



INDUSTRIAL STRATEGY AND THE REGIONS: THE UK'S FLAWED APPROACH

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Back on the Agenda? Industrial Policy Revisited
St Catherine's College, Cambridge. 12-13 June 2018.

Outline

- Part 1: Background
 - Research Questions
 - The re-emergence of industrial policy
 - The UK approach
- Part 2: A very brief recap on the UK's regional policy problem
- Part 3: An industrial strategy for certain places?
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- Part 4: the Making of the UK's Industrial Strategy
 - Competing hypotheses
 - Discuss

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30 Celebrating the
300th Anniversary
of CRESSE
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Industrial Strategy and the Regions
The shortcomings of a narrow sectoral focus
Steve Fothergill, Tony Gore and Peter Wells



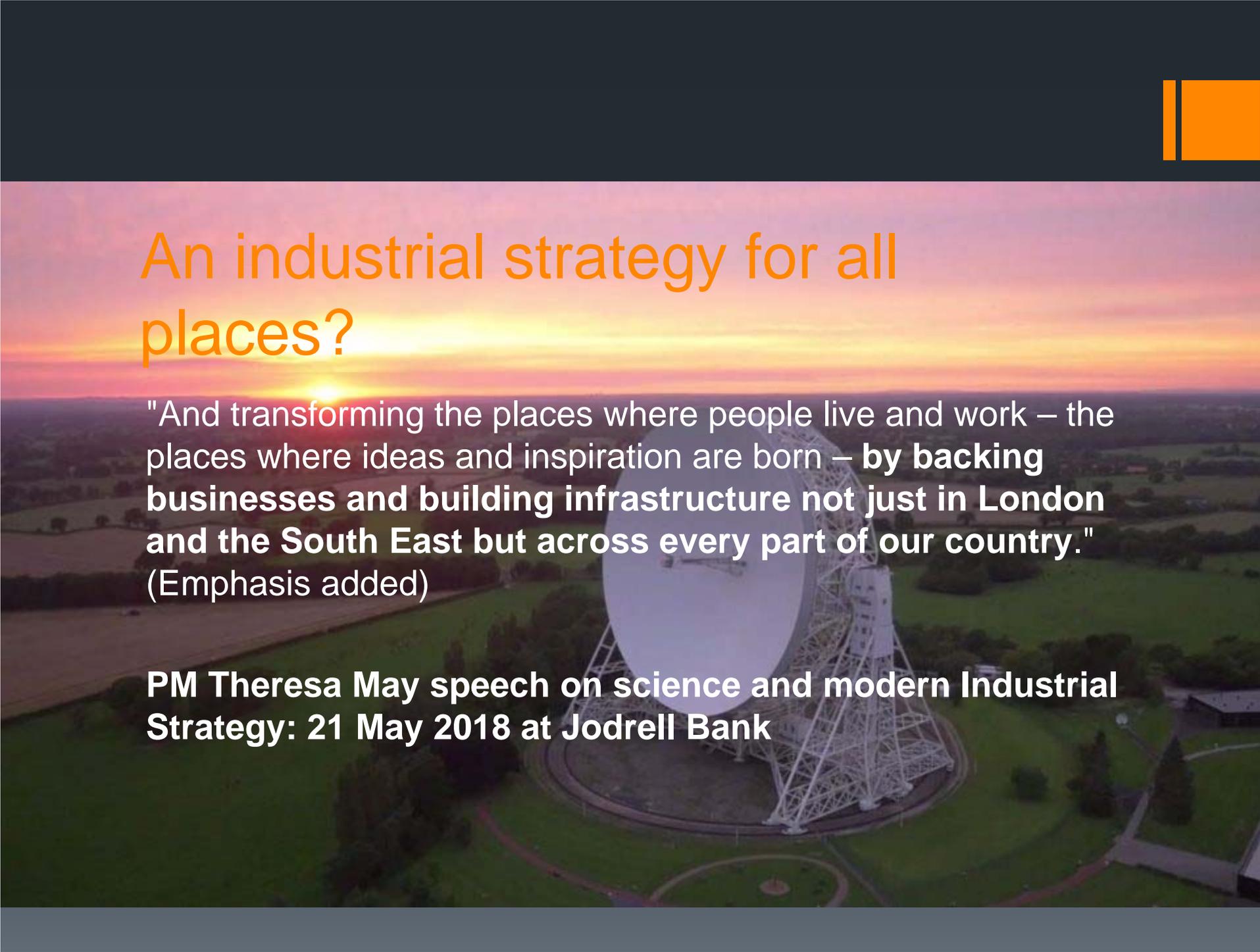


Part 1: Background to Industrial Strategy



Research Questions

1. Does the UK government's industrial strategy support regional policy objectives?
2. Why does the UK Government's Industrial Strategy take the form it does?

An aerial photograph of the Jodrell Bank radio telescope, a large white parabolic dish mounted on a complex metal lattice structure. The dish is positioned in a circular clearing surrounded by green fields. In the background, a sunset or sunrise is visible over a horizon, with the sky transitioning from orange to purple. The overall scene is serene and highlights the scale of the scientific infrastructure.

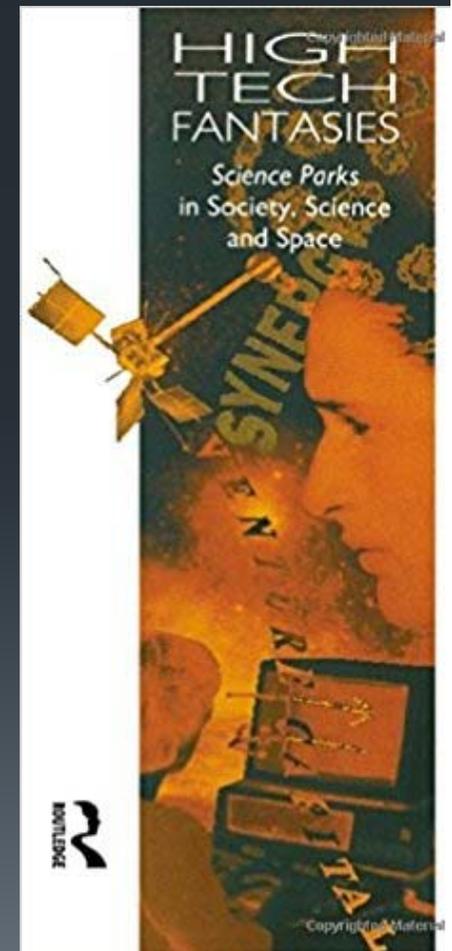
An industrial strategy for all places?

"And transforming the places where people live and work – the places where ideas and inspiration are born – **by backing businesses and building infrastructure not just in London and the South East but across every part of our country.**"
(Emphasis added)

PM Theresa May speech on science and modern Industrial Strategy: 21 May 2018 at Jodrell Bank

The re-emergence of industrial policy

- Policy prescriptions to economic dilemmas
 - international (OECD, EU)
 - national (most EU countries, Japan and China)
 - local/regional (local development agencies)
- Common themes
 - *Industry 4.0*, AI and Robotics
- Different variants
 - from regional innovation systems to smart specialisation (McCann & Ortega-Argilés 2015)
 - inclusive growth (Crisp et al, RSA, WEF...)
- Back to the future?
 - high tech fantasies (Massey, Quintas and Wield 1991)





International prescriptions

"National industrial strategies. Many countries have experimented with or are embarking on some form of industrial strategy and debate continues on the conditions for success and the respective merits of selective and horizontal approaches.

New industrial policy puts less emphasis on product market support measures and more emphasis on support for technology and skills, public-private partnerships and a government role in facilitation and coordination. These approaches are newer and by nature some are harder to evaluate. Successful implementation of industrial strategy requires well designed plans for monitoring and evaluation."

OECD 2014.

But how are these transferred and mutated at national and regional scales?



The (strange) case of the UK's Industrial Strategy

- A broad policy statement to support:
 1. Investing in science, research and innovation [2.4% of GDP target]
 2. Developing skills
 3. Upgrading infrastructure
 4. Supporting businesses to start and grow
 5. Improving procurement
 6. Encouraging trade and inward investment
 7. Delivering affordable energy and clean growth
 8. Cultivating world-leading sectors
 9. Driving growth across the whole country
 10. Creating the right institutions to bring together sector and places (emphasis added)



The (strange) case of the UK's Industrial Strategy

- ... but the narrow focus of the **Industrial Strategy Challenge Fund (ISCF)** new money is on six sectors:
 - Healthcare and medicine
 - Robotics and artificial intelligence
 - Batteries for clean and flexible energy storage
 - Self-driving vehicles
 - Manufacturing and materials for the future
 - Satellites and space technology



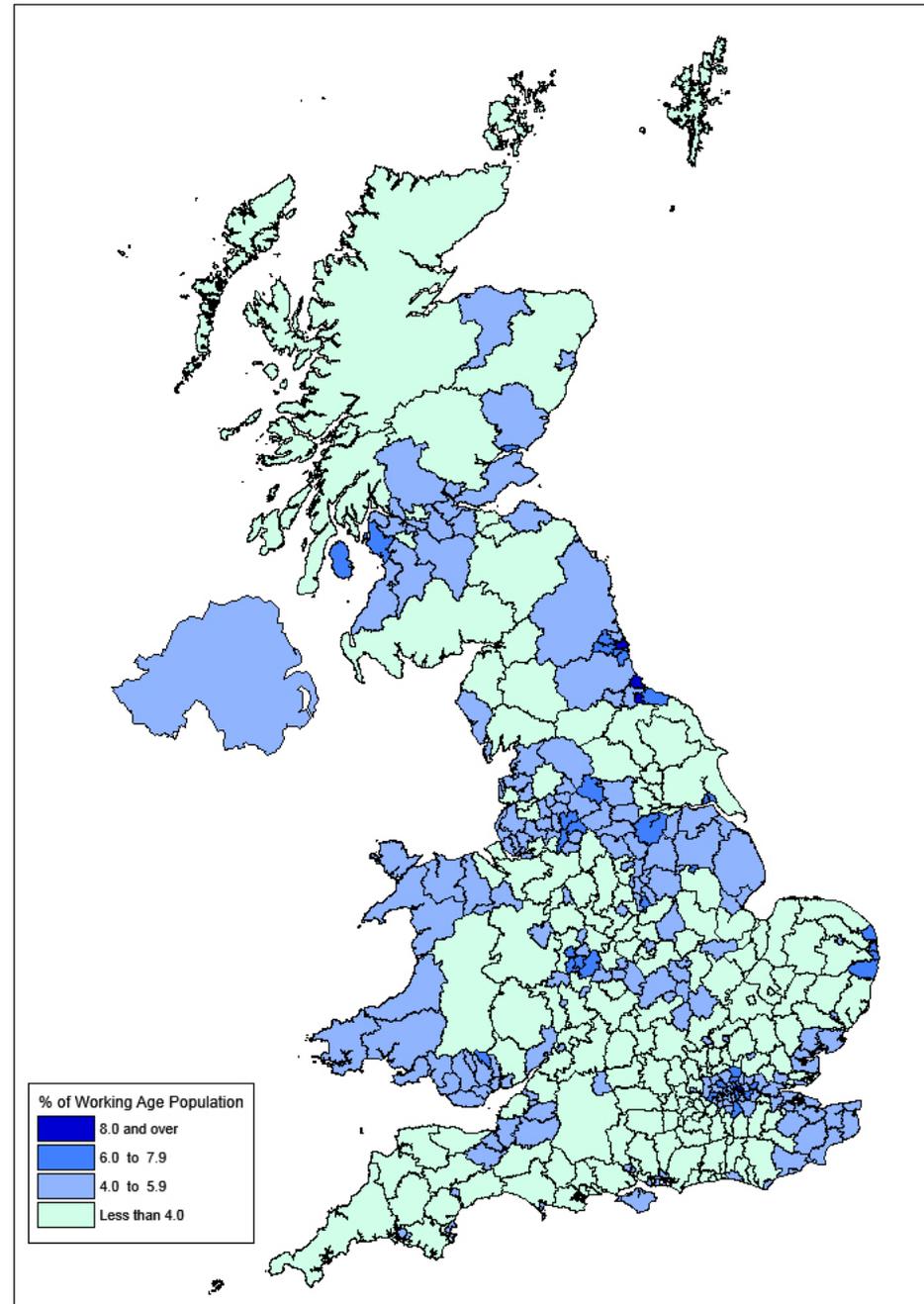
Part 2: A very brief recap of the UK's regional policy problem



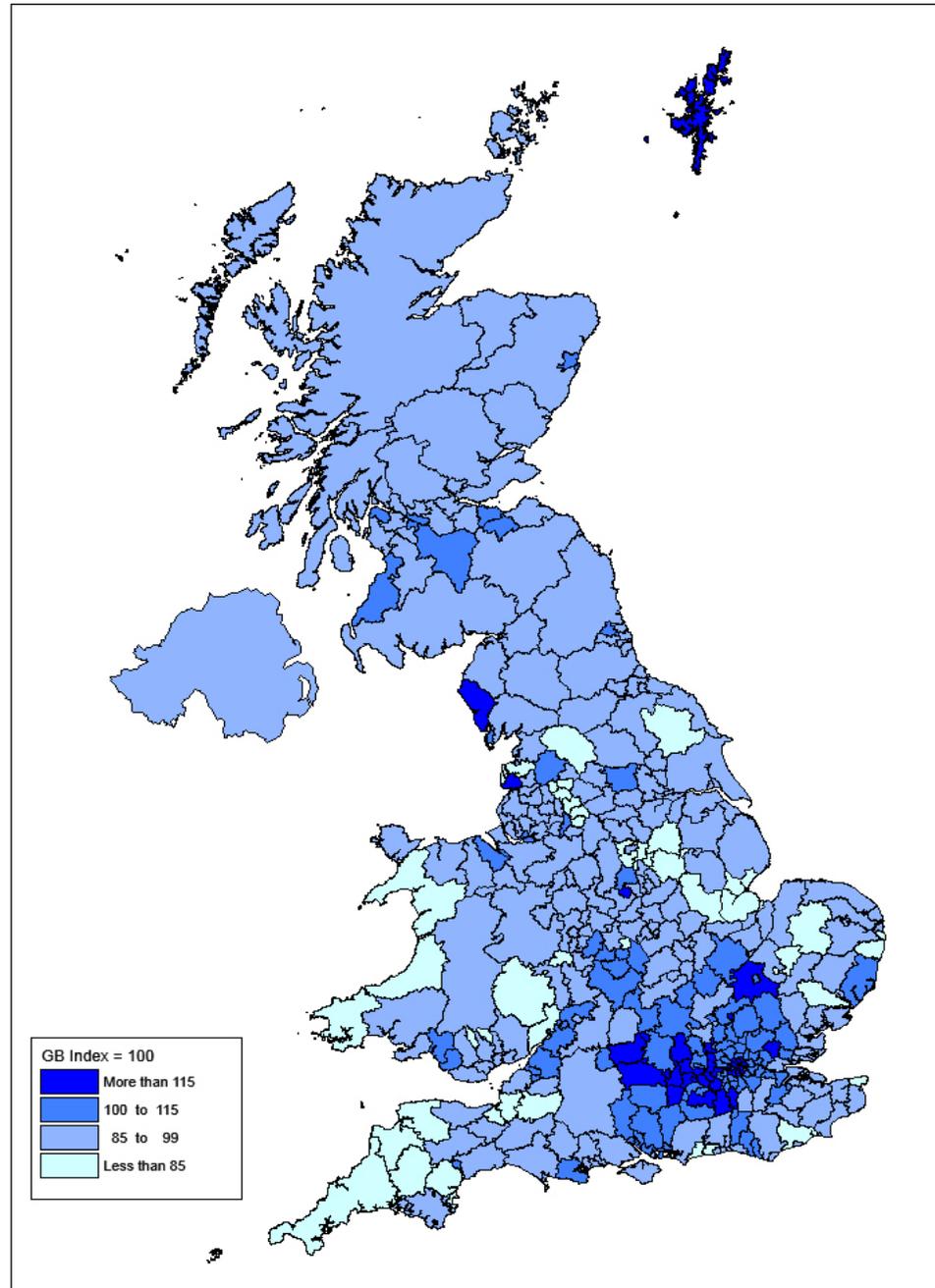
A recap on the UK's Regional Policy Problem

1. Unemployment
2. Earnings
3. Manufacturing location

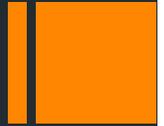
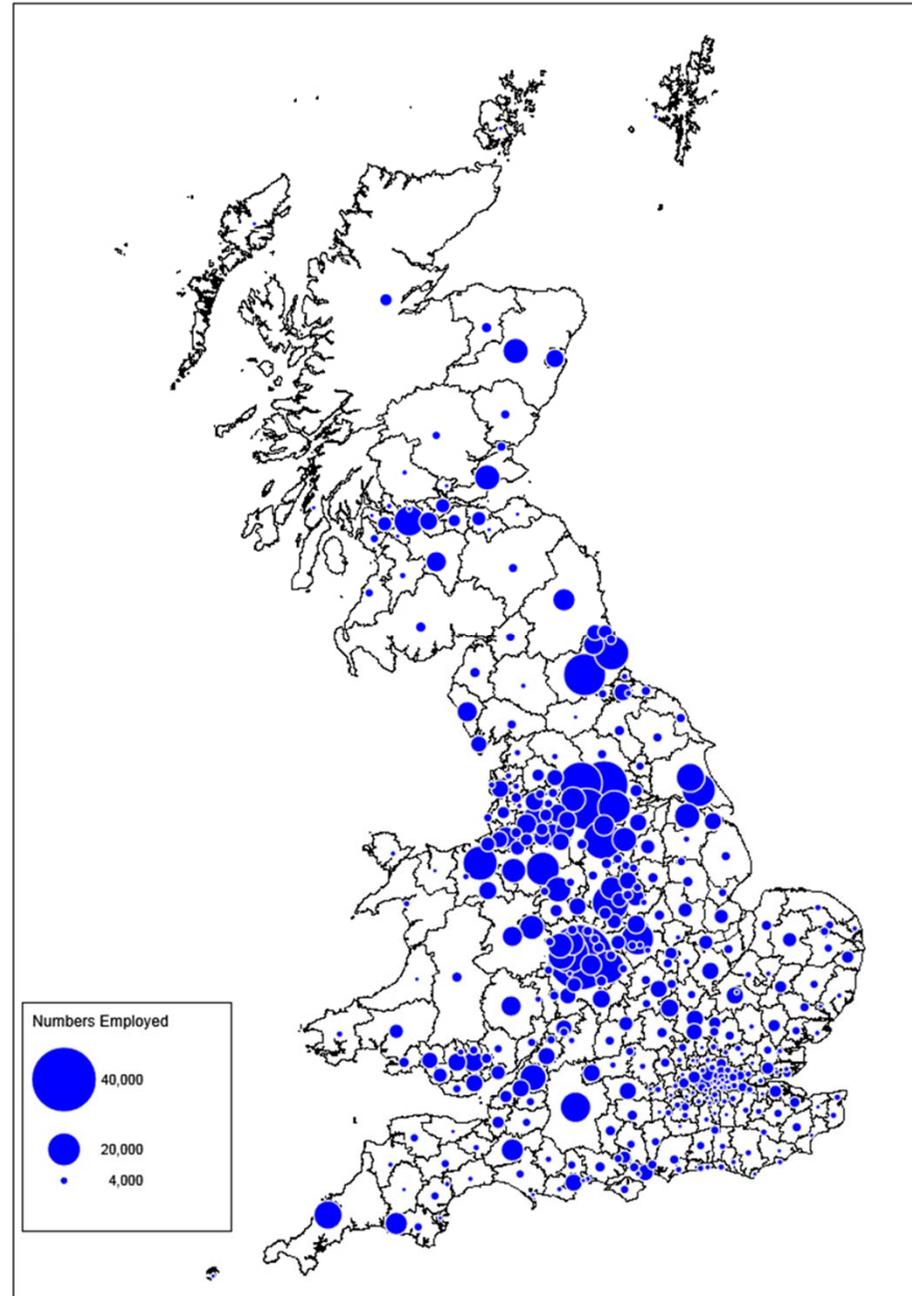
ILO unemployment by district, June 2017



Gross weekly earnings of full-time workers, by district, 2014-16



Employment in all manufacturing, by district, 2016





Where are the likely recipients to be located?

Part 3: An industrial strategy for (certain) places



Ex ante assessment methodology

- Three broad considerations:
 - Where are the target sectors located?
 - After universities, where are the main recipients (research labs) located?
 - Where has previous UK government RTDI funding gone?



Ex ante assessment methodology

Identifying where the ICSF funding may be dispersed - first two steps

1. identification of best fit sector classifications (by SIC codes)
2. using employment as a proxy for firm size
3. mapping target sectors (establishment) location
4. mapping the establishment of private research establishments (outside universities the most likely recipients of funding)



Defining the sectors - broad and generous definitions

Healthcare and medicine

- 21100 Manufacture of basic pharmaceutical products
- 21200 Manufacture of pharmaceutical preparations
- 26600 Manufacture of irradiation, electromechanical and electrotherapeutic equipment
- 32500 Manufacture of medical and dental instruments and supplies
- 72110 Research and experimental development on biotechnology

Robotics and artificial intelligence

- 28990 Manufacture of other special-purpose machinery
- ***Batteries for clean and flexible energy storage***
- 27200 Manufacture of batteries and accumulators

Self-driving vehicles

- 29100 Manufacture of motor vehicles

Manufacturing and materials of the future

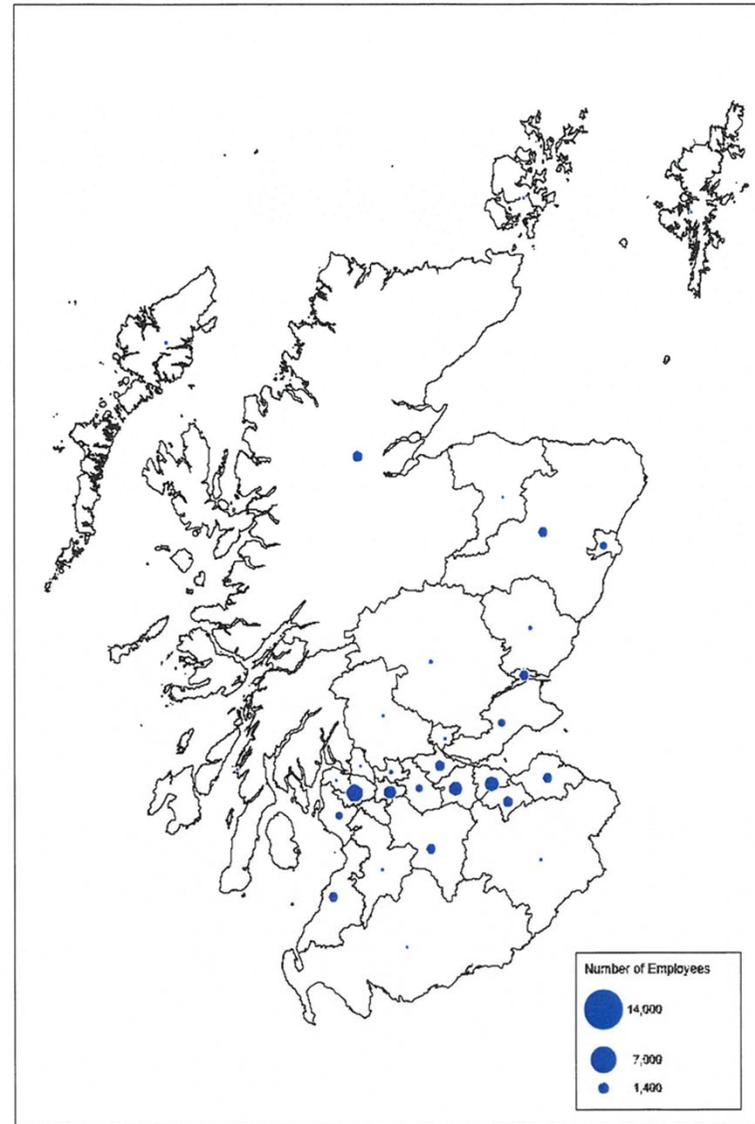
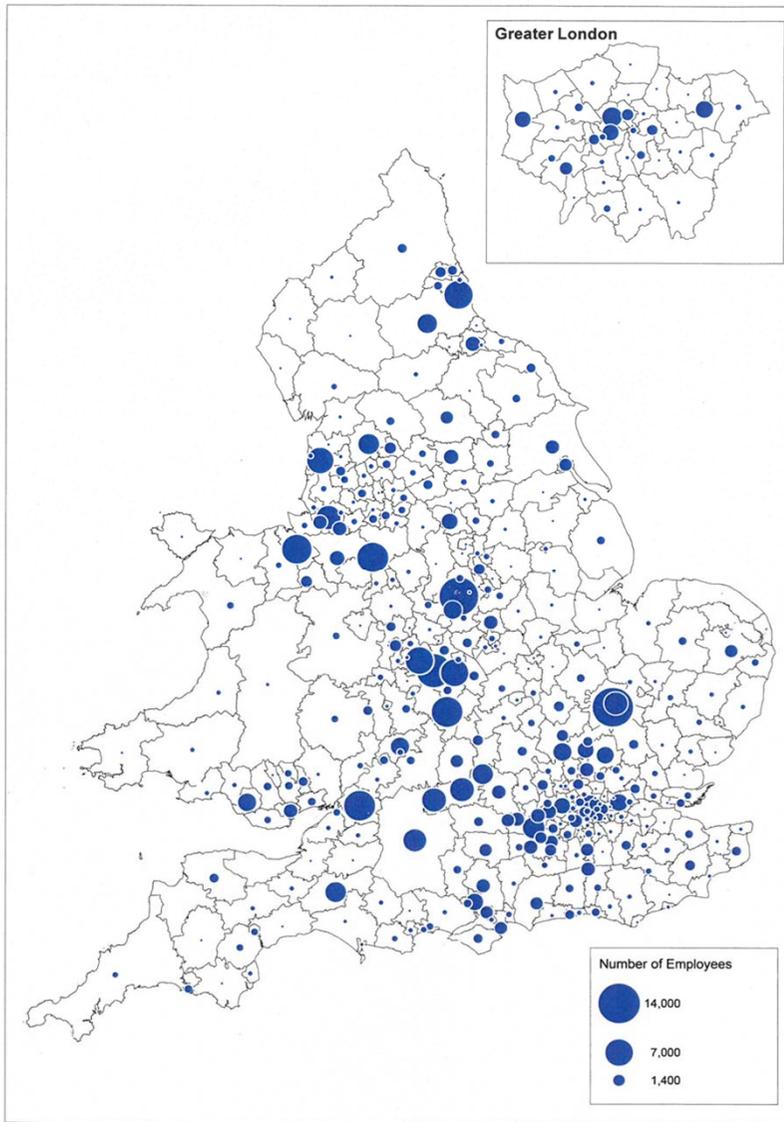
- 23990 Manufacture of other non-metallic mineral products
- 72190 Research and experimental development on natural sciences and engineering

Satellites and space technology

- 30300 Manufacture of air and spacecraft and related machinery
- 51220 Space transport

Sector	Employees
Basic pharmaceutical products	6,000
Pharmaceutical preparations	29,000
Irradiation, electromechanical and electrotherapeutic equipment	4,500
Medical and dental instruments and supplies	38,000
Research and experimental development on biotechnology	8,000
Other special purpose equipment	9,000
Batteries and accumulators	2,000
Motor vehicle manufacturing	78,000
Other non-metallic mineral products	6,000
R&D on natural sciences and engineering	120,000
Air and spacecraft and related technology	85,000
Space transport	0
Total	384,500
as % of all GB employees	1.4
as % of GB manufacturing employees	10.9

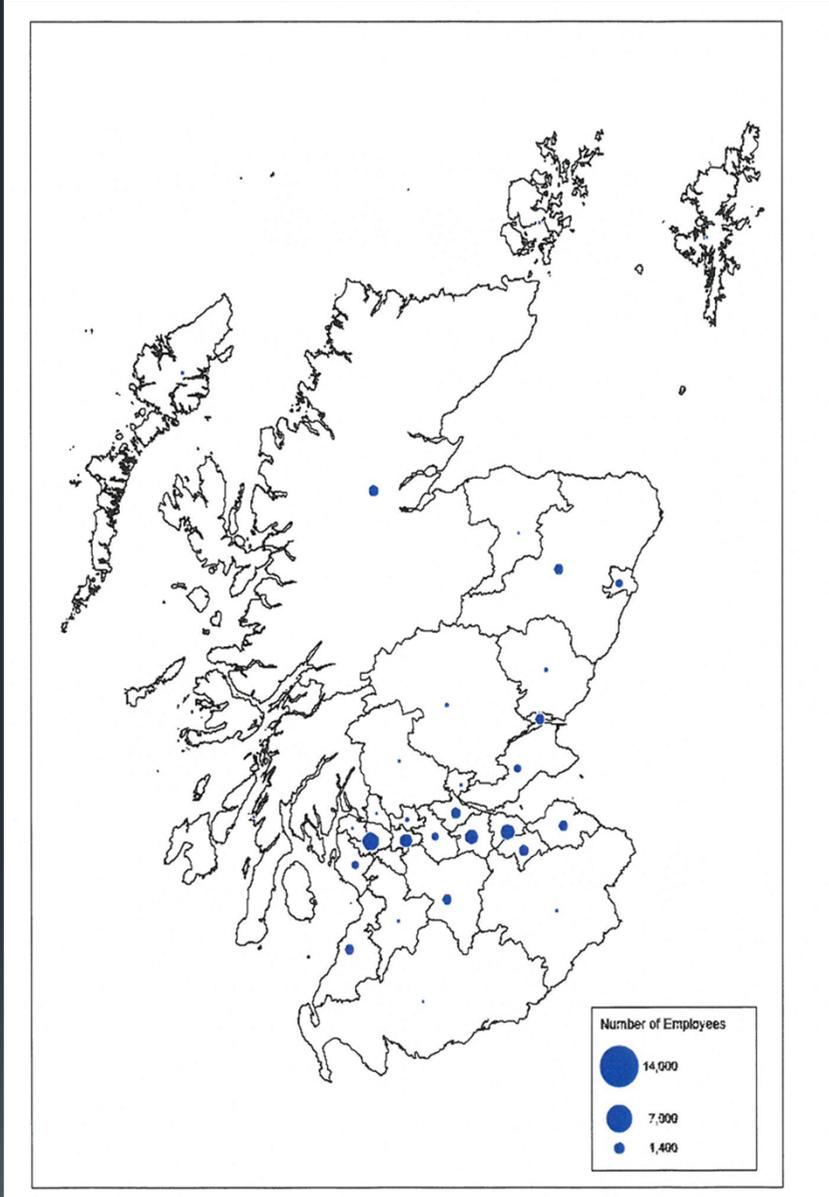
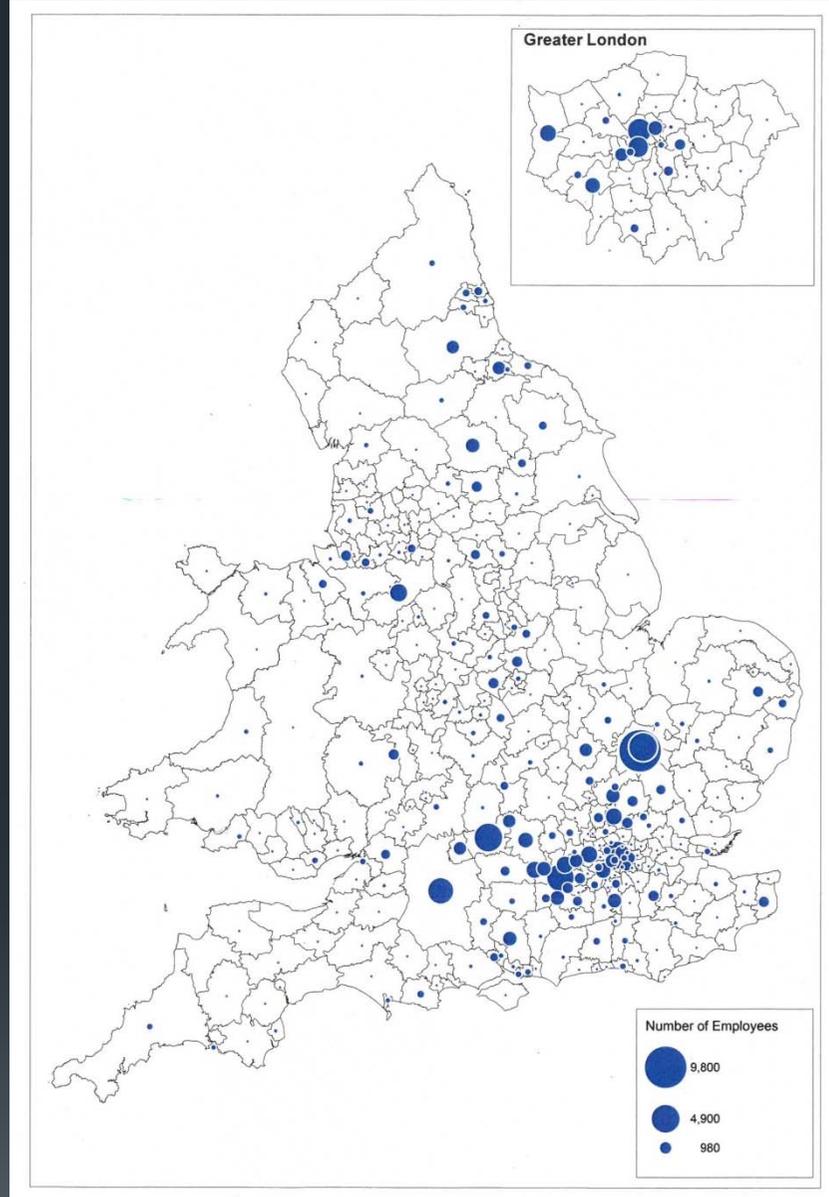
Source: BRES 2016



Employment in ISCF target sectors, by local authority district, Source: BRES

Employment in ISCF target sectors, by region and country, 2015

	Number of jobs	as % of manufacturing	as % of all employees
East of England	50,100	10.7	1.9
North East	20,100	12.7	1.9
South East	73,800	14.9	1.8
Wales	22,100	13.9	1.8
West Midlands	42,100	13.2	1.7
South West	37,900	14.0	1.6
East Midlands	27,900	8.9	1.4
North West	43,200	12.2	1.4
Scotland	23,000	6.3	0.9
Yorkshire & the Humber	18,300	4.9	0.8
London	25,800	7.6	0.5
Great Britain	384,500	10.9	1.4



**Employment in R&D establishments, by local authority district, 2015.
Source: BRES**



Location of employment in R&D establishments

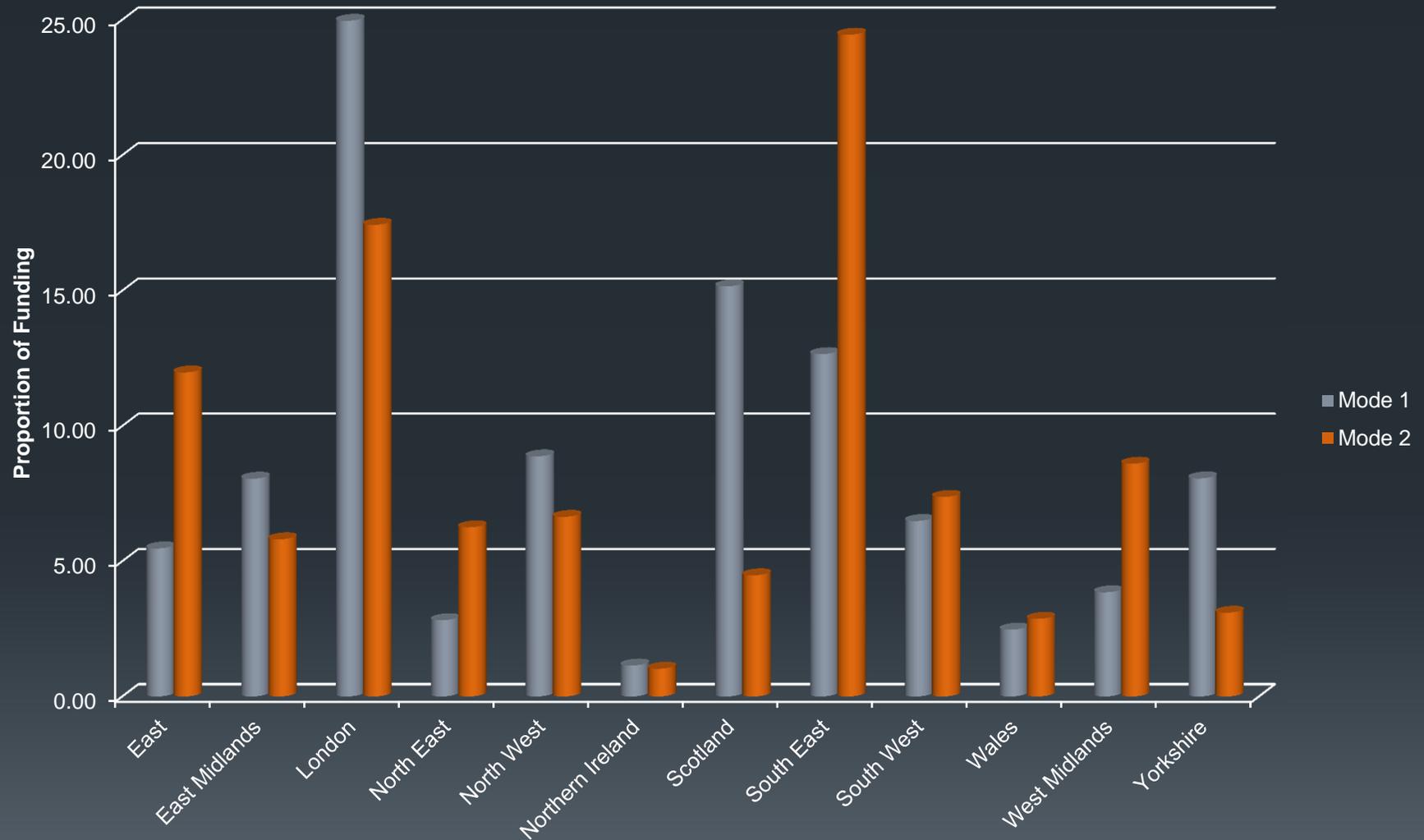
Region/Nation	Number of jobs
South East	36,500
East of England	28,500
London	17,300
Scotland	11,700
South West	6,800
North West	6,200
Yorkshire & the Humber	5,400
North East	5,300
East Midlands	4,100
West Midlands	3,100
Wales	2,100
Great Britain	128,000



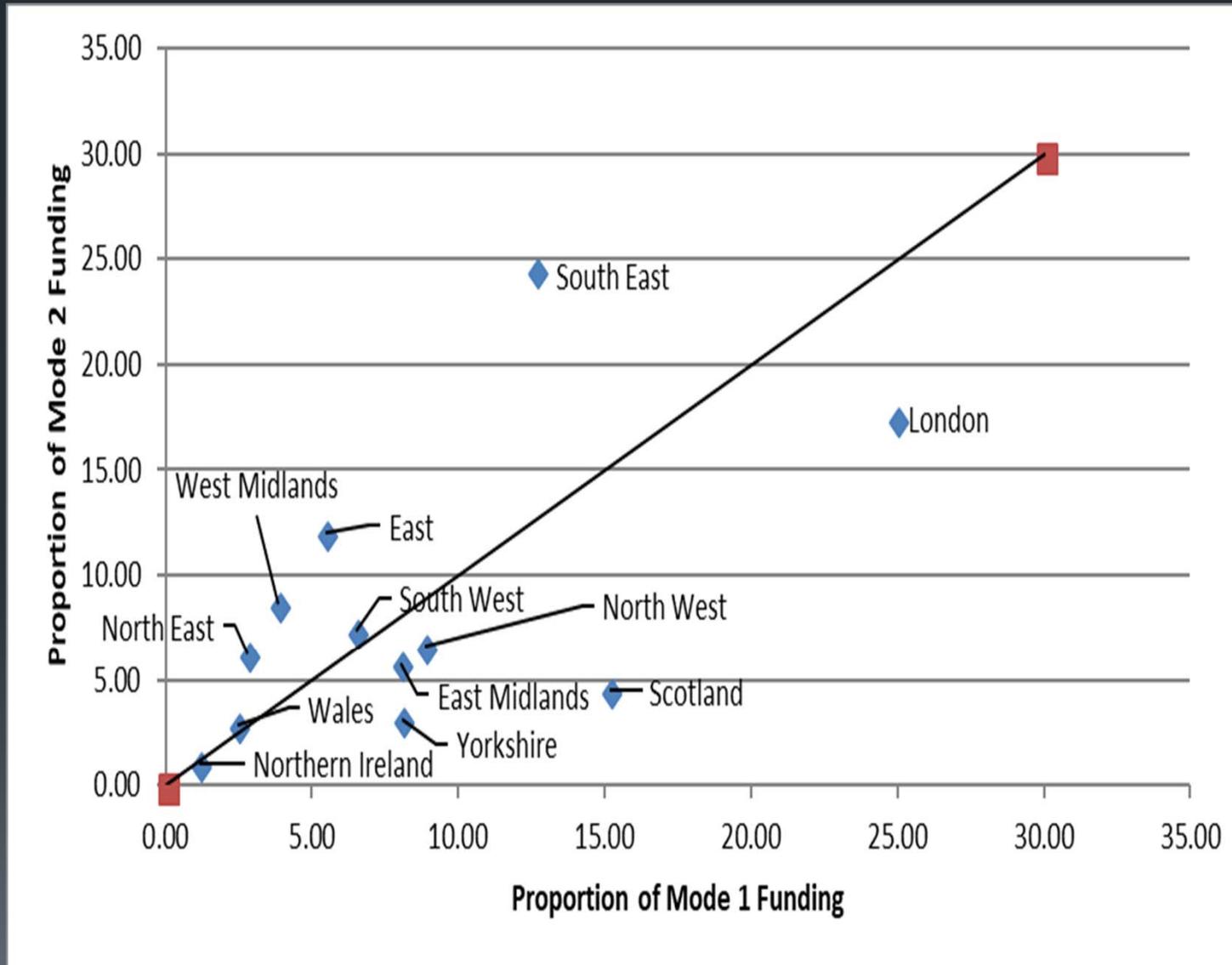
Location of UK RTDI Expenditure (2008-16)

- Analysis and coding of all UK Government RTDI Expenditure (e.g. RCUK/UKRI, Innovate UK, KTPs)
- Classification by:
 - Pure research
 - Collaborative research
 - Industry research funding
- Excludes non-research transactions to HEIs or industry
- Assignment of funding to Mode 1 (Pure) and Mode 2 (Collab/Industry)

Location of UK RTDI funding



University or Firm Led Regional Innovation Systems?





Conclusions: from the analysis of ICSF sectors and R&D establishments

1. The UK government's sectoral focus really is exceptionally narrow
2. The UK government's narrow sectoral focus threatens to widen regional divides
3. Many sectors with a strong presence have been ignored: chemical and steel industries, food & drink manufacturers, energy production and distribution
4. Little consideration of how new technological diffusion and adoption, the development of new products and processes, and with the development of new markets works
5. No consideration of evidence around systems of innovation, smart specialisation or inclusive growth
6. A new high tech fantasy?



Conclusions: from the analysis of RTDI spend

- Bias towards London and The South East in terms of funding, particularly in terms of Mode 1 funding
- Knowledge exporter regions - university led innovation system where funding proportionately skewed towards creating knowledge
- Knowledge importer regions - firm-led innovation system where funding proportionately skewed towards commercialising knowledge
- Existence of regional strengths/weaknesses by sector



Part 4: The Making of the UK's Industrial Strategy



Political Economy hypotheses

1. Geo-politics and the post austerity/post Brexit referendum politics of distinction
 - about industries of the future and positioning in an international order?
2. Policy convergence
 - industrial strategy: a policy turn in an era of public finance constraint?
3. Political Economy
 - The legacy of Hayek in the UK: from the "made order" to the "spontaneous order"?
4. New local-national political opportunity structures
 - new coalitions of policy actors (business, universities and local state) jostle to secure limited resources?

Political Economy hypotheses: a brief assessment



1. A new geo-politics

- about industries of the future and positioning in an international order?
- high tech industry and universities position to secure resources for a post Brexit world (2.4% target for 2027 is kicked down the road)

2. Policy convergence with international trends

- in name only: detail suggests UK, and within UK, divergence
- lesson drawing weakening - becoming an island state

3. Political Economy

- Rhetoric of 'right institutions' when focus under austerity has been 'institutional destruction'
- Spatial development which may challenge markets is resisted

4. Local coalitions

- defensive positioning focused on securing devolution deals, resources and regional position
- but devolution is not regional policy



Hayek revisited: from made order to spontaneous order

Understanding industrial policy formation:

no singular purpose and no central direction, [...] it utilises [...] dispersed local knowledge in a trial-and-error experimental process of ideas, approaches, projects and organisations, and ... it works [...] through self-organising adjustments to local circumstances

(Macmillan, 2013: 191; from F.A. Hayek 1979 Law, Legislation and Liberty: the Political Order of a Free People).



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What explains regional policy change?

- Regional Studies scholarship tends to focus on questions of:
 - why is economic development spatially uneven?
 - what are the impacts of regional policies?
 - how do the governance and institutions of regional policy work?
 - what might be done differently?
- Less attention with the politics of regional policy and the role of political economy:
 - why does attention to regional issues wax and wain?
 - what is the politics of regional policy formation?
- Notable examples include: Martin, O'Brien and Pike, Harrison, Storper and Massey.