What Next for the Levelling-Up Agenda? Addressing New and Old Challenges in the UK Regional Inequalities Landscape

- Dr David Nguyen, Senior Economist at NIESR (Chair)

- Professor Bernard Fingleton, University of Cambridge

- Dr Ben Gardiner, Cambridge Econometrics

- Professor Ron Martin, University of Cambridge

- Professor Philip McCann, University of Sheffield

- Dr Stuart McIntyre, Fraser of Allander Institute

- Dr Marianne Sensier, Alliance Manchester Business School

Understanding regional economic performance and resilience in the UK: trends since the Global Financial Crisis

**Marianne Sensier, Economics and
Fiona Devine, Alliance Manchester Business School
E-mail: marianne.sensier@manchester.ac.uk**

22/7/2020

NIESR webinar

Economic Resilience to Recession

- The resilience of the economy over the business cycle is of great interest to central and local government policy makers in helping them understand how an economy can recover from an economic crisis.

- At the regional level businesses, local authorities and devolved administrations need to understand the effect of the recession on their local area so they can apply measures to mitigate the impact of the economic downturn and aid in recovery.

Economic Resilience

- Economic resilience is the ability of an economy to withstand or recover from an economic shock which could be a global event (2008 financial crisis and 2020 coronavirus pandemic), national event (UK house price crash of the early 1990s) or a local event (the closing of a factory).

- This paper investigates the economic resilience of UK regions in the run up to the financial crisis, during and afterwards. We analyse the resistance, recovery and renewal of output, employment and productivity data over 1998-2018.

Economic Resilience Scorecard

- The economic resilience scorecard could be a useful tool for policy makers to help identify the least resilient regions that have struggled since the financial crisis and are in need of greater resources in order to "level up" productivity with the rest of the UK.

- Directing recovery policies to the places that need the most support now will help those least resilient regions emerge stronger from the current economic recession caused by the coronavirus global pandemic.

Regional Economic Resilience

Martin (2012, JEG) defines four dimensions of economic resilience to describe how a regional economy responds to a recessionary shock:

1. **Resistance** is the sensitivity of a region compared to the nation during the recession.

2. Speed and extent of **recovery** from the recession.

3. Has the region gone through structural **re-orientation** and what implications this has for the region's jobs, output and income.

4. The degree of **renewal** a region will undergo following the shock and the extent to which it renews its growth path.

Sensier, Bristow & Healy (2016, SEA) classify the economic resilience of regions across Europe following the global financial crisis.
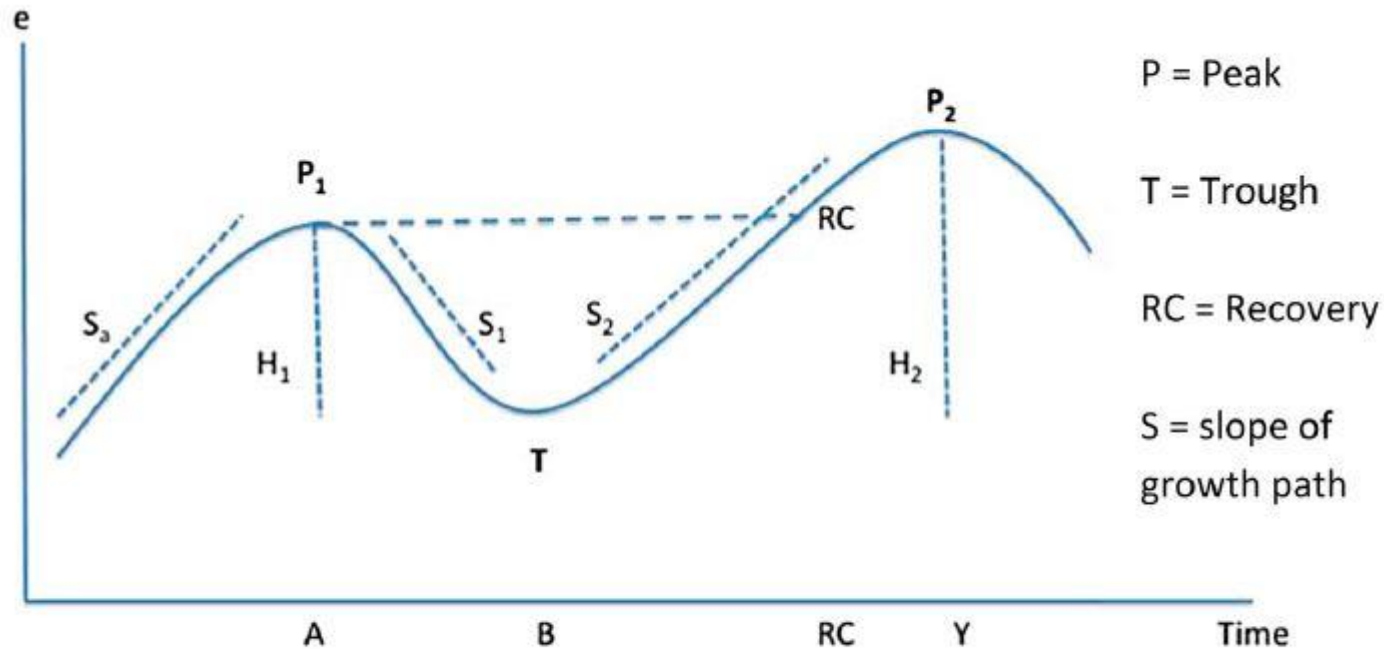

Figure 1. Stylised employment cycle.

■ Pre-recession we measure the expansion average growth rate (EAGR) by calculating the average over 5 years (first difference of the natural log) including the peak year. This is to measure the rate of growth before the recession.

■ LOSS: we calculate the loss over the recession by taking the percentage loss between peak and trough, for example with employment (E):

$$Employment\_Lost = 100x(E_P - E_T)/(E_P)$$

■ E2AGR is the average rate of growth for 5 years following the trough recession date.
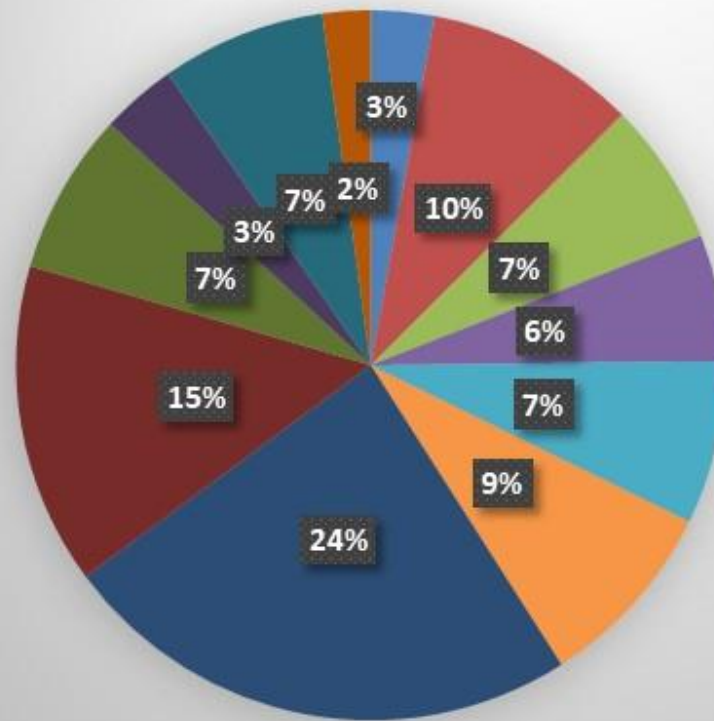
Resilience Scorecard

To calculate a regional ranking of resilience from the statistics, we ask the questions (Yes=1, No=0):

1. **Resistance**: has the fall in GVA/jobs/productivity been less than the national decrease? Beta<1

2. **Duration**: has the duration of the recession been shorter or the same as the national recession?

3. **Recovery**: has the region recovered faster or at the same time as the nation?

4. **Renewal**: was the rate of growth after the recession greater than before (E2AGR> EAGR)? A greater rate of increase means the region is accelerating to a higher growth path.
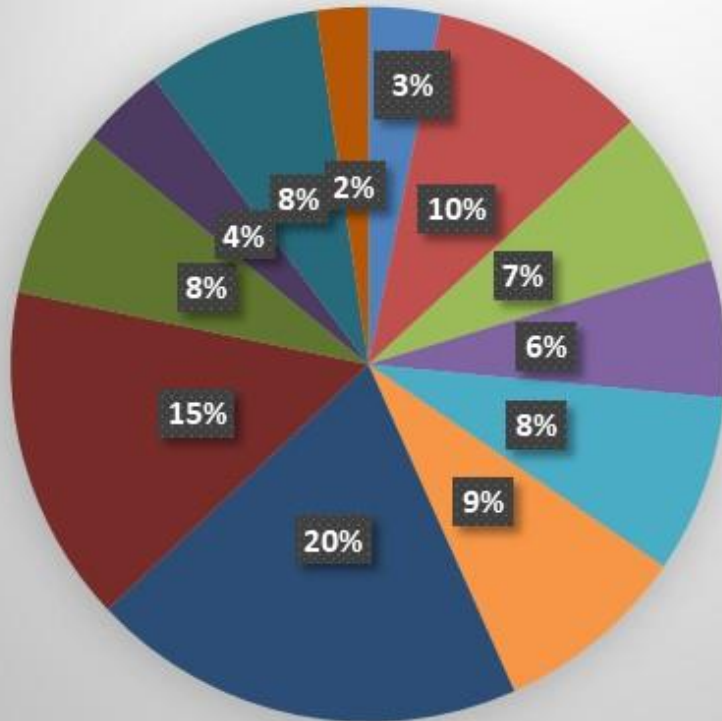
Regional Shares of Real GVA
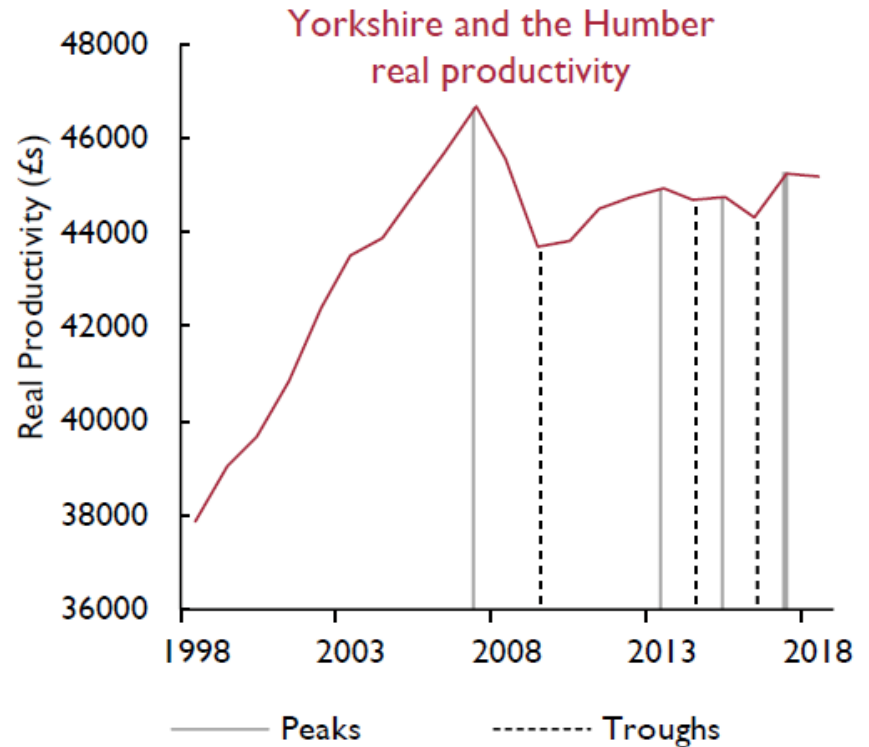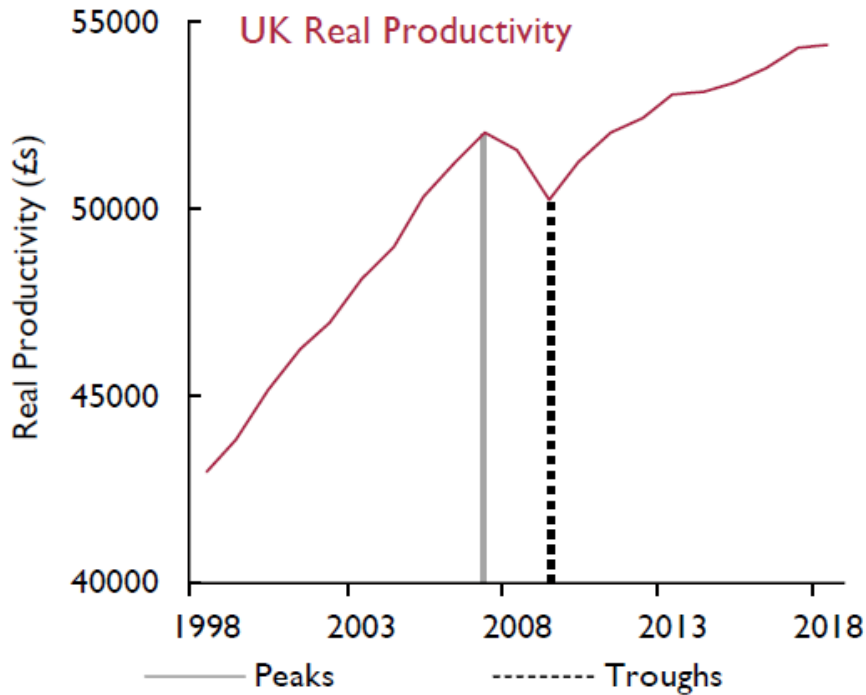
UK Productivity Regional Differences

Figure 1. Difference between national and regional productivity over time

Legend: ■ 1998: UK £43,018   □ 2007: UK £52,057   ■ 2018: UK £54,447
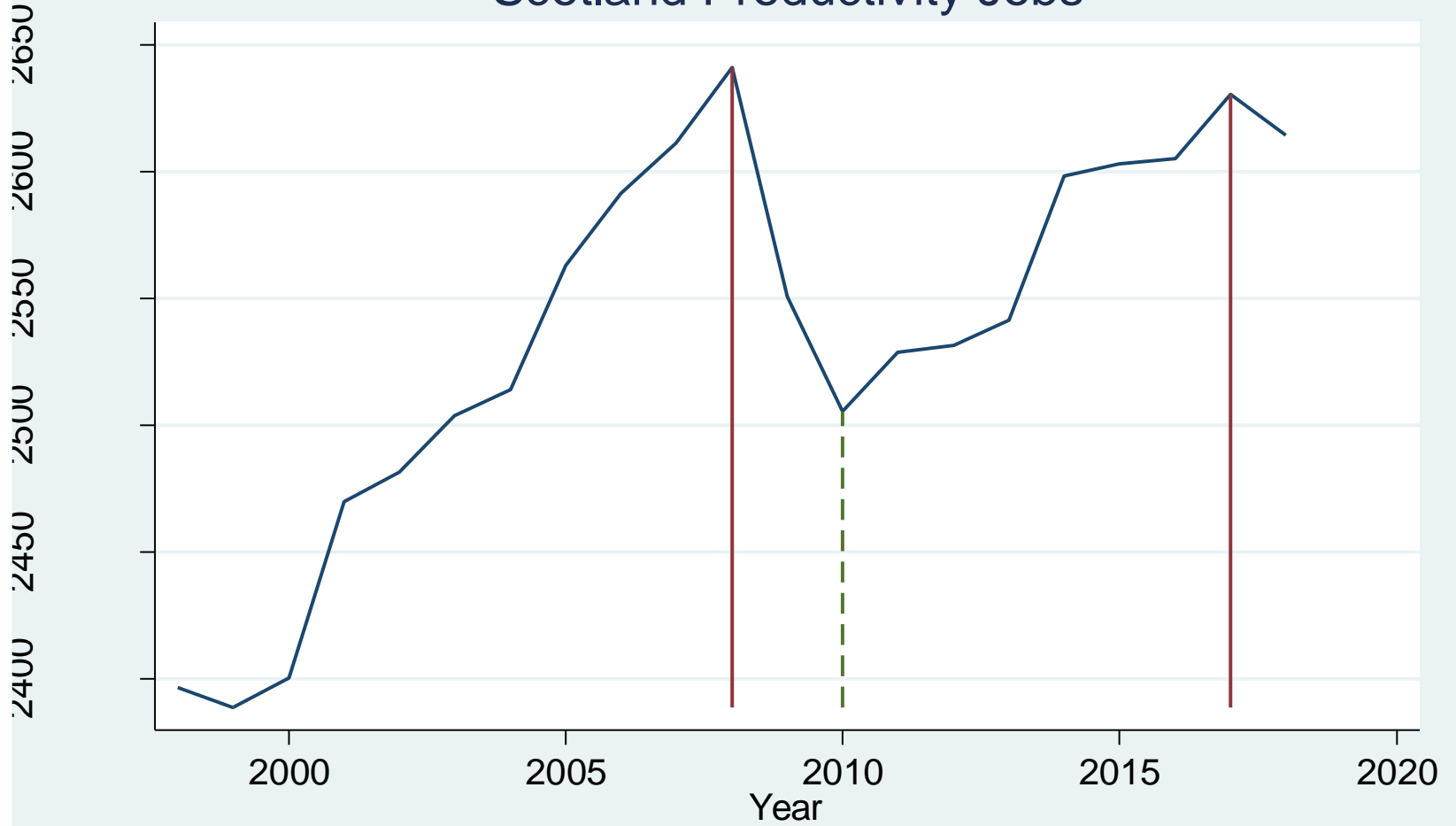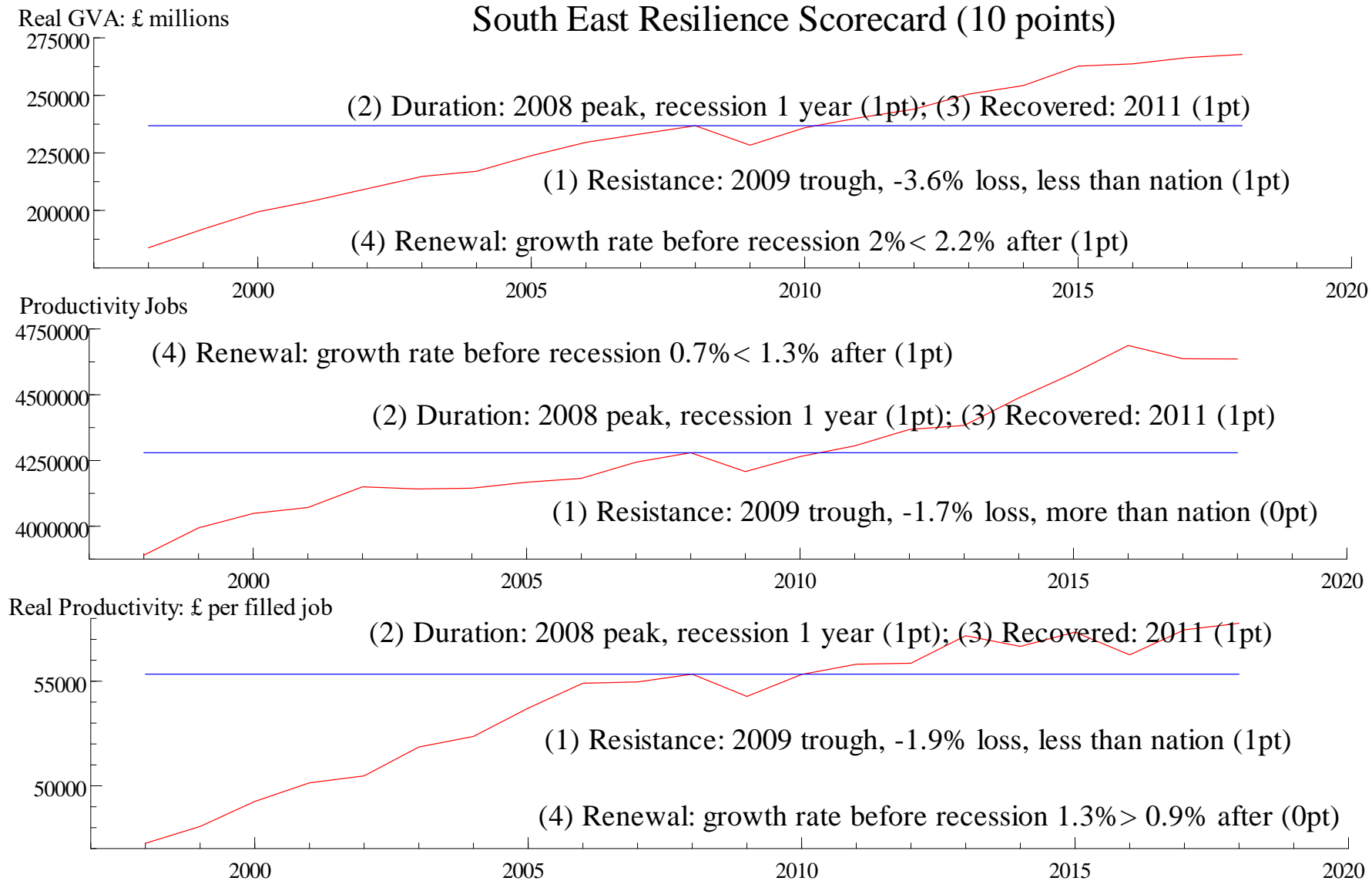
UK & Yorkshire and The Humber

Note: UK real GVA is excluding Extra Regio (in millions of pounds and 2016 prices).

Note: Productivity measure in £s per filled job.

Scotland

Scotland Productivity Jobs

Resilience Scorecard: South East

South East Resilience Scorecard (10 points)

Real GVA: £ millions

(2) Duration: 2008 peak, recession 1 year (1pt); (3) Recovered: 2011 (1pt)

(1) Resistance: 2009 trough, -3.6% loss, less than nation (1pt)

(4) Renewal: growth rate before recession 2%< 2.2% after (1pt)

Productivity Jobs

(4) Renewal: growth rate before recession 0.7%< 1.3% after (1pt)

(2) Duration: 2008 peak, recession 1 year (1pt); (3) Recovered: 2011 (1pt)

(1) Resistance: 2009 trough, -1.7% loss, more than nation (0pt)

Real Productivity: £ per filled job

(2) Duration: 2008 peak, recession 1 year (1pt); (3) Recovered: 2011 (1pt)

(1) Resistance: 2009 trough, -1.9% loss, less than nation (1pt)

(4) Renewal: growth rate before recession 1.3%> 0.9% after (0pt)

Resilience Scorecard: North East

North East Resilience Scorecard (4 points)

Real GVA: £ millions

(2) Duration: 2007 peak, recession 2 years (1pt); (3) Recovered: 2015 (0pt)

(1) Resistance: 2009 trough, -3.7% loss, less than nation (1pt)

(4) Renewal: growth rate before recession 2.9% > 0.6% after (0pt)

Productivity Jobs

(2) Duration: 2008 peak, recession 4 years (0pt); (3) Recovered: 2018 (0pt)

(1) Resistance: 2012 trough, -3.5% loss, more than nation (0pt)

(4) Renewal: growth rate before recession 1.1% > 0.5% after (0pt)

Real Productivity: £ per filled job

(2) Duration: 2007 peak, recession 2 years (1pt); (3) Recovered: 2011 (1pt)

(1) Resistance: 2009 trough, -3.6% loss, more than nation (0pt)

(4) Renewal: growth rate before recession 1.5% > 1% after (0pt)

Conclusions

- Most NUTS 1 regions have recovered pre-recession peaks in productivity with exception of Yorkshire and the Humber.

- South East, South West and the Midlands rank highest in the Resilience Scorecard.

- The resilience scorecard is a useful tool for comparing areas to understand how regions have resisted, recovered and experienced renewal after facing an economic shock.

- Help to level up resources and investment post COVID-19 crisis for local industrial strategies.

The University of Manchester

Further Reading

- Sensier, M. and Devine, F. (2020). "Levelling up regional resilience: policy responses to the COVID-19 crisis", An Industrial Strategy for Tomorrow Policy Series, no. 5, Bennett Institute for Public Policy, University of Cambridge. https://www.bennettinstitute.cam.ac.uk/media/uploads/files/Indust._Strat._5_Levelling_up.pdf

Policy@Manchester Blogs:

- 'Levelling up regional resilience', with Elvira Uyarra, 12/5/20, http://blog.policy.manchester.ac.uk/growth_inclusion/2020/05/levelling-up-regional-resilience/

- 'How resilient were UK regions to the 2008 financial crisis? Recovery policies for COVID-19 crisis', with Fiona Devine and Elvira Uyarra, 14/7/20, http://blog.policy.manchester.ac.uk/growth_inclusion/2020/07/how-resilient-were-uk-regions-to-the-2008-financial-crisis-recovery-policies-for-covid-19-crisis/

Overview

- Context and aims of paper
- Capital stock data and correlations
- Explanatory model of productivity
- Main findings and takeaway points

Context and aim

- National 'Productivity Problem' has a clear spatial dimension
- Regional disparities in labour productivity are long-standing (go back to 19thC)
  - and they are part of the problem of 'left behind places'
- Several factors invoked to account for geographical differences in productivity
- Lack of data has constrained evaluation of role of local capital stock
- Aim of paper is to use novel data set of regional capital stock to explore its contribution to regional disparities in productivity

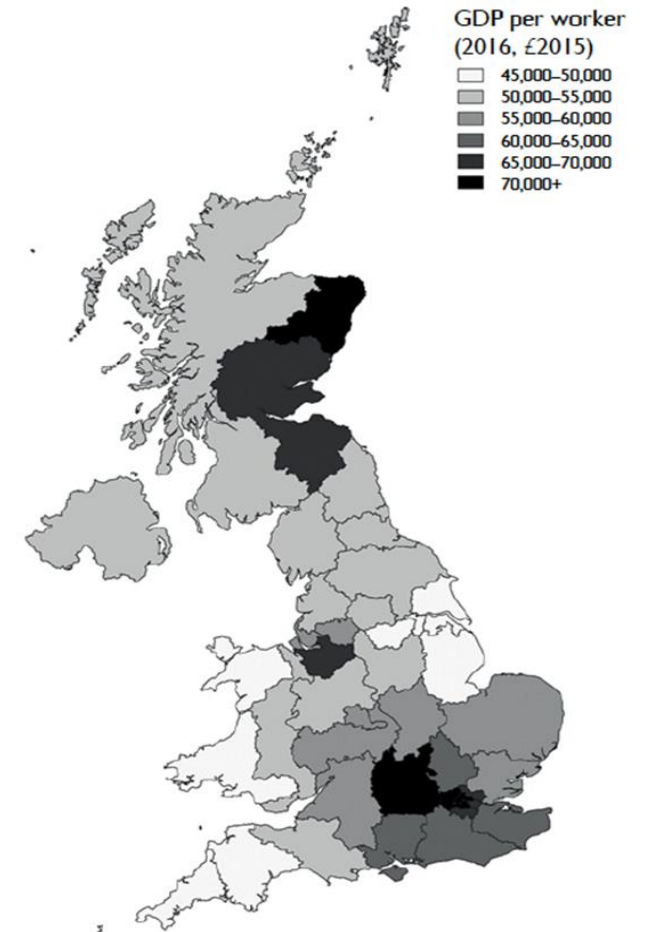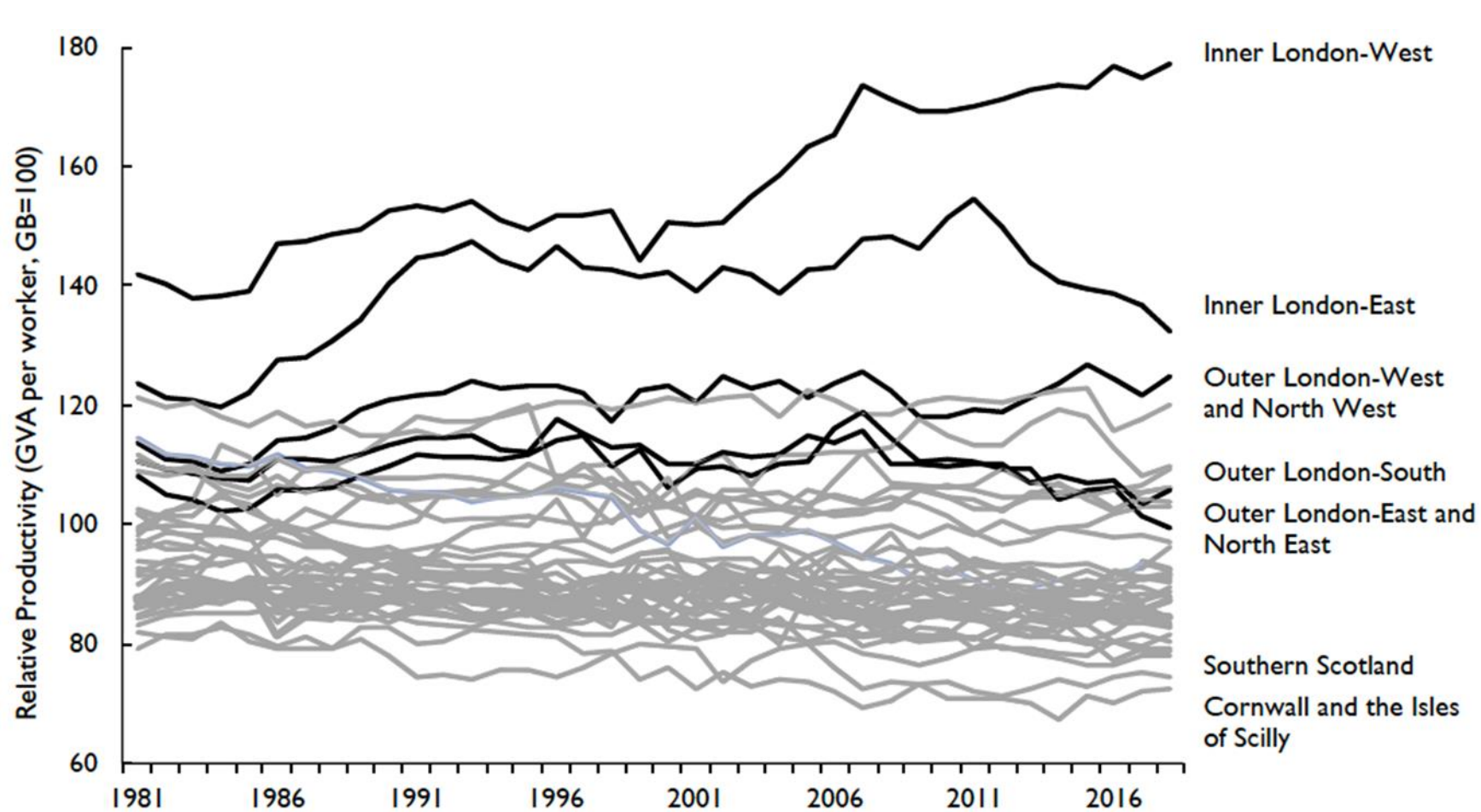cambridge
econometrics
camecon.com

Long-run trends in regional labour productivity
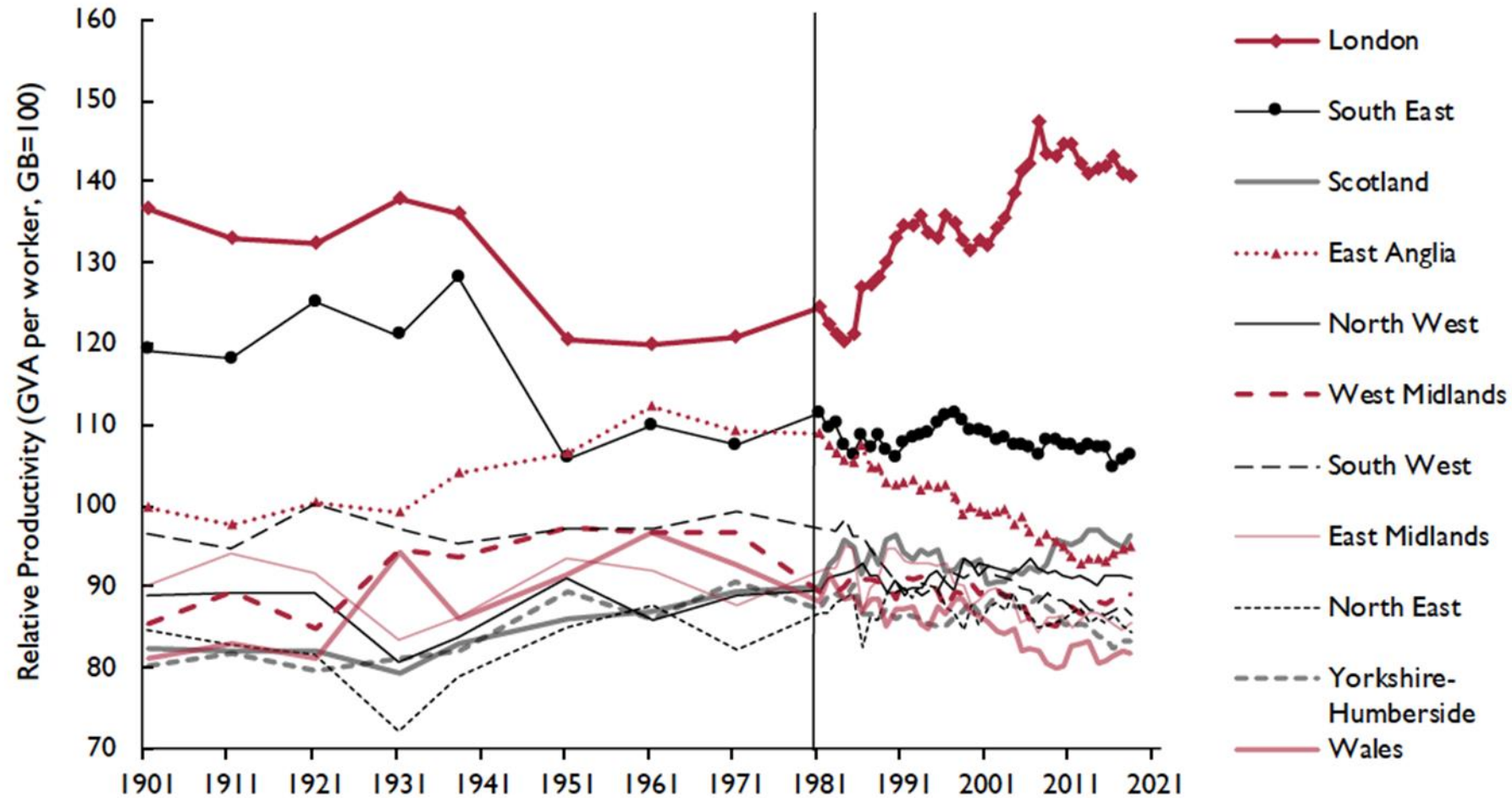
Data for 1901-1971 are GDP and from Geary and Stark (2016, 2020);

Data for 1981-2018 are GVA from Cambridge Econometrics, based on the ONS

Long-run trends in regional labour productivity (contd)

Data for 1981-2018 are GVA and from Cambridge Econometrics, based on the ONS

Regional capital stock – a missing piece in the productivity puzzle

- Lack of consistent data on regional capital stock

- Cambridge Econometrics work for European Commission (JRC)

- NUTS2 capital stock by 6 sectors, 1995-2016, based on PIM

- Application to UK productivity explanation

Capital stock per worker
(2000–16 % change)

- (−20)–(−10)
- (−10)–0
- 0–10
- 10–20
- 20–30
- 30+

Capital stock per worker
(2016, UK=1)

- 0.70–0.80
- 0.80–0.90
- 0.90–1.00
- 1.00–1.20
- 1.20–1.40
- 1.40+
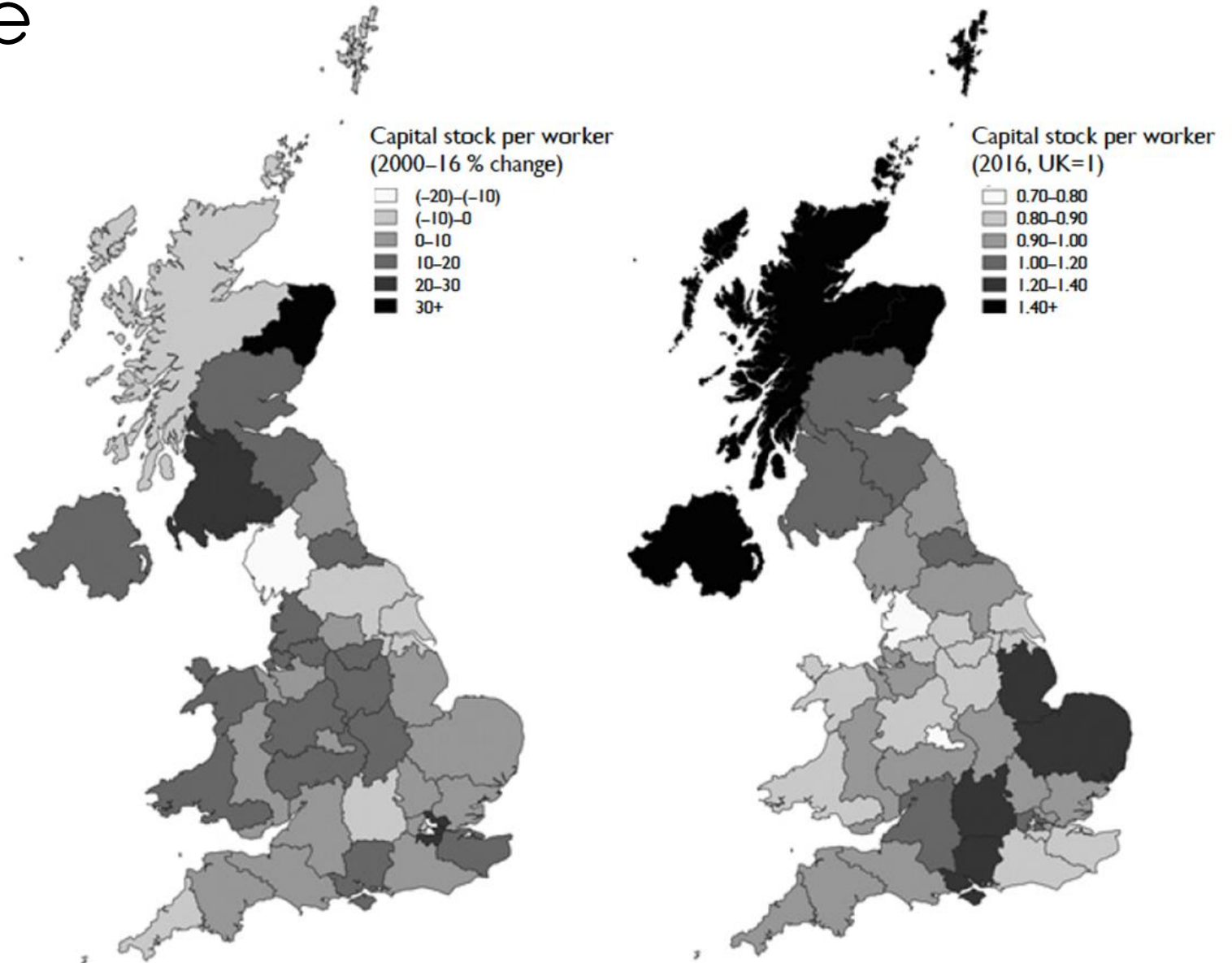
Basic correlations with labour productivity

Productivity and physical capital stock
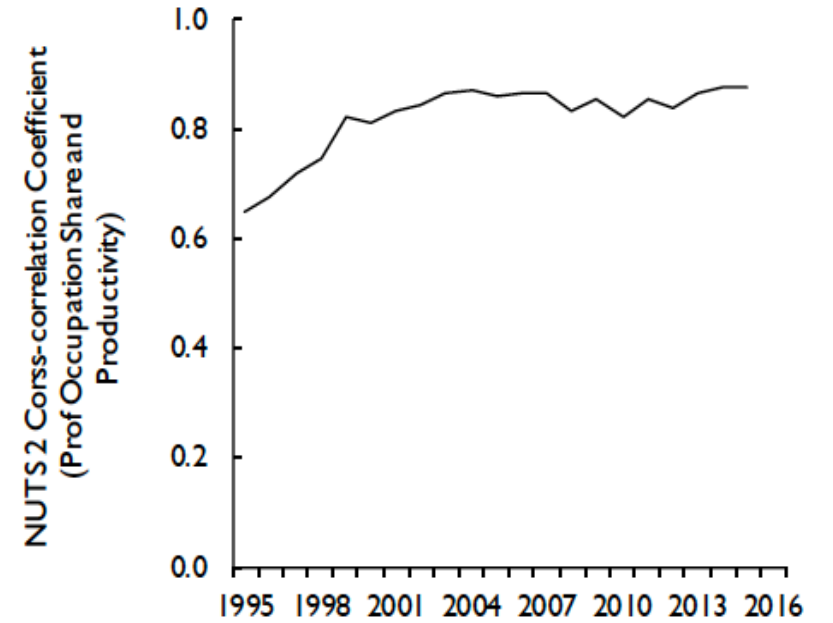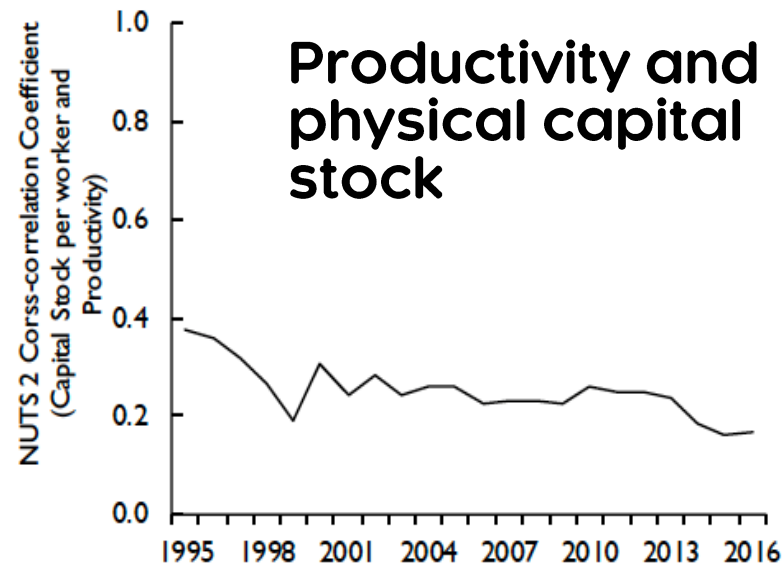
Productivity and human capital

Productivity and professional occupations
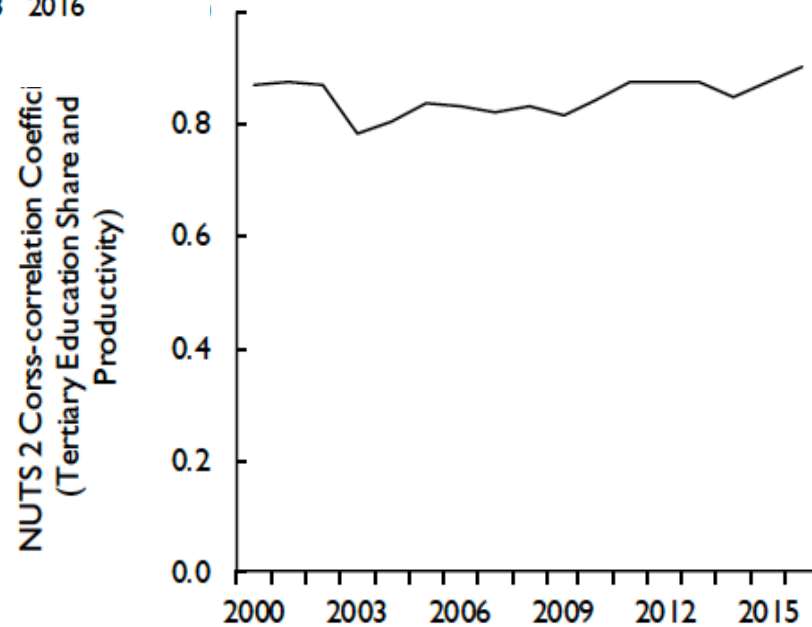
An explanatory model for labour productivity

$$\ln P_t = k + \beta_1 \ln H_t + \beta_2 \ln Q_t + \beta_3 \left(\ln H_t \ln \left(K_t / L_t \right) \right) + \ldots$$

$$\beta_4 \ln \bar{P}_t + \beta_5 \ln \bar{H}_t + \beta_6 \ln \bar{Q}_t + \beta_7 \ln \left(\bar{K}_t / \bar{L}_t \right) + \ldots$$

$$\gamma \ln P_{t-1} + \rho W \ln P_t + \theta W \ln P_{t-1} + \alpha \ln \left(K_t / L_t \right) + \varepsilon_t$$

- Where
  - P is labour productivity, Q is output, L is labour, K is capital, and H is human capital
  - W describes the connectivity of the regions, with zeros on the main diagonal

cambridge
econometrics
camecon.com

Main findings

- Capital stock per worker is a significant cause of labour productivity variation across regions
  - a persistent (long-run) 1% increase in capital stock per worker leads to a 1.29% increase in labour productivity
- But the effect of capital stock depends on the level of educational attainment
  - as we move from low to high levels of human capital, the effect of capital stock per worker becomes less
  - the long-run elasticity reduces to 1.25% taking account of the negative interaction between capital stock and educational attainment

cambridge
econometrics
camecon.com

Main findings (contd)

- Estimating over the more recent 2008-2015 period shows the long run elasticity with respect to capital stock is less than for the whole 2001-2015 period
  - 1.18% compared with 1.25%
  - but the elasticity with respect to educational attainment is higher (1.31% compared with 0.78%)
- It is evident that the stock of human capital is increasingly becoming a more dominant force affecting productivity variations
- This implies that regions like London, which already has the highest levels of human capital, could pull away still further from other regions in the future

cambridge
econometrics
camecon.com

Key takeaway points

- Another 'missing piece' of the productivity puzzle is in place, in the form of regional capital stocks

- Despite the endogeneity issues, it is possible to estimate the relationship between capital stocks and productivity, and thus explore its role in explaining the disparity of regional performance

- The estimated long-run elasticity for capital stock wrt productivity is of sensible magnitude, shows signs of reducing over time, and of interaction effects with human capital

- Further work (sectors, agglomeration, Europe)

cambridge
econometrics
camecon.com

Our paper:

RECONCILED ESTIMATES AND NOWCASTS OF REGIONAL OUTPUT IN THE UK

Gary Koop,* Stuart McIntyre,* James Mitchell** and Aubrey Poon*

There is renewed interest in levelling up the regions of the UK. The combination of social and political discontent, and the sluggishness of key UK macroeconomic indicators like productivity growth, has led to increased interest in understanding the regional economies of the UK. In turn, this has led to more investment in economic statistics. Specifically, the Office for National Statistics (ONS) recently started to produce quarterly regional GDP data for the nine English regions and Wales that date back to 2012Q1. This complements existing real GVA data for the regions available from the ONS on an annual basis back to 1998; with the devolved administrations of Scotland and Northern Ireland producing their own quarterly output measures. In this paper we reconcile these two data sources along with UK quarterly output data that date back to 1970. This enables us to produce both more timely real terms estimates of quarterly economic growth in the regions of the UK and a new reconciled historical time-series of quarterly regional real output data from 1970. We explore a number of features of interest of these new data. This includes producing a new quarterly regional productivity series and commenting on the evolution of regional productivity growth in the UK.

Overview of our work in this area

› Research undertaken as part of a project for the ONS as part of the Economic Statistics Centre of Excellence (see: https://www.escoe.ac.uk/regionalnowcasting);

› Three issues with this data landscape:

1. Timeliness of regional data;

2. Frequency and historical coverage of the available data;

3. Consistency of the different output estimates.

› In previous work we explored ways to address 1 and 2 through econometric nowcasting methods;

› In this paper we try to reconcile the data econometrically to help with issue 3. We also explore the implications for our understanding of regional productivity differences.

Background – UK regional economic data

› Until 2019 only annual regional output (real/nominal) data @ NUTS1-3 levels GVA(B) back to 1997/98 were produced by ONS. Latest vintage is only to 2018 (release delay of just under one year), internationally similar;

› Devolved administrations better (data to Q1 2020):

- Scottish Government *Q* (now *M*) GDP data from 1998; Northern Ireland (NISRA) data Q back to 2006; Welsh short term indicator (ONS) back to 1999. Scottish and NI data not exactly the same as ONS.

› Last year, ONS started producing quarterly Regional Short Term Indicator (RSTi) data for the English regions and Wales (available from 2012) using VAT data:

- These have a release delay of around 6 months, and will aggregate (temporally) for the English regions and Wales to equal annual growth in the GVA(B) data (subject to delays in data release and revisions). The Scottish & NI data were taken to be the RSTis.

› Productivity data annual back to 1998 (annual) and currently available to 2018, but hours/jobs data available *Q* from 1997 (*A* before). NUTS2/3 and other sub-region geographies from 2004. No *Q* productivity series currently available.

Our model in this paper

› Extends the model in KMMP (2020) to incorporate these RSTI data:

   • KMMP (2020), "Regional Output Growth in the United Kingdom: More Timely and Higher Frequency Estimates, 1970-2017" *Journal of Applied Econometrics*

› KMMP (2020) was a Mixed frequency VAR model using ONS annual data for regional output, quarterly data for the output of the UK as a whole, and some UK macro indicators;

› To this model and in this paper we add these RSTi data from ONS for the English regions and Wales, and from the Scottish Government and NISRA for these DAs:

   • And, as in KMMP (2020), we reflects the key features of these data in the model, including: release timings, cross sectional constraint (adding up across regions), intertemporal constraint (consistency between quarterly and annual estimates).

› We focus on three empirical exercises in the paper: **1)** comparison with KMMP (2020) results over the full sample period (1970s onward), **2)** exploration of the implications for regional productivity, **3)** real—time nowcasting exercise.

Our results (in brief!) – see paper for full details

1. Comparison with KMMP (2020) results:

   • Incorporating the RSTi data and the DA data changes our reconciled regional output estimates (unsurprisingly the biggest effects are to Scotland and NI, and in the latter part of the sample).

2. Exploration of the implications for regional productivity:

   • We produce regional quarterly productivity series, and show how these compare to the UK. This highlights the differences in performance since 1997 between regions, but also really illustrates how differences between (e.g.) ONS/SG estimates of regional output can drive fundamentally different economic narrative.

3. Real—time nowcasting exercise:

   • Improvements in nowcast accuracy relative to KMMP model.

Implications for regional data and policy

› Earlier we highlighted three issues with this data landscape:

   1. Timeliness of regional data;

   2. Frequency and historical coverage of the available data;

   3. Consistency of the different output estimates.

› What our work has done, we think, is highlight how econometric modelling can help address some of these shortcomings of the existing landscape;

› But we've also highlighted in the paper some ongoing challenges around issue **(3)** in particular the different economic stories that can emerge from ONS v. DA data, but also confronting the RSTIs with the annual ONS data;

› Without timely data it's difficult for policy to track what is happening in the regions. Recent developments of RSTIs are a step forward but these need some way of being reconciled in real time with the UK data.

Implications for regional data and policy

› Some big issues remain though:

- Everything that we've done is at the NUTS1 level, but with increasing devolution many (most?) of the decision about regional economic and enterprise policy are taken at lower levels (city-regions, combined authorities, LEPs);

- Getting underlying ONS/DA methodologies consistent so that – at least at some point – the numbers will formally add up (without an econometric model to reconcile them).

› Next steps for us:

- We're going to take the productivity series back further to provide a longer term understanding of how regional productivity has evolved;

- We're also exploring other methods of reconciling different measures of output;

- There are a whole series of issues that emerge around the operation of regional economies that could be explored with these data…
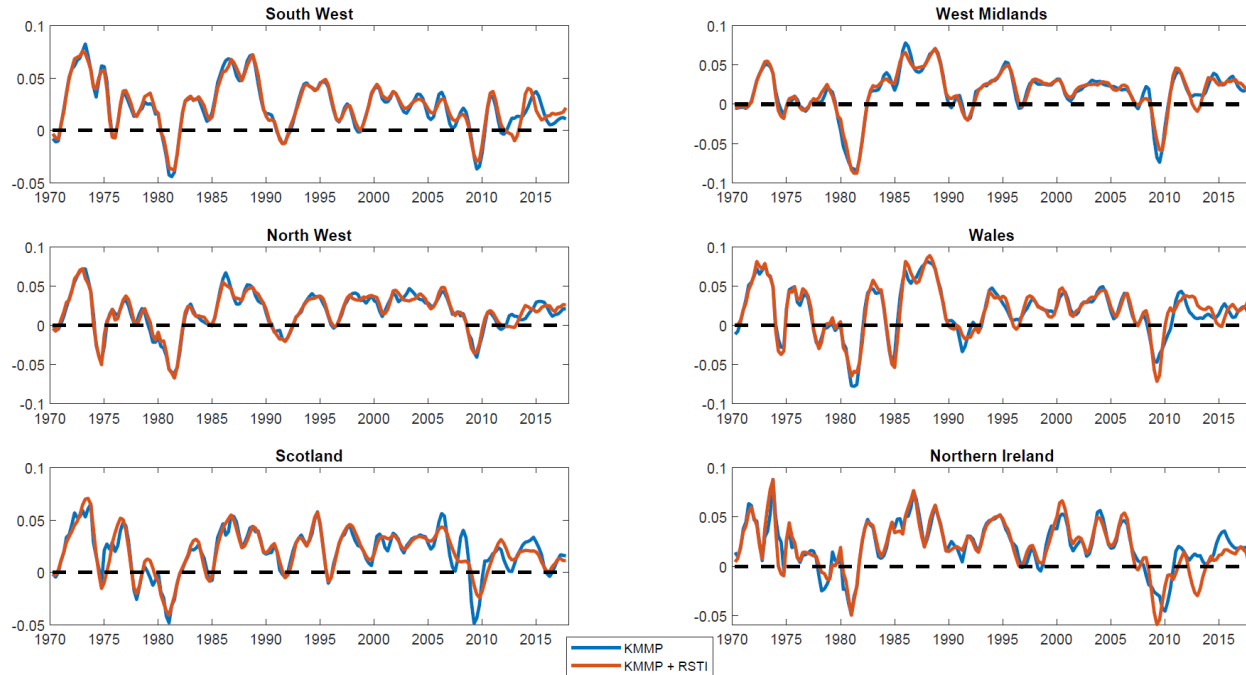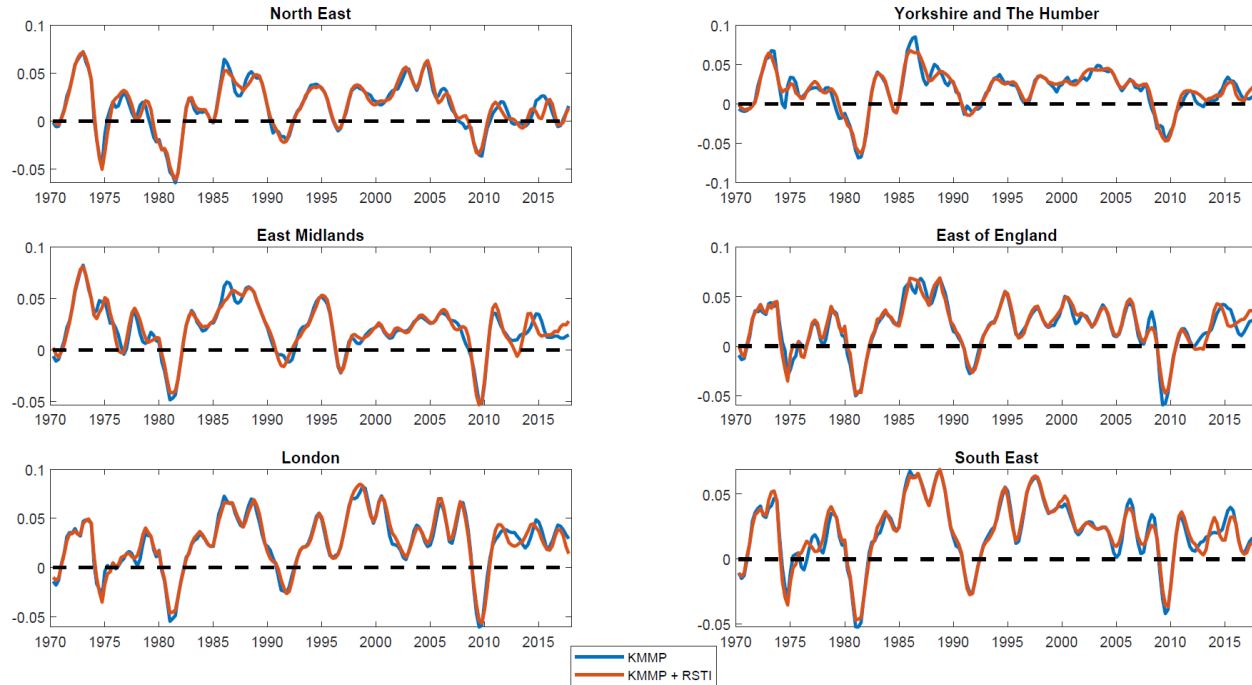
Results appendix

1) comparison with KMMP (2020)

1) comparison with KMMP (2020)

2) implications for regional productivity
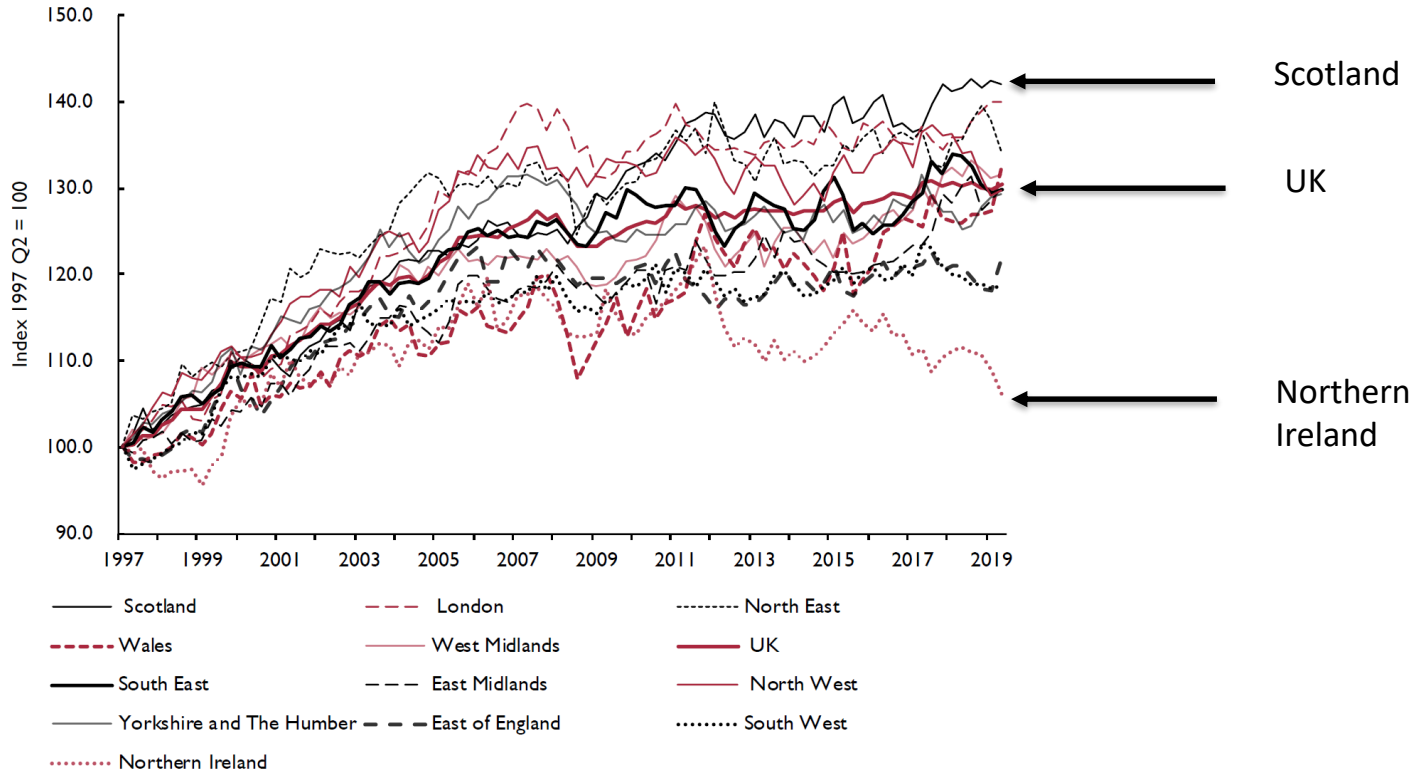
2) implications for regional productivity

Figure 8. London labour productivity (1997–2019)

Legend:
- GVA Index (1997 Q2 = 100)
- Hours worked Index (1997 Q2 = 100)
- KMMP Productivity growth
- UK Productivity Growth
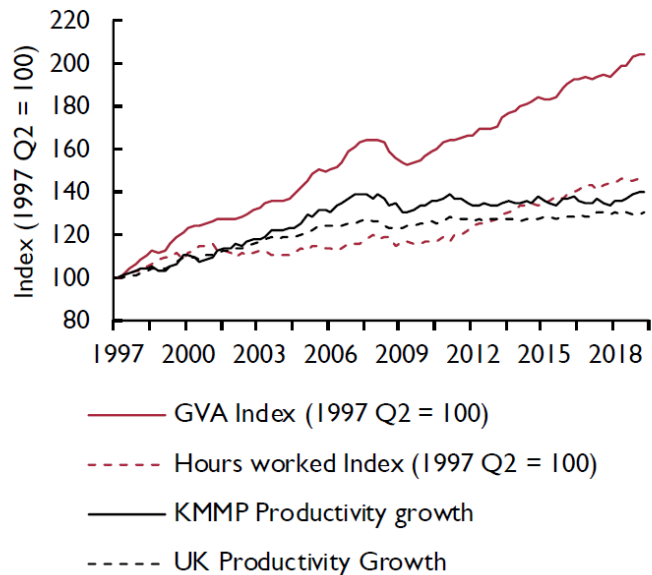
Table 1. Average annual growth rate of labour productivity (per cent)

	ONS (A) 1998–2018	KMMP (Q) 1998–2018	KMMP (Q) 1998–2006	KMMP (Q) 2010–2018
UK	1.20	1.27	2.58	0.52
Scotland	1.59	1.69	2.62	0.98
London	1.45	1.46	3.41	0.31
West Midlands	1.29	1.38	2.37	1.16
North Vest	1.27	1.26	2.98	0.13
South East	1.23	1.33	2. 0	0.26
North East	1.16	1.42	2.82	0.68
Northern Ireland	1.13	0.67	1.94	-0.27
East of England	1.11	0.99	2.45	0.00
East Midlands	1.09	1.32	1.88	1.23
South West	1.07	0.93	2.13	-0.03
Yorkshire and The Humber	0.93	1.01	2.98	0.18
Wales	0.91	1.23	1.74	1.49
Regional Mean	1.19	1.23	2.49	0.51
Regional St.Dev	0.19	0.27	0.49	0.55

2) implications for regional productivity

Figure 10. Scotland labour productivity 1998–2019

ONS based Scottish GVA

SG's Scottish GVA

Hours data

Legend:
- ONS GVA Index
- ONS Hours worked Index
- KMMP Productivity growth
- UK Productivity Growth
- Scottish Government Output
- Scottish Government Hours
- Scottish Government Productivity
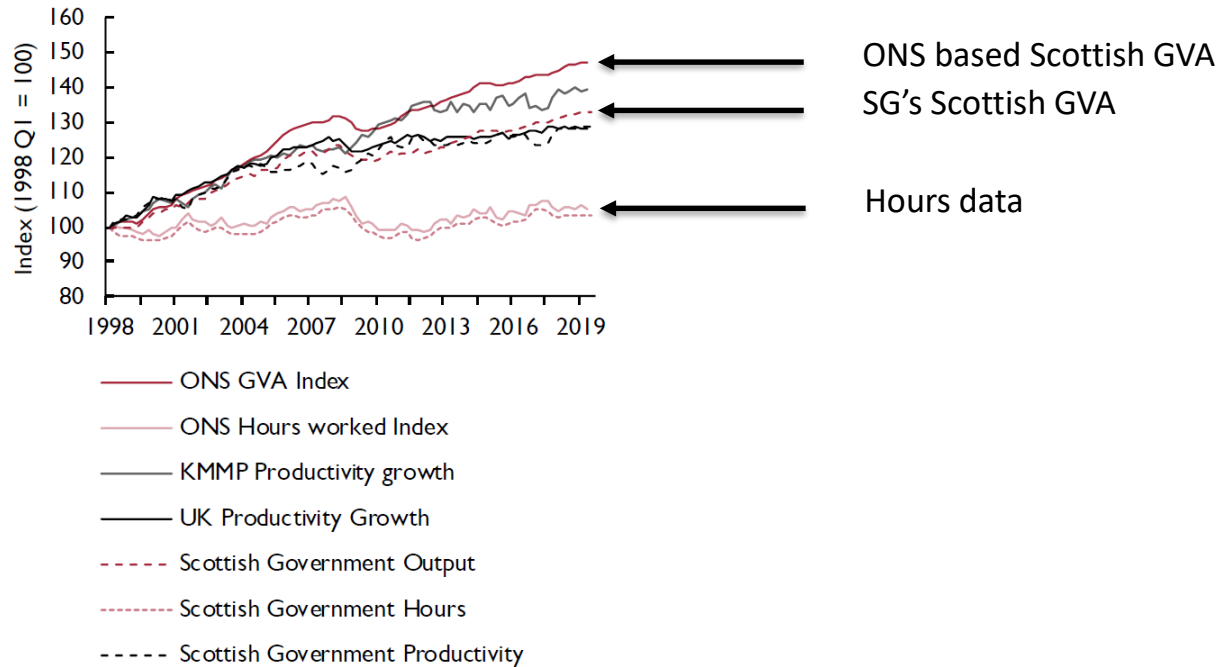
2) implications for regional productivity

Figure 10. Scotland labour productivity 1998–2019
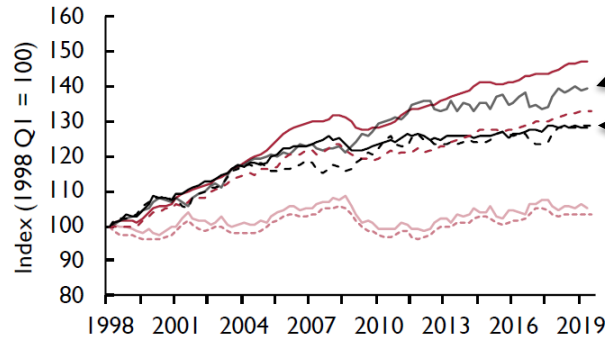
Our estimate of Scotland's productivity growth reconciling ONS and SG data

ONS's estimate of UK productivity and SG's estimate of Scottish productivity

3) real—time nowcasting exercise.

›   RSTI data only go back to 2012Q1, so we start our out-of-sample evaluation in 2012Q2.

›   Given that vintage RSTI data do not exist, our analysis is 'quasi real-time', i.e. it involves use of the latest (at the time of writing this was February 2020) RSTI data vintage.

›   We update our *nowcasts* and *backcasts* each time there is a new release of UK GVA, given that this aggregate should be informative about the regional disaggregates;

   •   Given the 6-month release delay for the RSTIs, regional data for the previous two quarters will not have been released at this point in time.

   •   Our estimate for the previous quarter is therefore what we call a *now*cast; an estimate for two quarters ago we call the *back*cast, both are produced ahead quarterly RSTI outturns being published by the ONS.

3) real—time nowcasting exercise.

Table 3. RMSFEs for real GVA growth forecasts, 2012Q2–2019Q2

	North East	York. & H.	E. Midlands	E. of Eng.	London	South East
KMMP+RSTI						
backcast	0.0077	0.0065	0.0096	0.0133	0.0088	0.0085
nowcast	0.0074	0.0060	0.0090	0.0141	0.0100	0.0080
KMMP						
backcast	0.0083	0.0071	0.0098	0.0127	0.0111	0.0104
nowcast	0.0079	0.0059	0.0111	0.0168	0.0128	0.0128

	South West	W. Mids	North West	Wales	Scotland	N. Ireland
KMMP+RSTI						
backcast	0.0068	0.0110	0.0081	0.0195	0.0052	0.0108
nowcast	0.0063	0.0112	0.0148	0.0180	0.0055	0.0118
KMMP						
backcast	0.0080	0.0121	0.0230	0.0215	0.0080	0.0170
nowcast	0.0081	0.0120	0.0483	0.0258	0.0111	0.0341

UK Interregional Inequality in a Historical and International Comparative Context

Andre Carrascal-Incera, Philip McCann, Raquel Ortega-Argilés, and Andres Rodriguez-Pose

UK Regional Inequalities

- *The Spectator* 1st December 2012
- "Broken Britain"
- *The Spectator*, "Another Country",
- 14 April 2012
- *The Economist*, 30 November 2013
- "A Sticky Pitch for the Tories"

- 'Levelling Up' and 'Rebalancing'
- Narratives have shifted dramatically very recently

UK Regional Inequalities

- Problems of the interaction between *geography, globalisation and governance*, and also the differing *perceptions* of how these interact – governance is also about perceptions

- The UK's ultra-centralised, top-down and space-blind governance system is uniquely mis-matched, badly-designed and ill-equipped to respond to these internal inequalities

- Philip McCann, 2016, *The UK Regional-National Economic Problem: Geography, Globalisation and Governance,* Routledge, London, 570pp

- Philip McCann, 2019, "Perceptions of Regional Inequality and the Geography of Discontent: Insights from the UK", 2019, *Regional Studies,* 53.5, 741–760

3

UK Regional Inequalities

- UK political economy debates regarding whether or not the UK has a serious 'regional problem' or if it is just typical of other countries

- Profound lack of awareness by 'national' media, thought-leaders/influencers/shapers, think-tanks, academic institutions etc. regarding place-based issues

- Andy Haldane – 'hub with no spokes'

- Problem of 'metropolitan elites' is related to governance centralisation – not urbanisation → governance in its broadest sense

- UK does have very high interregional inequalities over very short distances → perceptions and awareness

UK Regional Inequalities

- GDP per capita – half the UK population live in areas no better than the poorer parts of the former East Germany, poorer than parts of central and eastern Europe, and poorer than the US states of Mississippi and West Virginia

- OECD Multi-Dimensional Quality of Life: SE top 25%; L, SW, E top 50%; rest of UK bottom 50% – equivalent to Alabama

- Quality and accessibility of healthcare is similar to eastern Europe

- Civic engagement: SW & SE Top 50%, Rest of UK lower 3rd quartile

- Heritage allocations, R&D funding distributions

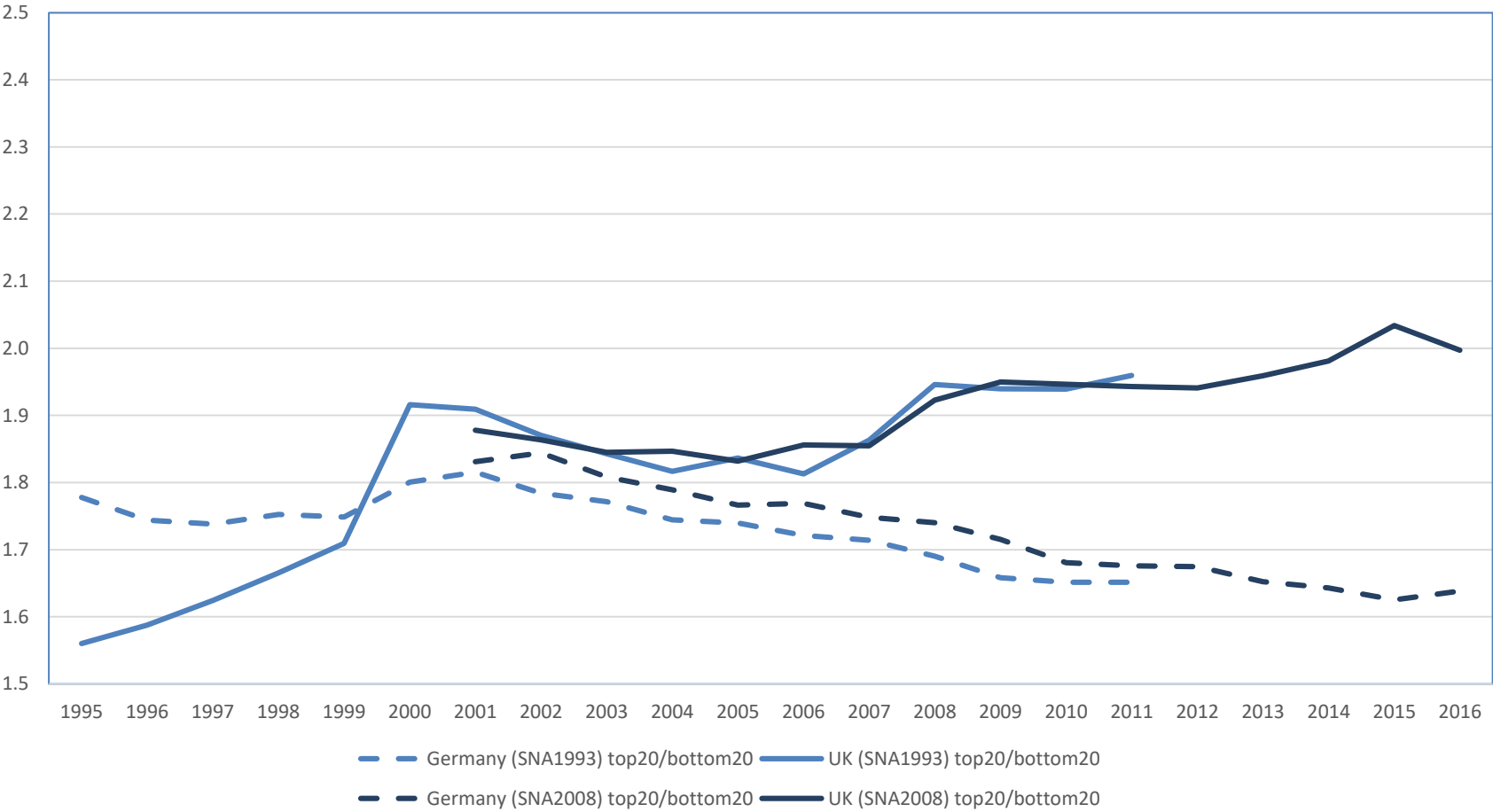- UK local governance autonomy equivalent to Albania or Moldova

Figure 1. The Long-Run Evolution of Interregional Inequality, 1900-2010.
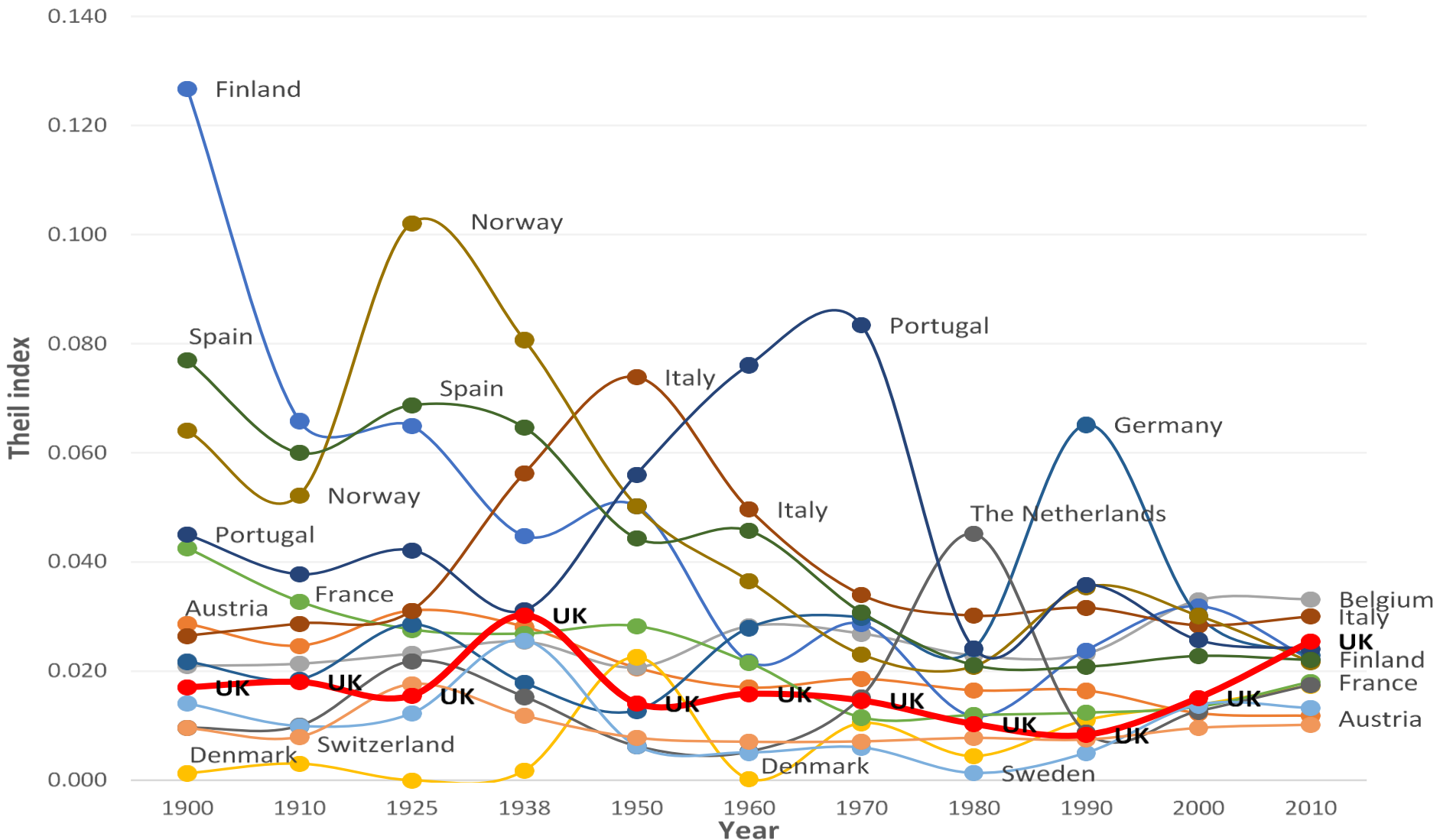
Source of data: Roses and Wolf (2019)

Selection of countries: Austria, Belgium, Denmark, Finland, France, Germany, Italy, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom

UK-Germany Comparisons: OECD-TL2 Regional GDP per Capita: Ratio of Top 20% over the Bottom 20% of the Population in UK and Germany 1990-2016 Using the System of National Accounts for 1993 and 2008

Germany (SNA1993) top20/bottom20 — UK (SNA1993) top20/bottom20
Germany (SNA2008) top20/bottom20 — UK (SNA2008) top20/bottom20

UK-Germany Comparisons OECD-TL3 Regional GDP per Capita: Ratio of Top 10% over the Bottom 10% of the Population in UK and Germany 2000-2016
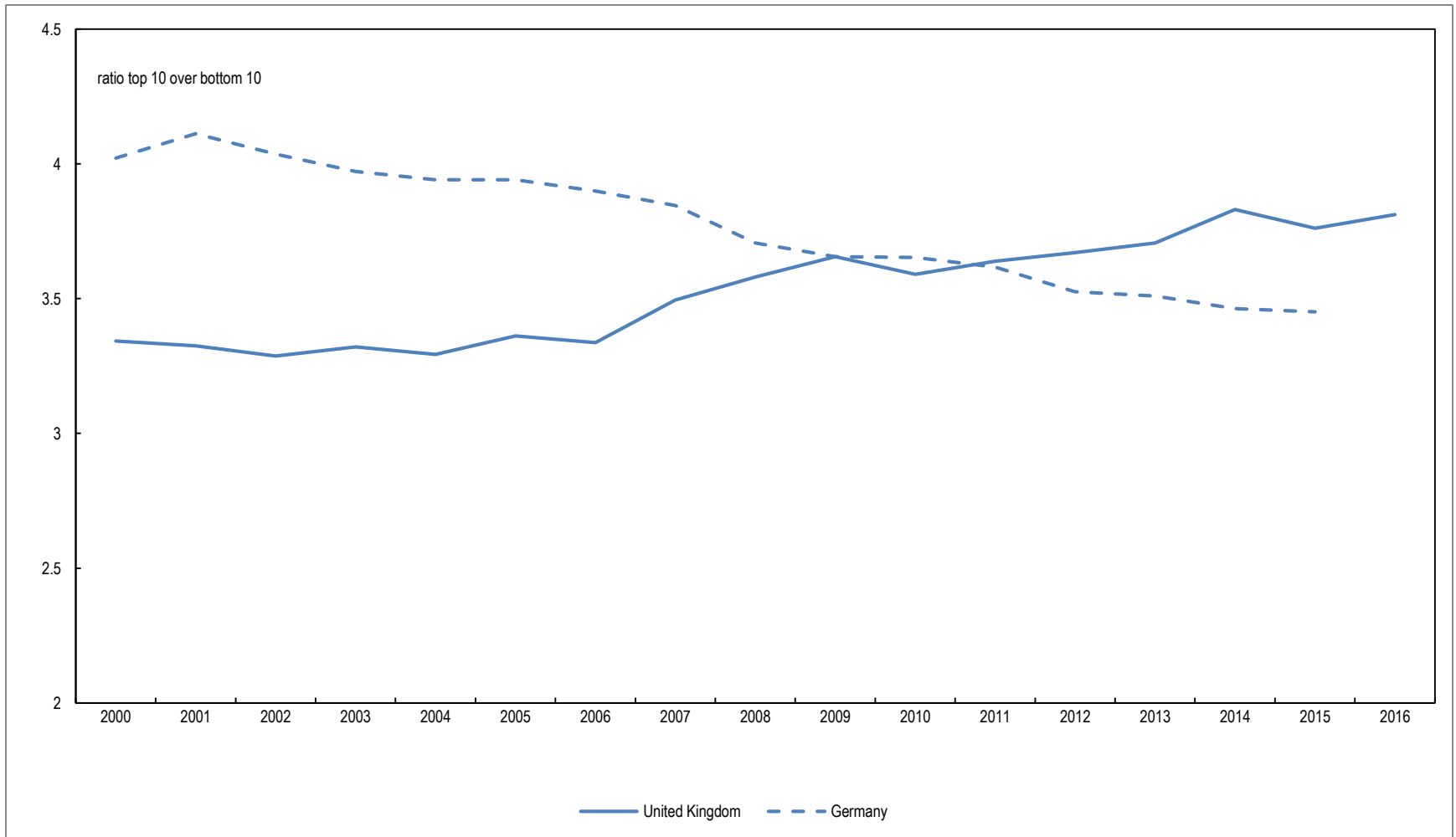
UK-Germany Comparisons OECD-TL3 Regional GDP per Capita: Ratio of Top 20% over the Bottom 20% of the Population in UK and Germany 2000-2016

F
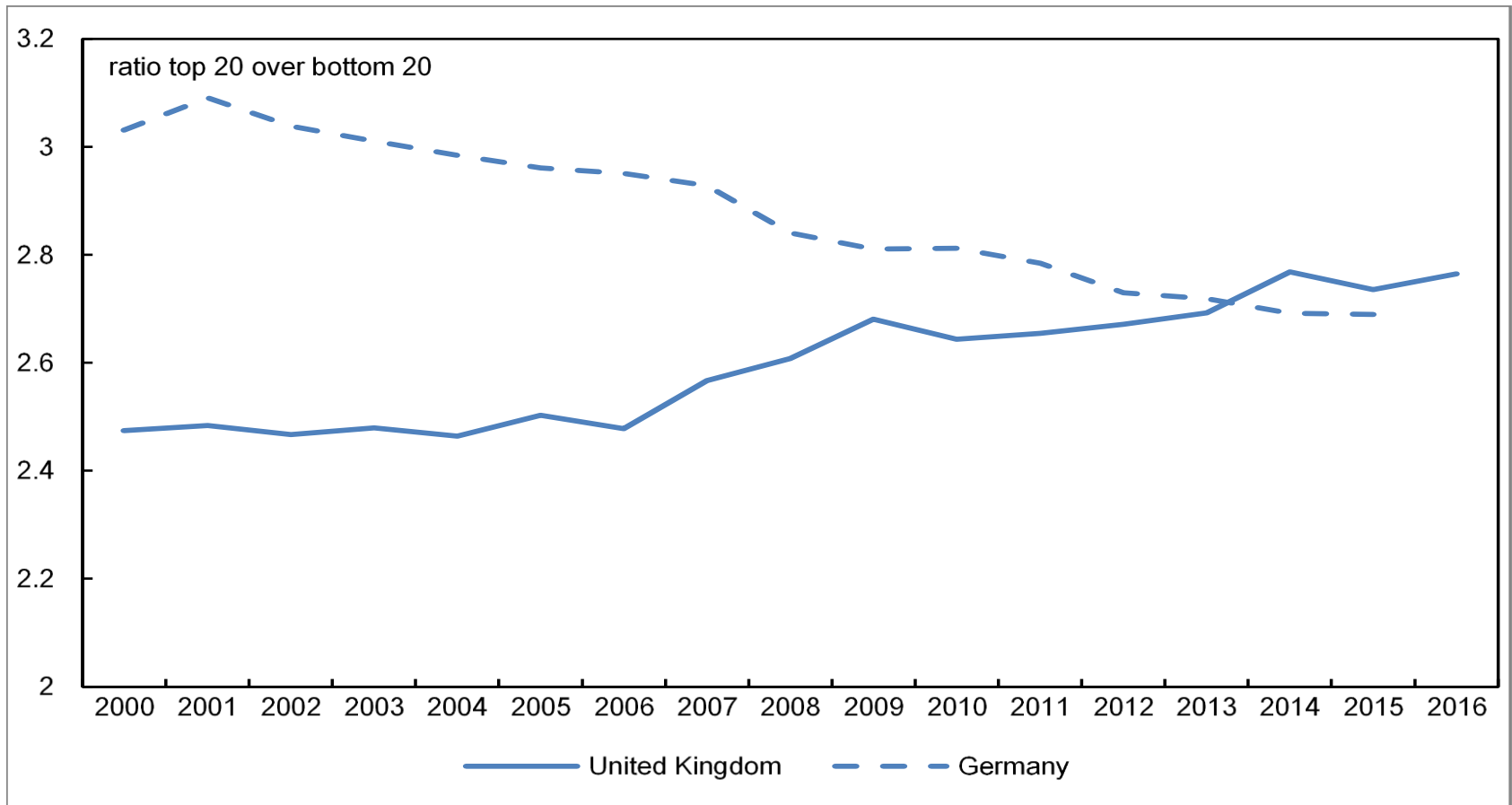
UK-Germany Comparisons OECD-TL3 Regional GDP per Capita: Ratio of Top 10% over the Bottom 75% of the Population in UK and Germany 2000-2016
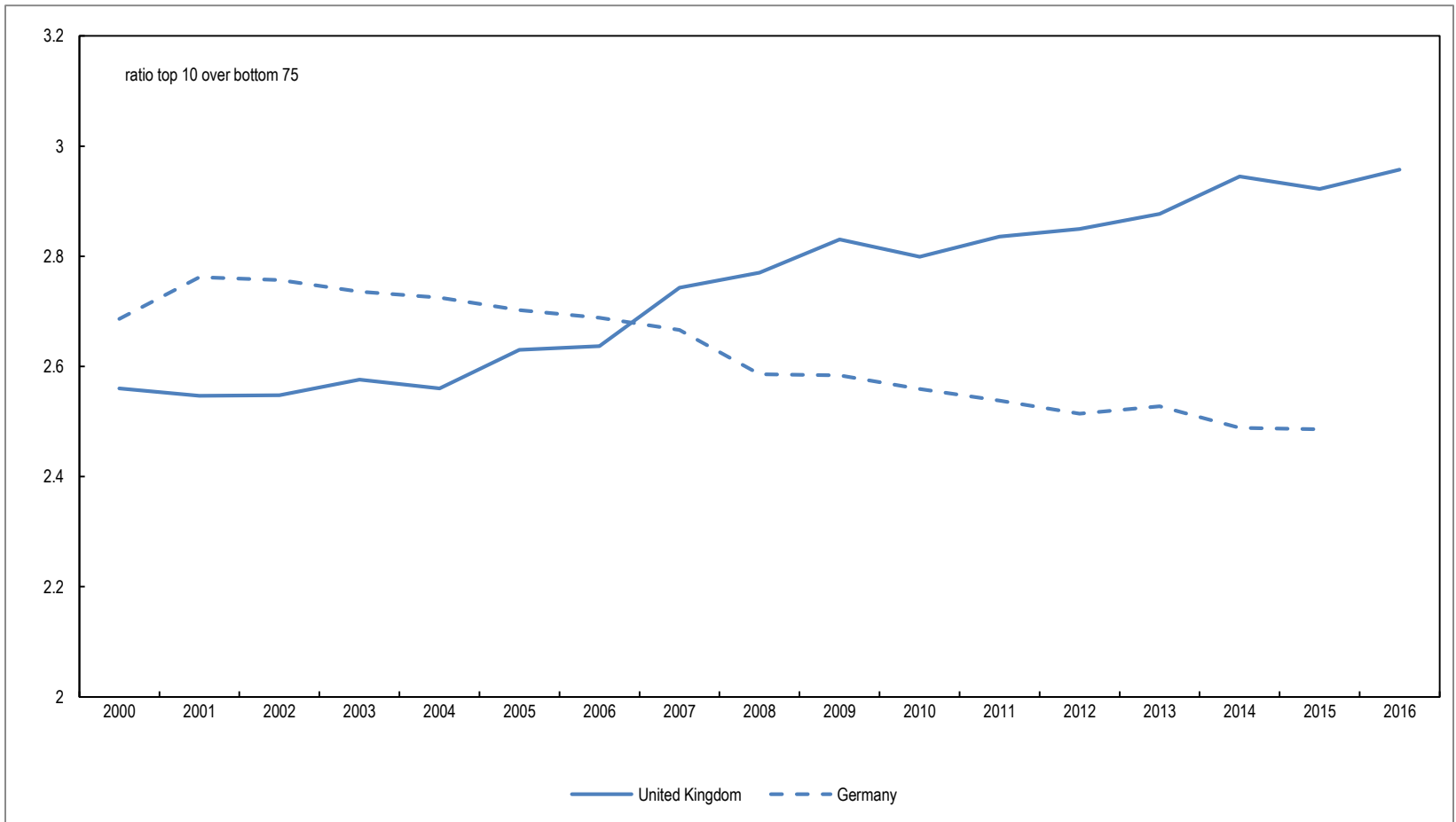
UK Regional Inequalities

- UK-Germany comparisons

- Similar national population densities

- Similar urban population densities

- Germany – €70billion per annum

- Germany productivity premium over UK today is more than West Germany over UK in 1990

- Germany was more unequal interregionally but now is much more equal

Ratio of the Top 20% over the Bottom 20% of the Urban Population by Countries 2001, 2008, 2016.

Ranking	Country	2001	Country	2008	Country	2016
1	IT	2.1753	PL	2.5367	PL	2.6486
2	DE	2.1056	IT	2.2315	IT	2.4049
3	CZ	2.0840	**UK**	**2.0803**	FR	2.1459
4	**UK**	**2.0161**	CZ	2.0371	**UK**	**2.1238**
5	BE	1.9287	FR	2.0278	US	2.0224
6	FR	1.8946	DE	1.9358	CZ	1.9029
7	US	1.8639	US	1.9309	ES	1.8608
8	ES	1.8148	BE	1.8428	DE	1.8593
9	PL	1.7389	ES	1.7314	BE	1.8517
10	KOR	1.6272	CA	1.6981	GR	1.6291
11	NL	1.5241	NL	1.6606	KOR	1.6072
12	PT	1.4819	KOR	1.6510	NL	1.5833
13	CH	1.4699	PT	1.5325	SE	1.5807
14	CA	1.4489	SE	1.4985	CA	1.5556
15	SE	1.4447	GR	1.4941	CH	1.4392
16	GR	1.4381	CH	1.4699	PT	1.4062
17	JP	1.4216	JP	1.4454	JP	1.3666
18	AU	1.1380	AU	1.3034	AU	1.3494
19	AT	1.1201	AT	1.0921	AT	1.0922

OECD Regional Database

Ratio of the Top 10% over the Bottom 75% of the Urban Population by Countries 2001, 2008, 2016.

| Ranking	Country	2001	Country	2008	Country	2016
1	DE	1.8287	PL	1.869	PL	1.9087
2	**UK**	**1.6636**	CA	1.814	**UK**	**1.7259**
3	PL	1.5960	**UK**	**1.7204**	DE	1.6378
4	FR	1.5067	DE	1.7002	US	1.6022
5	KOR	1.5000	FR	1.5864	FR	1.5988
6	US	1.4920	US	1.5470	IT	1.5589
7	CZ	1.4270	KOR	1.5386	CA	1.5237
8	CA	1.4084	IT	1.4433	KOR	1.5126
9	IT	1.3796	CZ	1.4194	ES	1.3998
10	ES	1.3715	AU	1.3811	AU	1.3776
11	BE	1.2920	NL	1.3679	CZ	1.3493
12	SE	1.2142	ES	1.3291	NL	1.2721
13	JP	1.2121	BE	1.2446	SE	1.2561
14	NL	1.2076	SE	1.2293	BE	1,2181
15	PT	1.1867	JP	1.2139	CH	1.1998
16	CH	1.1622	PT	1.1993	JP	1.1669
17	GR	1.0975	CH	1.1622	PT	1.1575
18	AU	1.0822	GR	1.1080	AT	1.1525
19	AT	1.0527	AT	1.1001	GR	1.1327

OECD Regional Database

Theil Index Ranking of Inter-Metropolitan Inequality by Countries 2001, 2008, 2016.

Ranking	Theil Index Country	2001	Country	2008	Country	2016
1	HU	0.0589	HU	0.0766	HU	0.0661
2	KOR	0.0447	KOR	0.0476	KOR	0.0435
3	CZ	0.0435	CZ	0.0473	**UK**	**0.0350**
4	BE	0.0349	US	0.0331	US	0.0341
5	US	0.0323	BE	0.0319	BE	0.0321
6	DE	0.0295	CA	0.0318	CA	0.0316
7	IT	0.0287	**UK**	**0.0318**	CZ	0.0314
8	**UK**	**0.0283**	IT	0.0272	IT	0.0311
9	ES	0.0235	DE	0.0251	EL	0.0310
10	PT	0.0196	PT	0.0227	ES	0.0269
11	SE	0.0125	ES	0.0223	DE	0.0225
12	FI	0.0125	NL	0.0221	NL	0.0187
13	CA	0.0124	EL	0.0198	SE	0.0181
14	FR	0.0109	SE	0.0144	PT	0.0164
15	NO	0.0084	CH	0.0143	FR	0.0156
16	DK	0.0081	FR	0.0134	DK	0.0155
17	JP	0.0068	FI	0.0091	FI	0.0143
18	AU	0.0022	NO	0.0082	AU	0.0122
19	AT	0.0013	AU	0.0080	CH	0.0116
20	CH	Na	DK	0.0080	NO	0.0064
21	EL	Na	JP	0.0076	JP	0.0060
22	NL	Na	AT	0.0016	AT	0.0023

OECD Regional Database

GDP per capita Annual Growth and Interregional Inequality, 2000-2017, OECD TL3 Regions (excluding former Transition Economies)

Source: OECD Regional Database
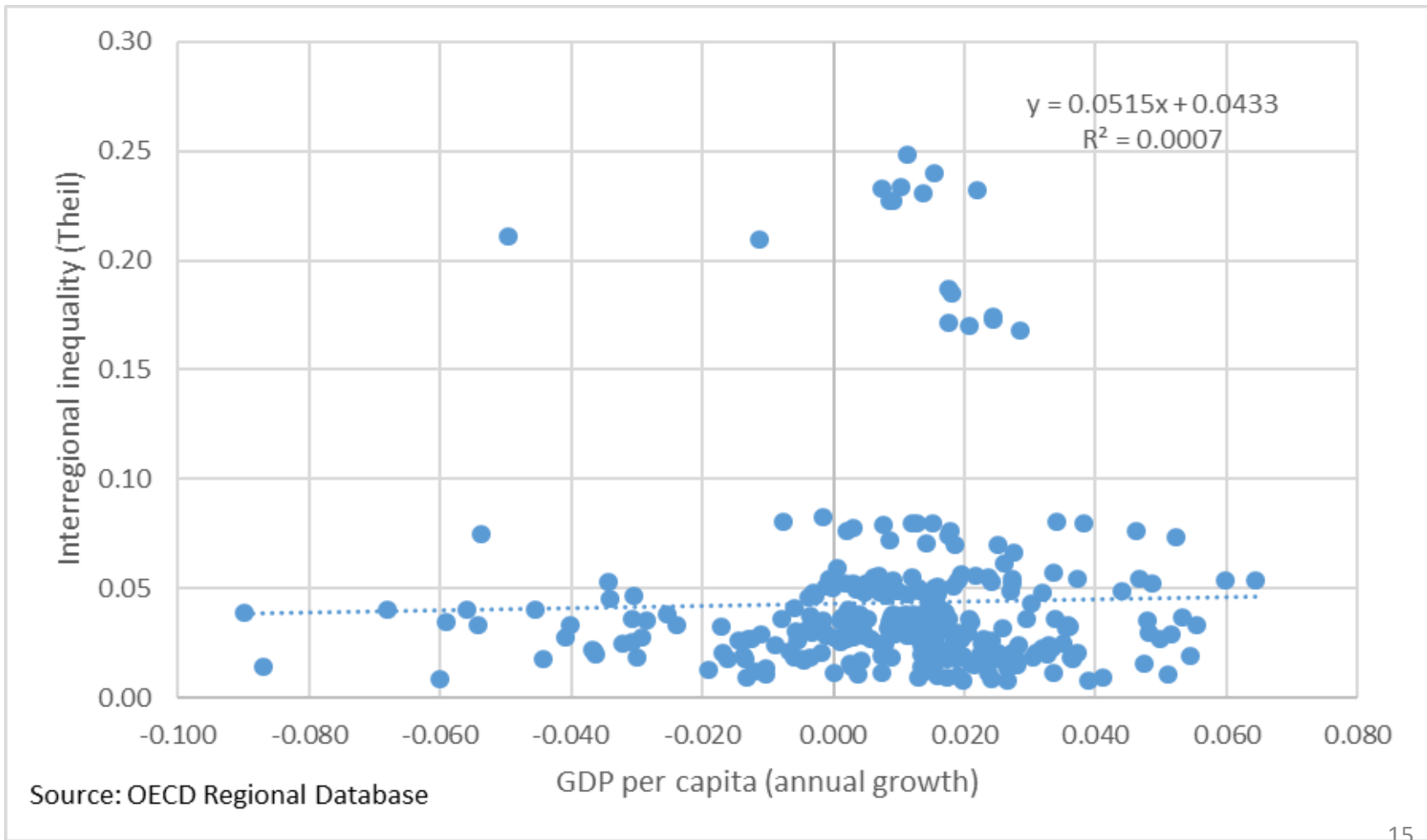
GDP per Capita Annual Growth and Interregional Inequality, 2000-2009, OECD TL3 Regions (excluding former Transition Economies).

$y = -0.0238x + 0.0419$
$R^2 = 0.0002$

Interregional inequality (Theil)
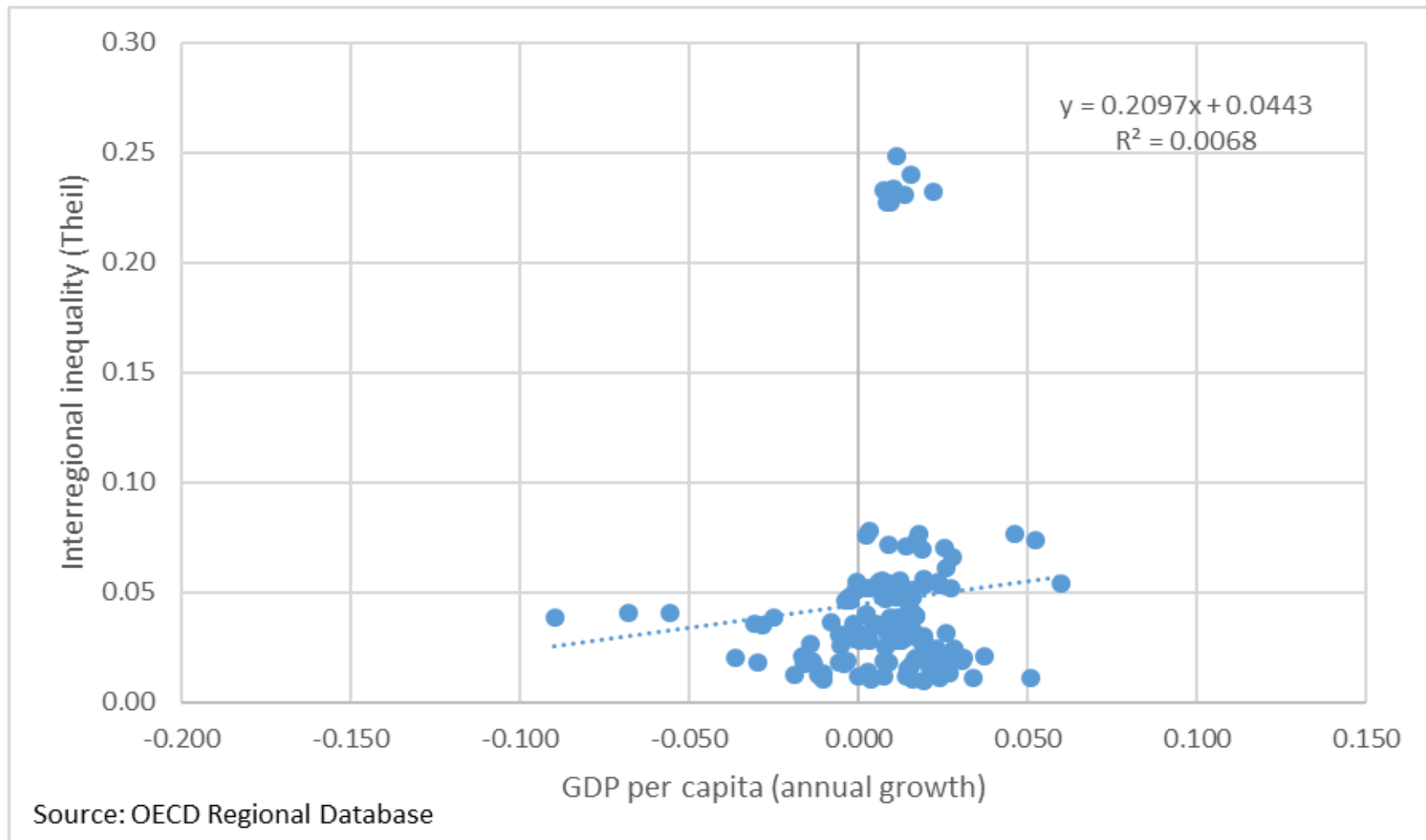
GDP per capita (annual growth)

Source: OECD Regional Database
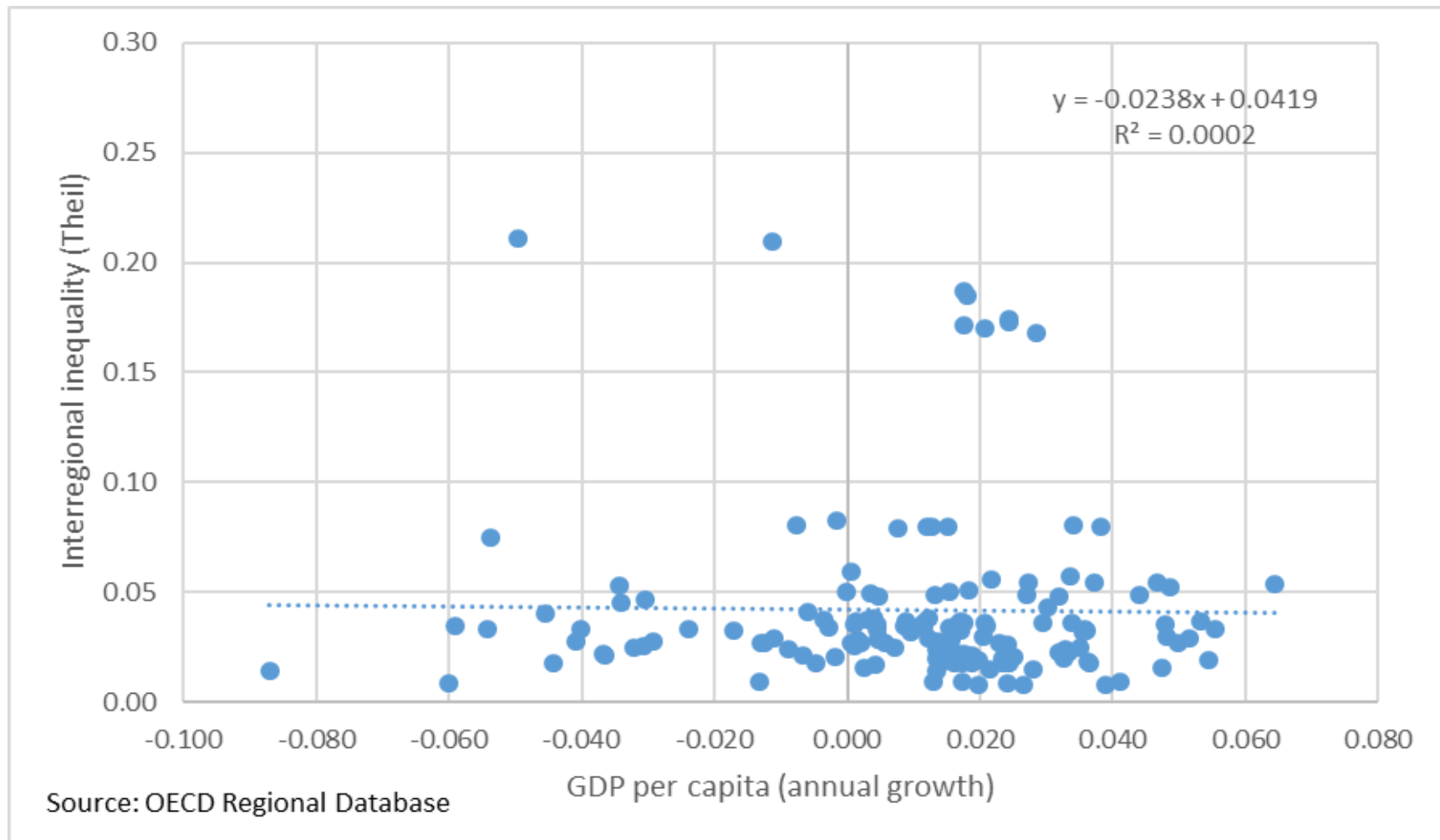
GDP per Capita Annual Growth and Interregional Inequality, 2009-2017, OECD TL3 Regions (excluding former Transition Economies).

$y = 0.2097x + 0.0443$
$R^2 = 0.0068$

Interregional inequality (Theil)

GDP per capita (annual growth)

Source: OECD Regional Database

Levelling Up Challenges: Place-Based Thinking

- Key UK geographical problem is the under-performance of large UK urban areas outside of the Greater South and South East

- Danger of 'cities versus towns' narrative or 'urban versus rural' narrative - coastal towns are largely a symbolic issue

- LEPs and Local Industrial Strategies – no real logic to design

- Shared Prosperity Fund should not be a top-down or competitive system

- Pandemic coordination experiences: need to learn lessons country-by-country of what worked well and what did not (not just English-speaking countries!)

- Covid-19 and devolution questions around devolved healthcare