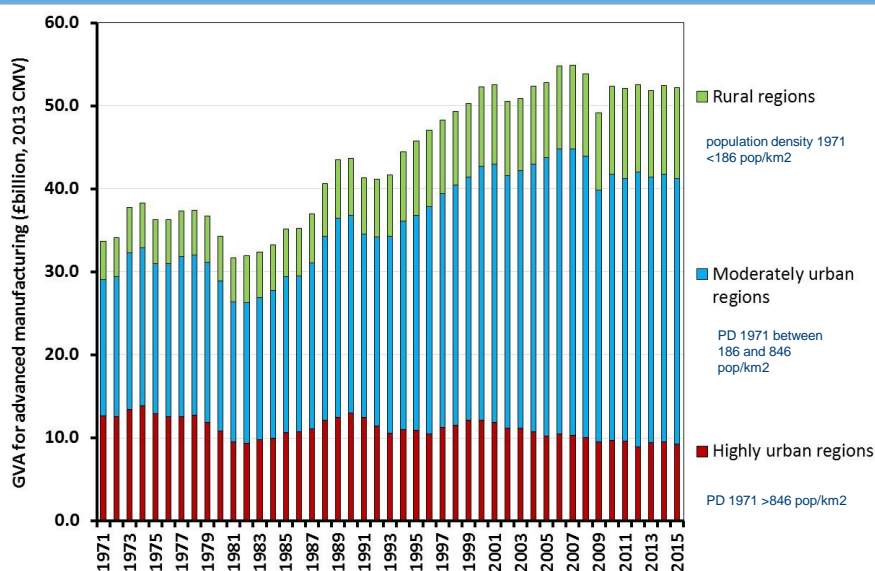
'Advanced manufacturing' industries

'Advanced manufacturing' defined as the following industries:	Pharmaceuticals; Electronics, computers and optical products; Electrical equipment; Machinery and equipment; Motor vehicles; Other transport equipment
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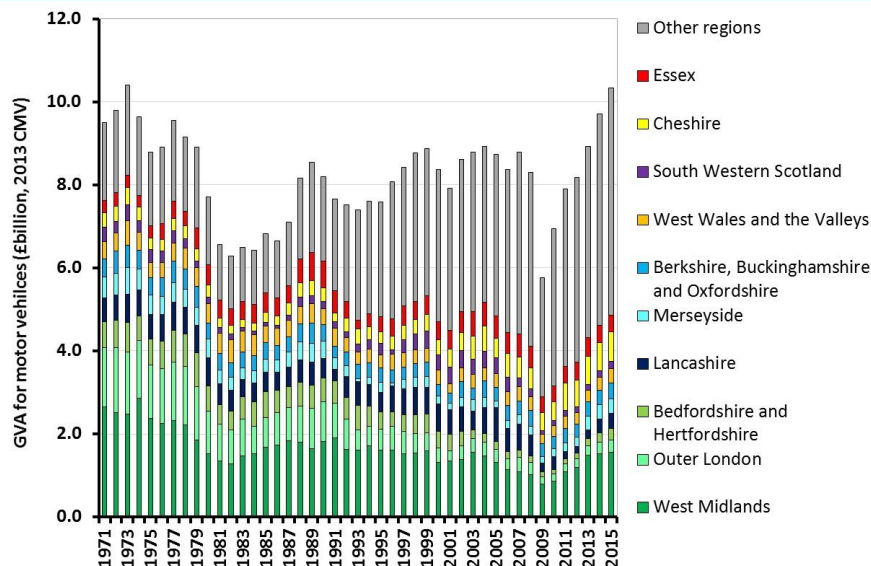
Regional Shares of 'Advanced Manufacturing' GVA



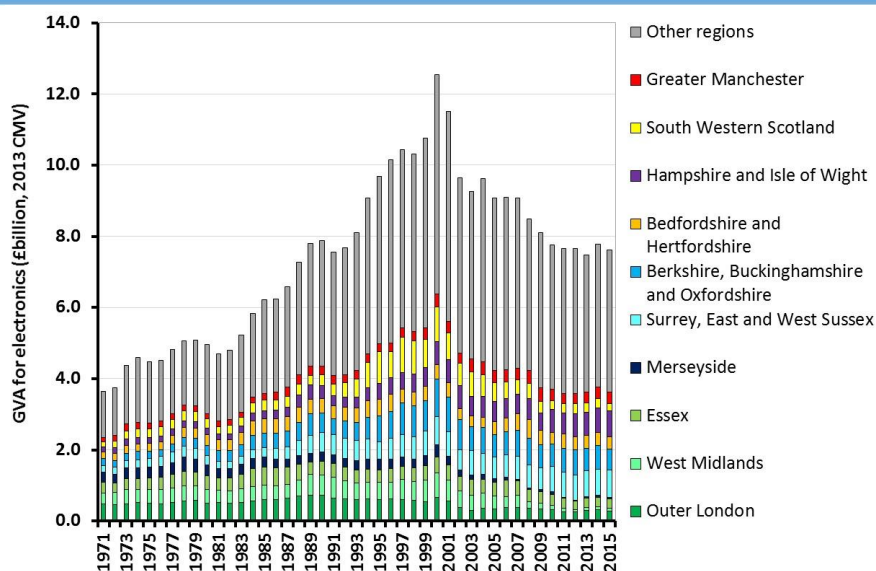
Advanced Manufacturing GVA by type of region



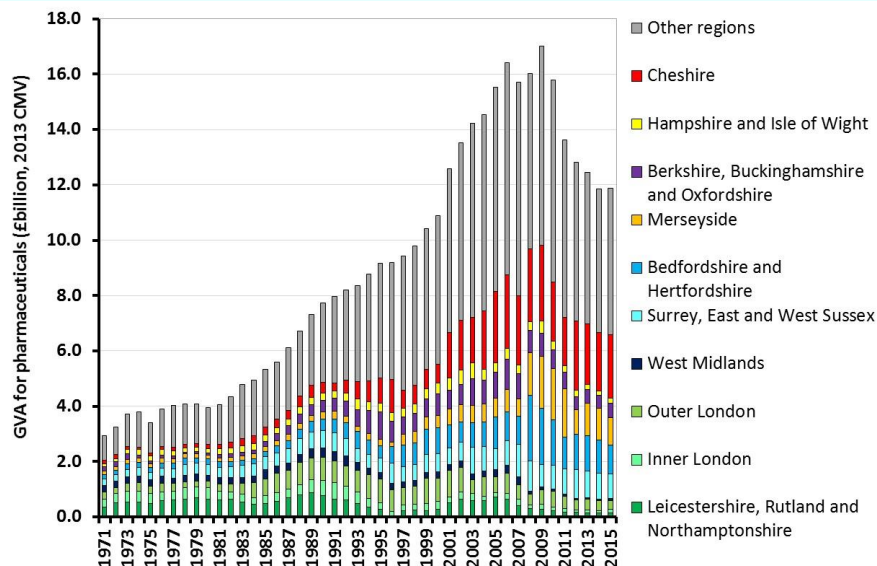
GVA of 1971 Top 10 regions (NUTS2-level) in motor vehicles



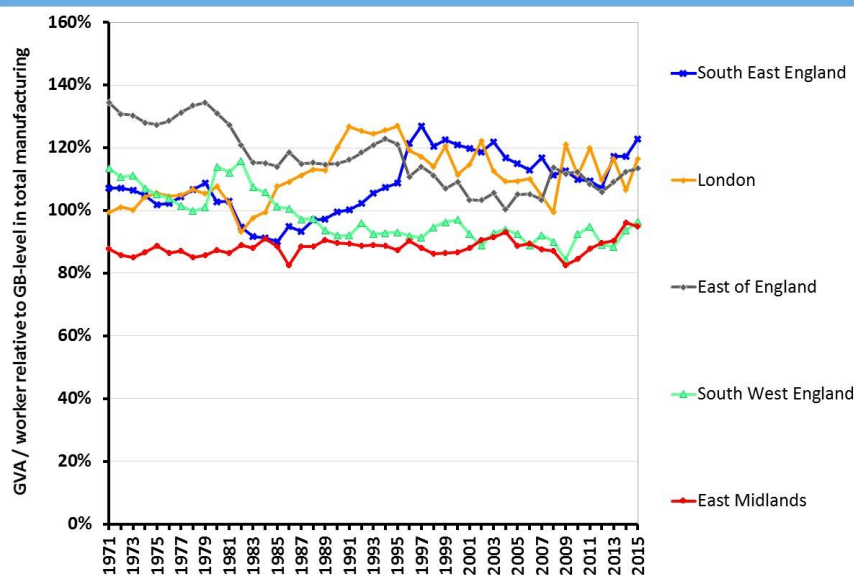
GVA of 1971 Top 10 regions (NUTS2-level) in electronics, computing, optics



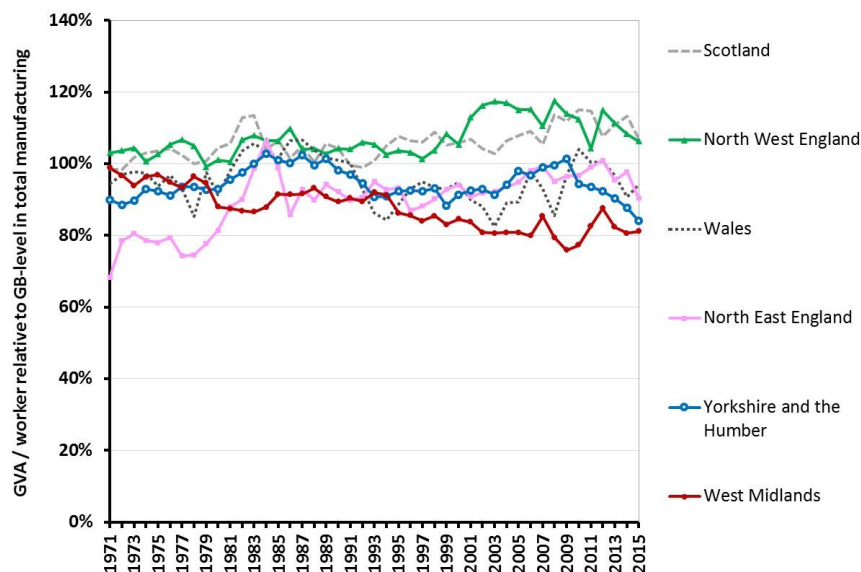
GVA of 1971 Top 10 regions (NUTS2-level) in pharmaceuticals



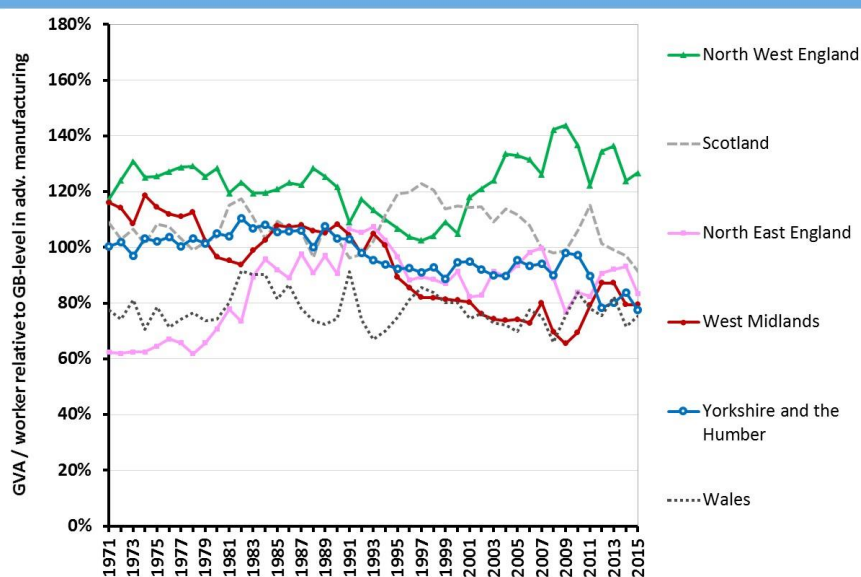
GVA per worker by region (relative to GB) for total manufacturing – Southern regions



GVA per worker by region (relative to GB) for total manufacturing – Northern regions

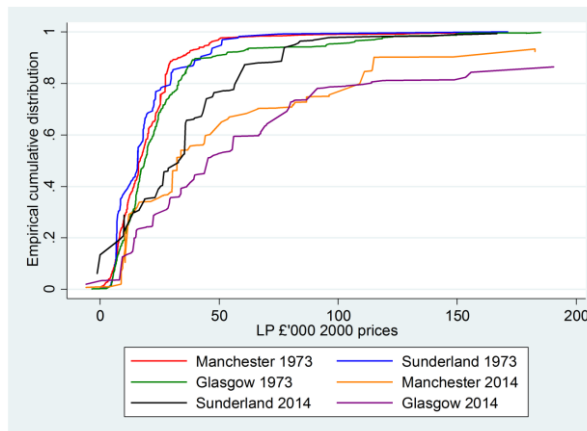


GVA per worker by region relative to GB, for 'advanced manufacturing' – Northern regions



Early Productivity Results

Distribution by firms of GVA per worker in manufacturing in certain cities, 1973 and 2014



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Future Cluster Analysis

- Has deindustrialisation eroded the basis for manufacturing clusters, or are there robust and resilient clusters that place-based industrial policies could support and develop?
- Empirical evidence on the status and evolution of manufacturing clusters in Britain has been limited
- Based on snapshots in time and measures of clustering that suffer from areal unit, aggregation and checkerboard problems.
- Intend to use a distance-based measure of clustering between firms to overcome these limitations.

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First Paper

- Apply this model to ARD micro-data set on manufacturing firms in Britain since 1973 and estimate TFP by firm
- Examine strength of clusters in different types of manufacturing industries and their evolution since the 1970s.
- Are higher productivity industries associated with greater clustering?
- Any evidence that clustering has raised the productivity of manufacturing firms?



Early Thoughts

- Manufacturing 'heartlands show different paths (compare North West with Yorkshire and Humberside)
- Manufacturing spatial evolution shows dispersal – new centres and belts
 - consistent with productivity growth from opening of new plants, supply chains stretched beyond travel to work areas (Bailey et al, 2015)
- How does a sector and cluster-focused industrial strategy fit with these new patterns?
- How should place-based institutional support be designed and scaled to respond?

