

Project Advisory Group
Thursday 22nd June 2023

Trajectories of deprivation in the UK

Chris Lloyd

Queen's University Belfast
c.lloyd@qub.ac.uk
@lloydcd

Co-investigators:

Gemma Catney (QUB)

Sara Ferguson (QUB)

David McLennan (deprivation.org)

Michael Noble (deprivation.org)

Paul Norman (University of Leeds)



UNIVERSITY OF LEEDS



Rationale

- Deprivation measures crucial in development and implementation of policies to help disadvantaged communities
- Multiple deprivation indices official measures of deprivation across the four UK nations
- Funding allocated based upon a single time point
- Likely success of interventions determined by the **deprivation history** and **trajectory** of an area
- Success of schemes should be assessed by measuring changes in deprivation over time



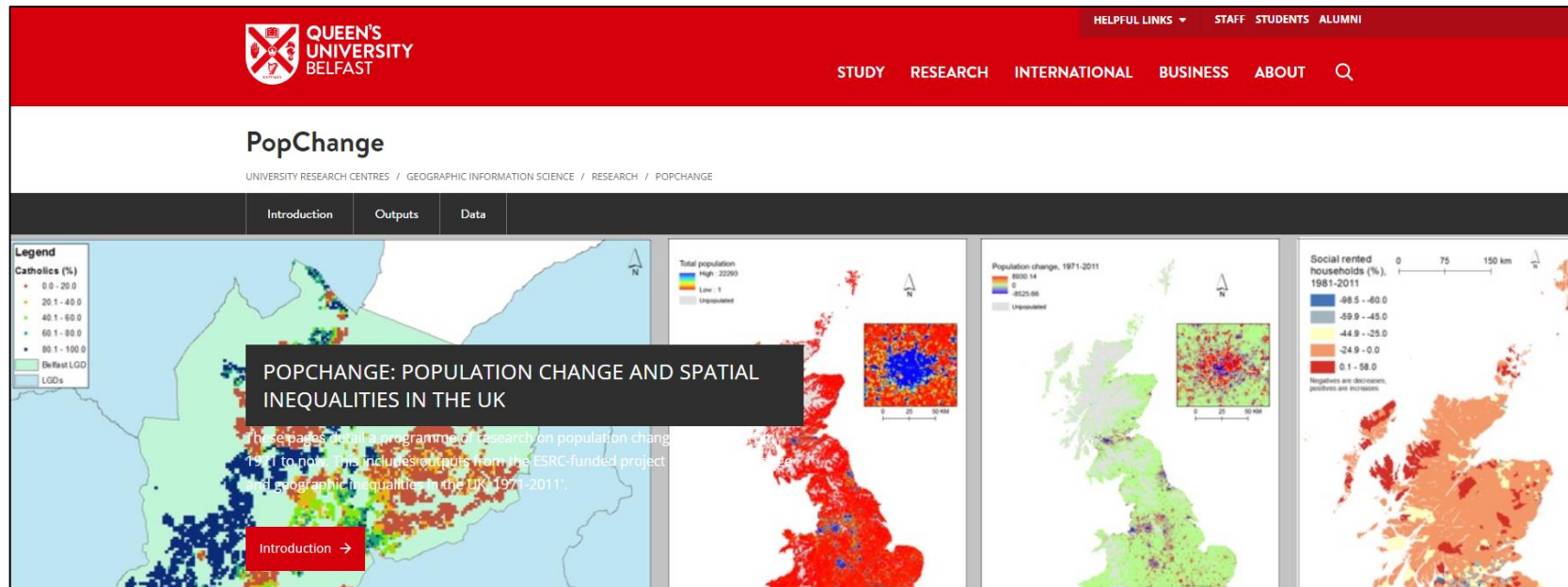
Background

Body of work led by Norman (e.g., 2010, 2016) on deprivation change in small areas, 1971-2011

ESRC PopChange project produced gridded deprivation indices, 1971-2011 (analyses for GB and separately for NI)

Economic Deprivation Index produced by McLennan et al, 1999-2009

Various local-level studies (e.g., Greater Manchester; Hincks, 2015)



Trajectories of Deprivation in the UK: Project Introduction

Analysis of components of deprivation change accounting for demographic, social and economic changes

Census data, multiple deprivation measures, and monthly benefit claimants' data

Working with policy and practice experts within local authorities to provide the context behind the main trends

Building on ESRC PopChange project

The screenshot shows the Nuffield Foundation website for the project 'Trajectories of deprivation in the UK'. The page features a navigation bar with links for Research, Funding, Students and teachers, Impact, Latest, and About. The main content area has a red header with the project title and a sub-header 'Research | Projects'. Below this, it lists the dates 'March 2022 - February 2024' and the researchers 'Professor Christopher Lloyd | Dr Gemma Catney...'. A horizontal menu includes categories like 'Income and wealth', 'Inequality and social mobility', 'Poverty and living standards', and 'Welfare'. The page is divided into 'Overview' and 'Team' sections. The 'Team' section lists Professor Christopher Lloyd (Queen's University Belfast), Dr Gemma Catney (Queen's University Belfast), Professor Michael Noble (deprivation.org), Dr David McLennan (deprivation.org), and Dr Paul Norman (University of Leeds). The 'Project overview' section contains text about the project's goals, such as developing a toolkit to document and understand changes in deprivation across the UK, and mentions that the research team will develop a novel resource characterising deprivation over time.



Measures of deprivation

Townsend measure

- Census data; composite measure including unemployment, rented households, no car or van access, overcrowding

Multiple Deprivation Measures

- Principally administrative data; comprising seven domains including income and employment (different measures in UK nations)

Experimental claimant count

- Job Seeker's Allowance and Universal Credit

Townsend measure variables

	Unemployed*	Non owner occupied	No car or van	Overcrowded
1971	3.84	49.96	48.22	6.05
1981	10.04	42.40	38.58	3.39
1991	9.12	32.70	32.42	2.11
2001	5.21	31.28	26.84	1.89
2011	6.59	35.87	25.80	2.10

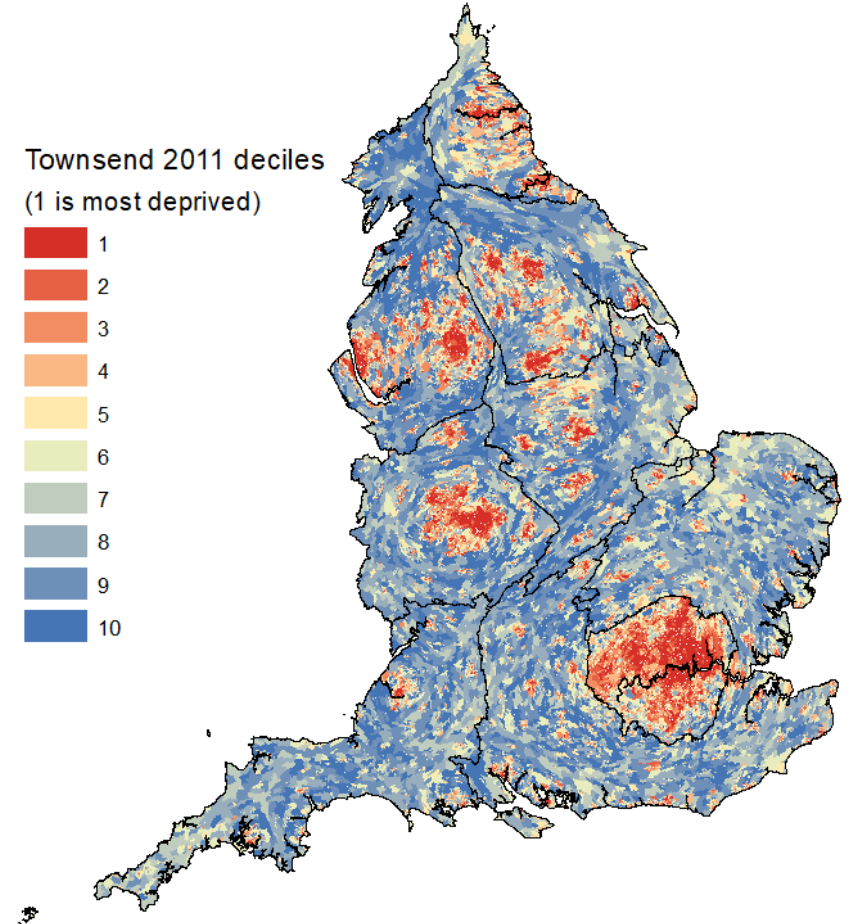
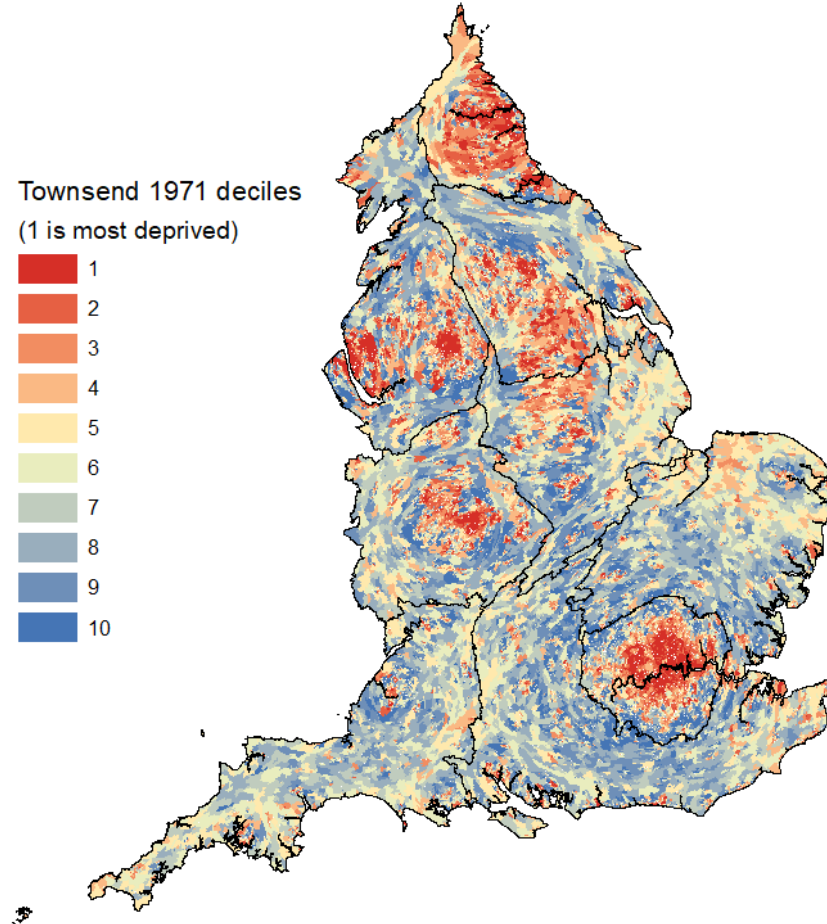
Percentages in each group for England. *For 1971: seeking work / (working + seeking work); for 1981-2011 inclusive: unemployed/ (employees + self-employed + unemployed).

Townsend index

Marked growth in urban areas...

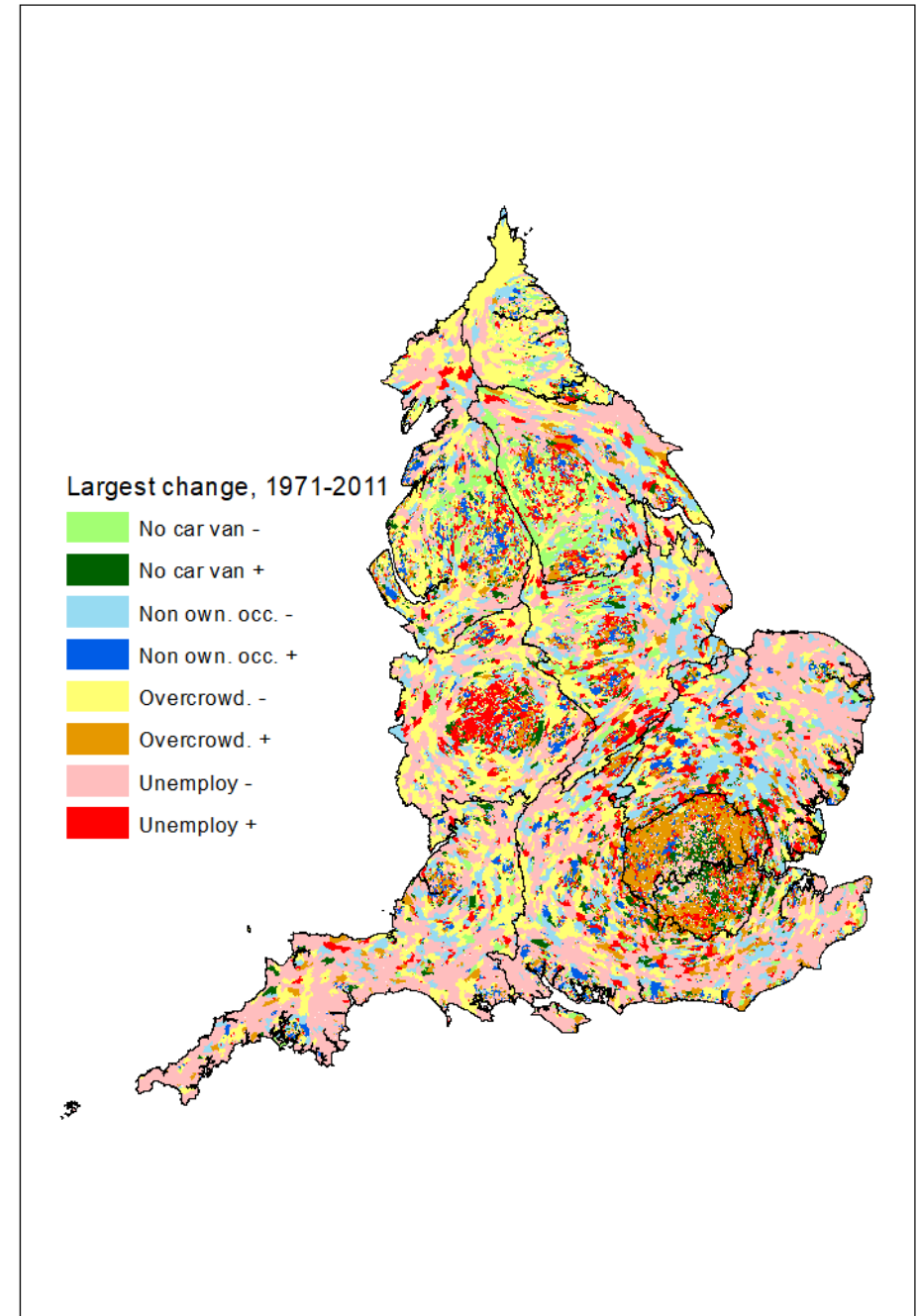
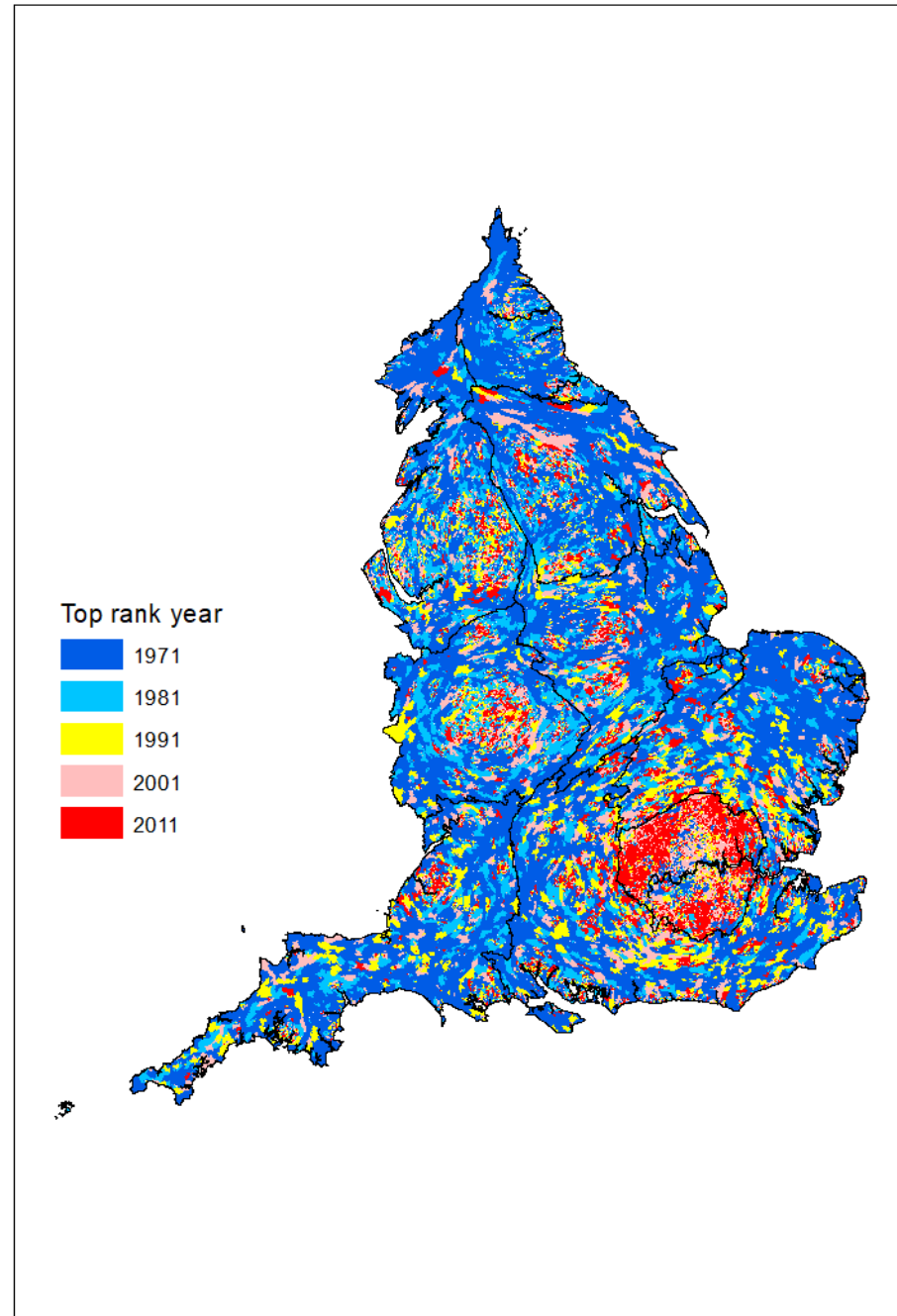
Increased spatial inequalities between urban and more rural regions

Cartograms: based on square root of area of LSOAs



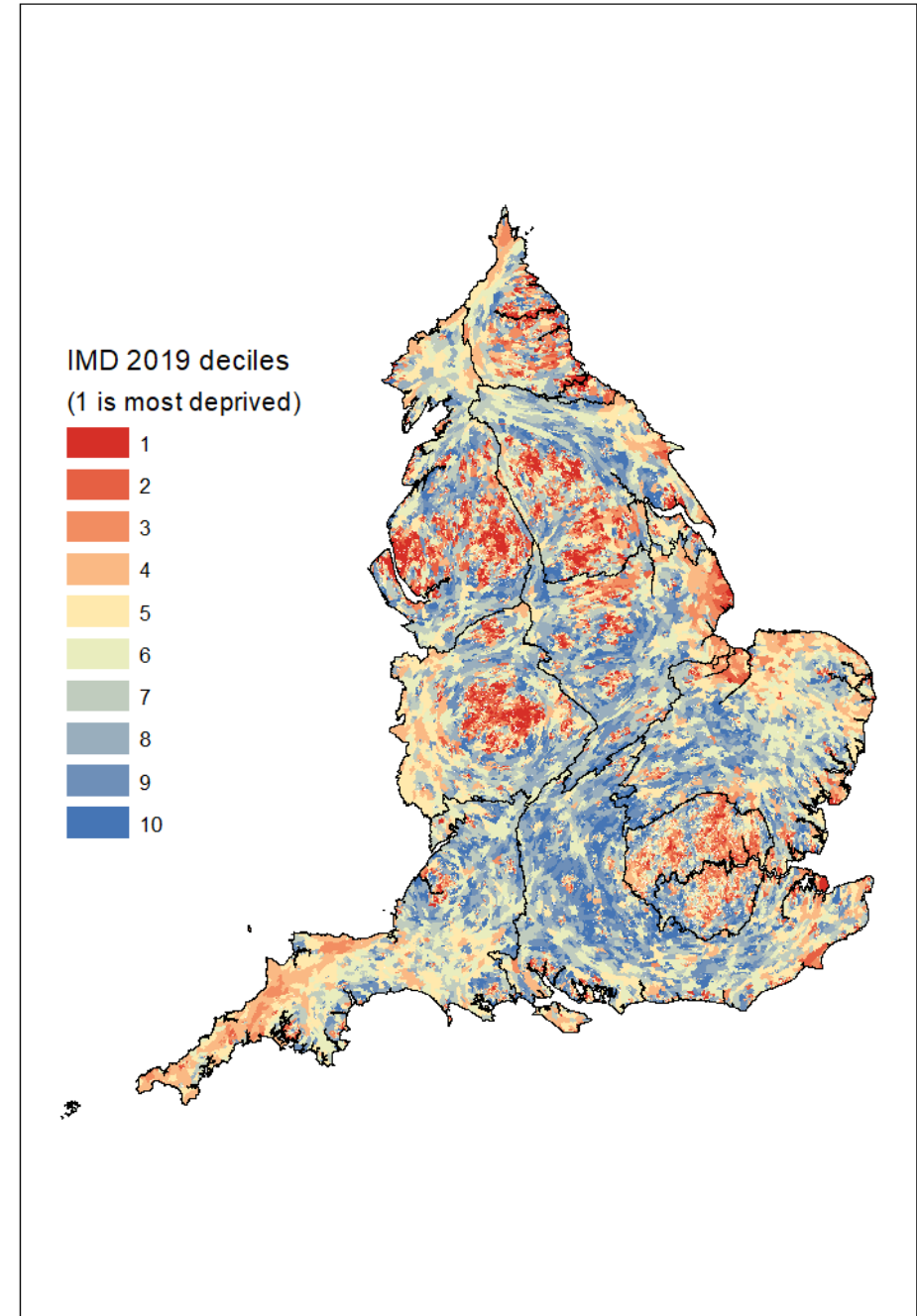
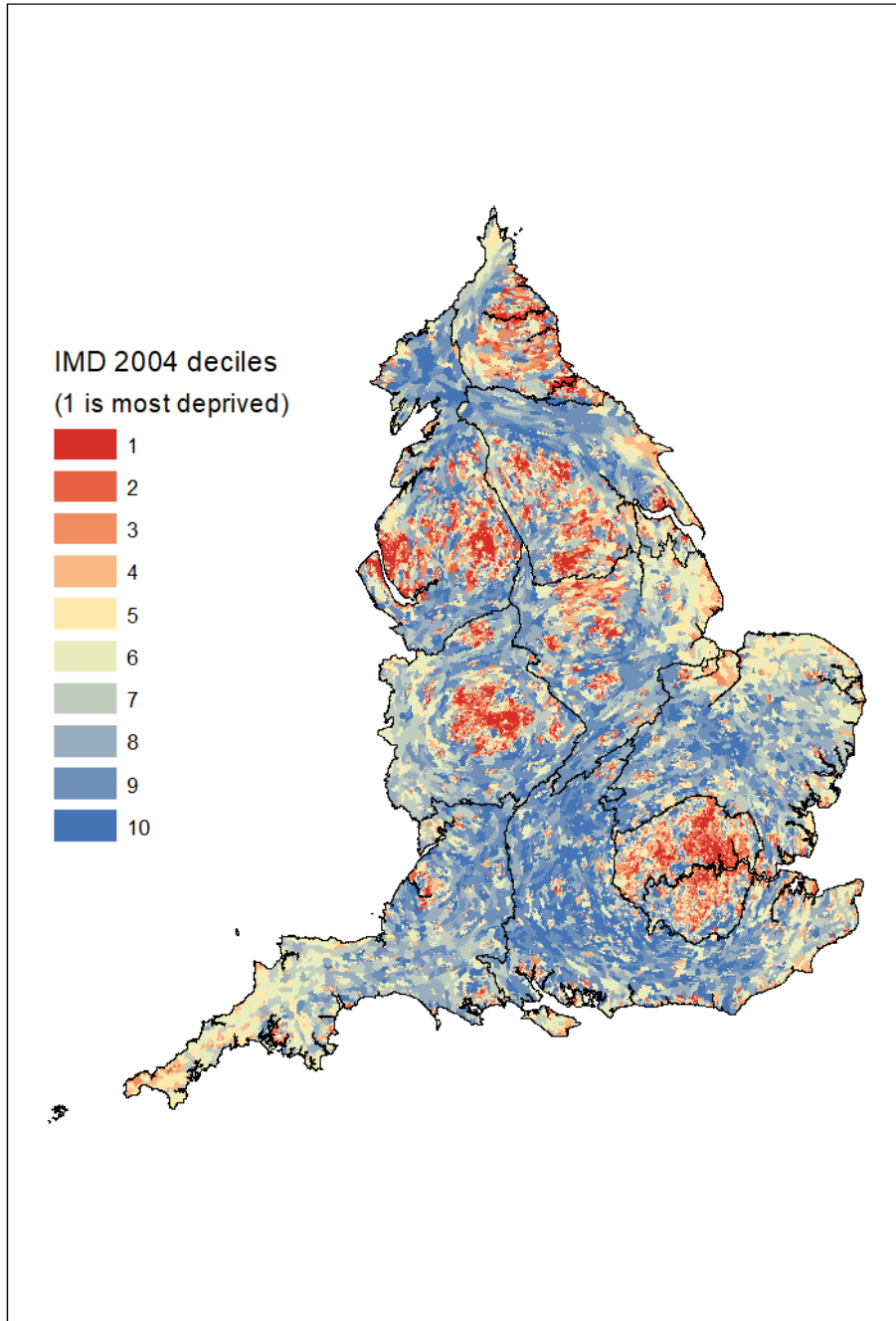
Townsend index

Growing deprivation in urban areas, driven in part by increases in overcrowding



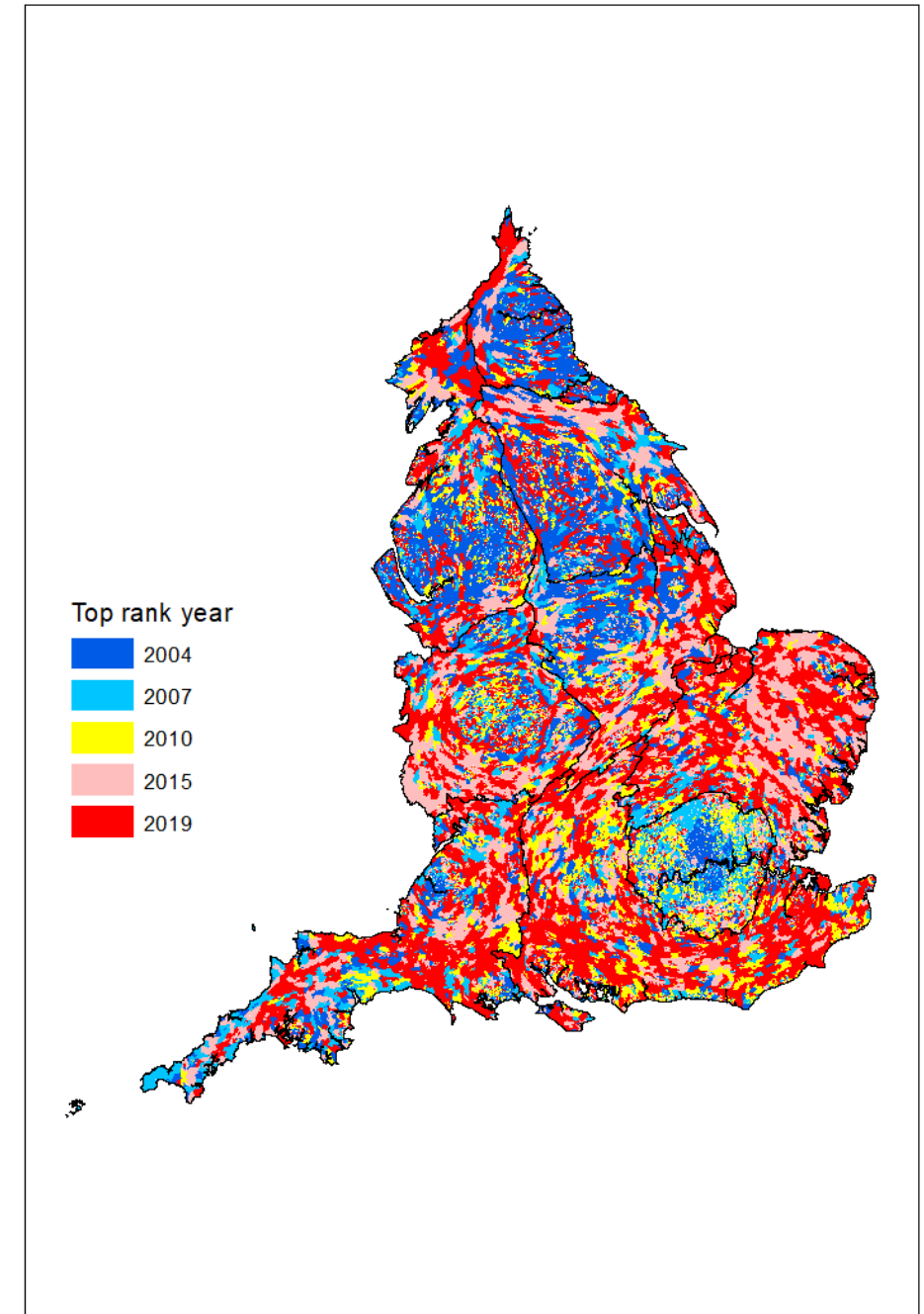
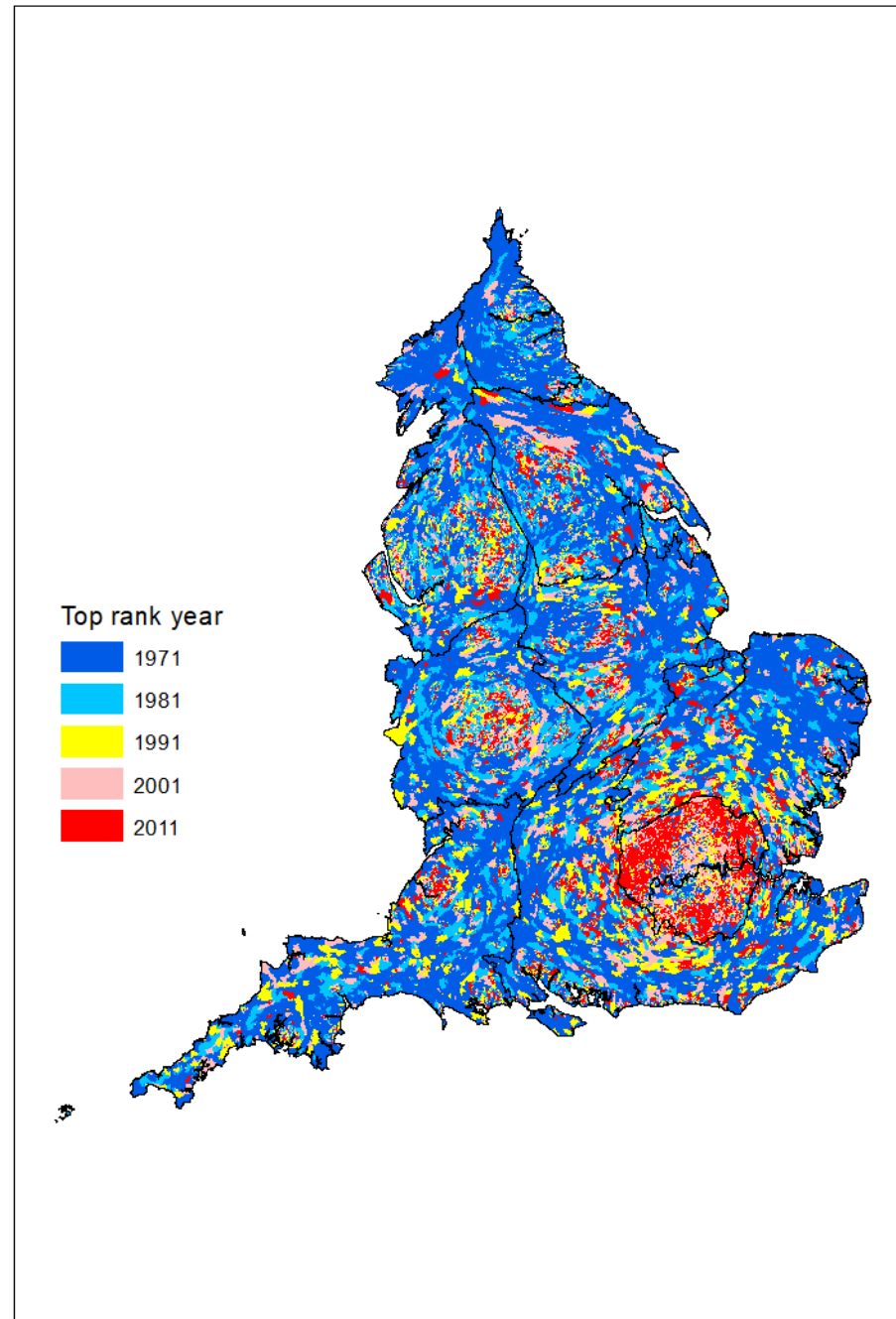
IMD

Reduced spatial inequalities between urban and more rural regions



Townsend vs IMD

Trends in different
directions (but for
different time
periods)



Deprivation decile by Output Area Classification

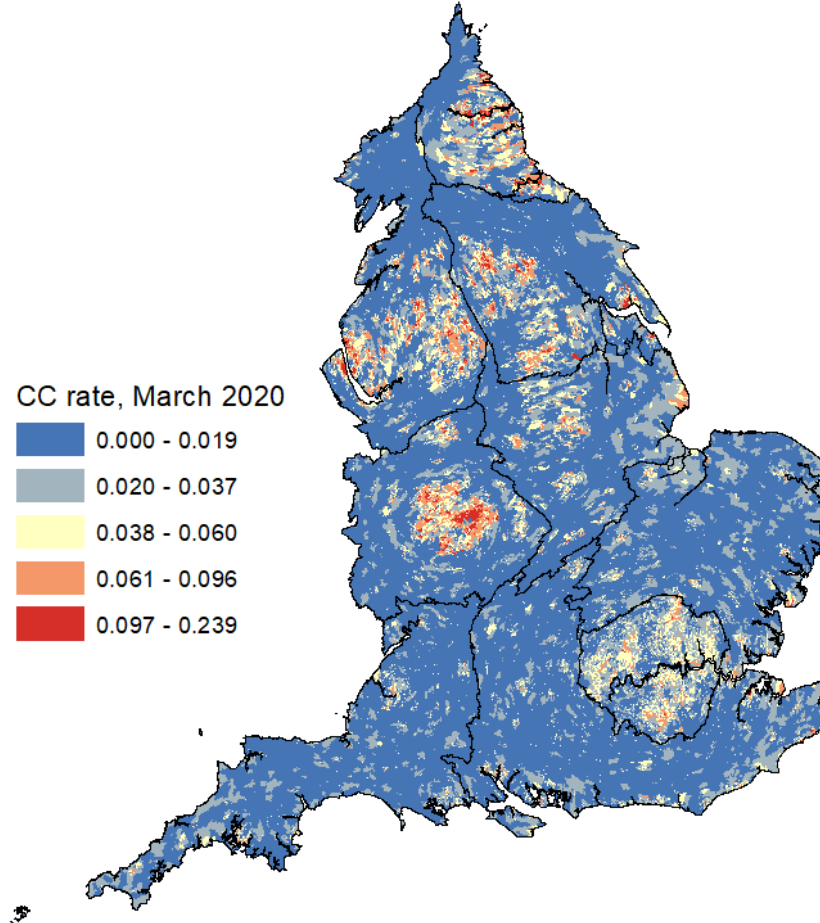
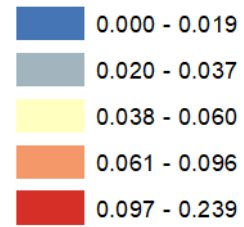
Top 10%	Business and Education Centres	Coast and Heritage	English and Welsh Countryside	London Cosmopolitan	Mining Heritage and Manufacturing	Prosperous England	Suburban Traits
TS71	27.28	2.34	4.32	29.80	28.01	0.94	7.31
TS11	28.19	2.25	1.04	40.73	13.33	0.37	14.09
IMD04	32.33	3.44	3.62	19.85	28.98	0.58	11.20
IMD19	35.37	6.03	6.54	2.56	38.78	0.70	9.98

Percentages of LSOAs in top deprivation decile by OAC

Claimant count

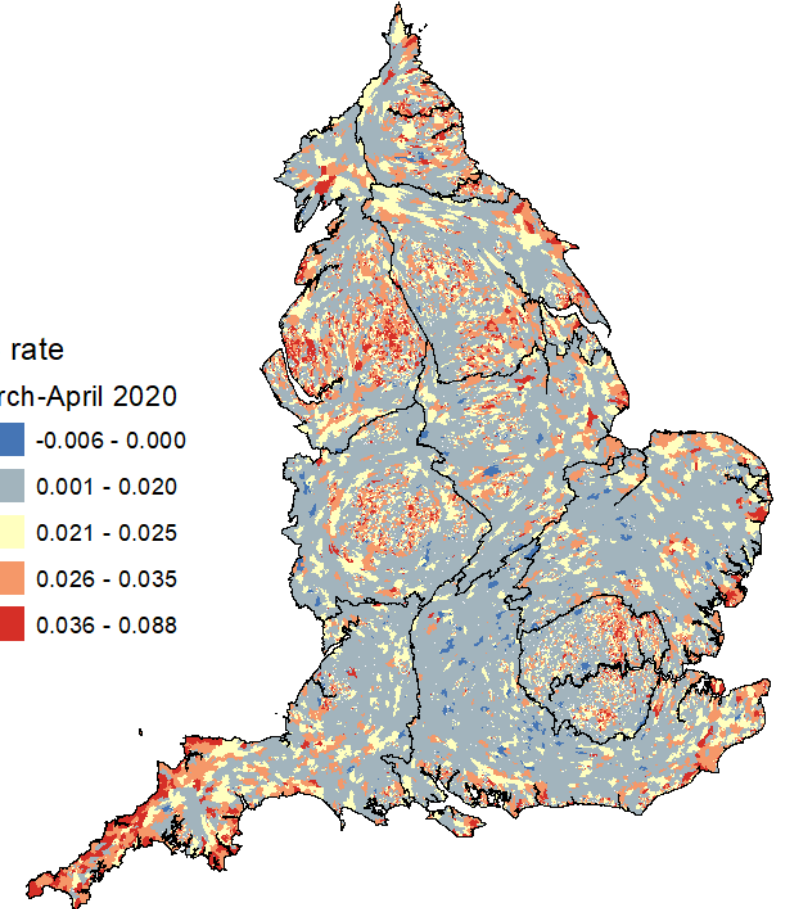
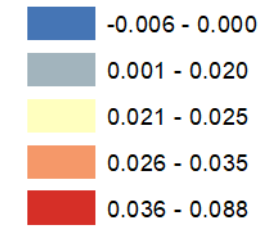
Pre Covid-19 lockdown and post lockdown change

CC rate, March 2020



CC rate

March-April 2020



Summary

Long term (1971-2011) growth in deprivation in urban areas driven by an increase in household overcrowding

A more complex picture with the IMD, showing (for example) a relative increase in deprivation in Mining Heritage and Manufacturing (OAC) areas between 2004 and 2019

Increases in claimant count rates between March and April 2020 focused in urban areas, but also the south-west and coastal areas in the east and north-east of England

Acknowledgements

The Nuffield Foundation are thanked for funding 'Trajectories of Deprivation in the UK' (award ref. WEL /FR-000023253).

The ESRC PopChange project was funded by the Economic and Social Research Council (ESRC) under the Secondary Data Analysis Initiative (SDAI), Phase 2 (project ES/L014769/1) and this support is acknowledged gratefully.

The Office for National Statistics are thanked for provision of the data on which the analyses were based. Office for National Statistics, 2011 Census: Digitised Boundary Data (England and Wales) [computer file]. ESRC/JISC Census Programme, Census Geography Data Unit (UKBORDERS), EDINA (University of Edinburgh)/Census Dissemination Unit. Census output is Crown copyright and is reproduced with the permission of the Controller of HMSO.



Project Advisory Group
Thursday 22nd June 2023

Trajectories of deprivation in the UK: deprivation job losses following Covid

Chris Lloyd

Queen's University Belfast
c.lloyd@qub.ac.uk
@lloydcd

Co-investigators:

Gemma Catney (QUB)

Sara Ferguson (QUB)

David McLennan (deprivation.org)

Michael Noble (deprivation.org)

Paul Norman (University of Leeds)



UNIVERSITY OF LEEDS



Introduction

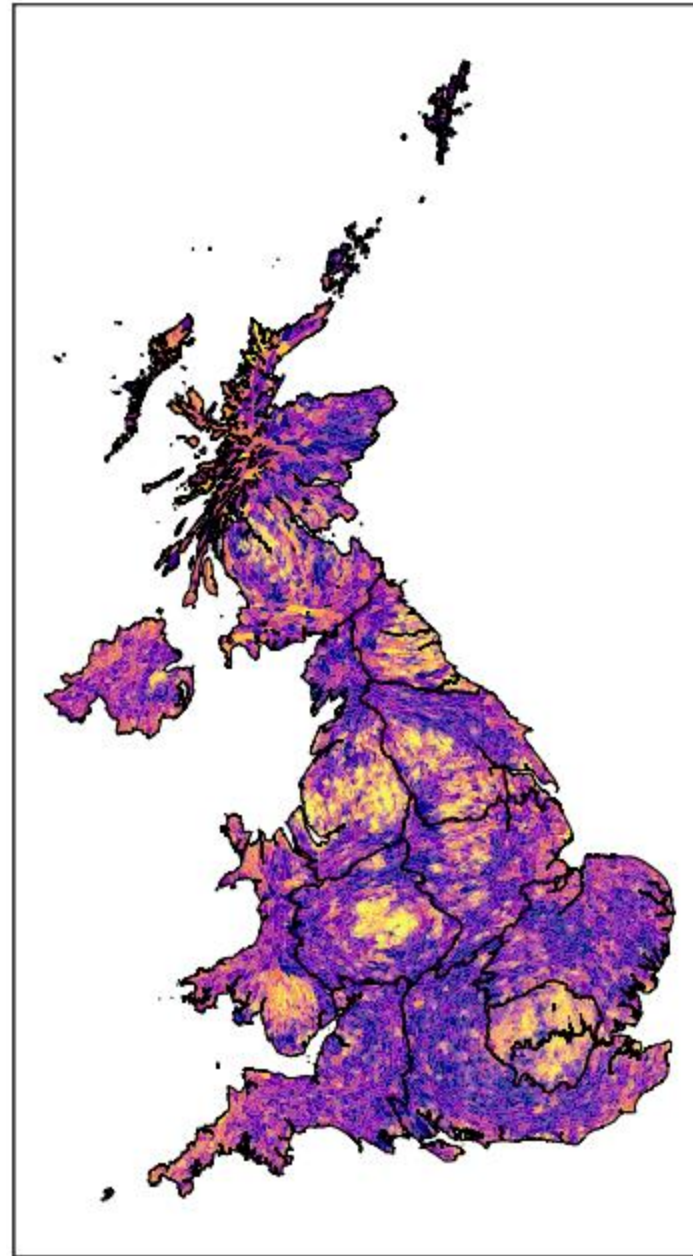
Job losses following the first UK Covid lockdown have a distinct geography

Key question: how far can geographical patterns of job losses be explained by deprivation histories?

Use of a classification approach to group together areas which have similar trends of benefit claimant count rates (as a proxy for unemployment)

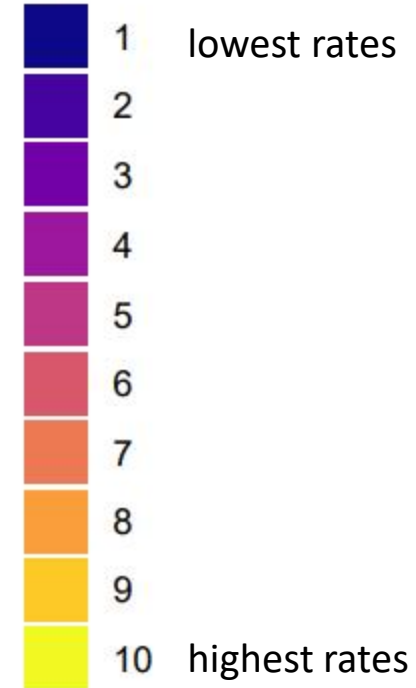
Claimant count

Claimant count rates in the first month after UK national lockdown



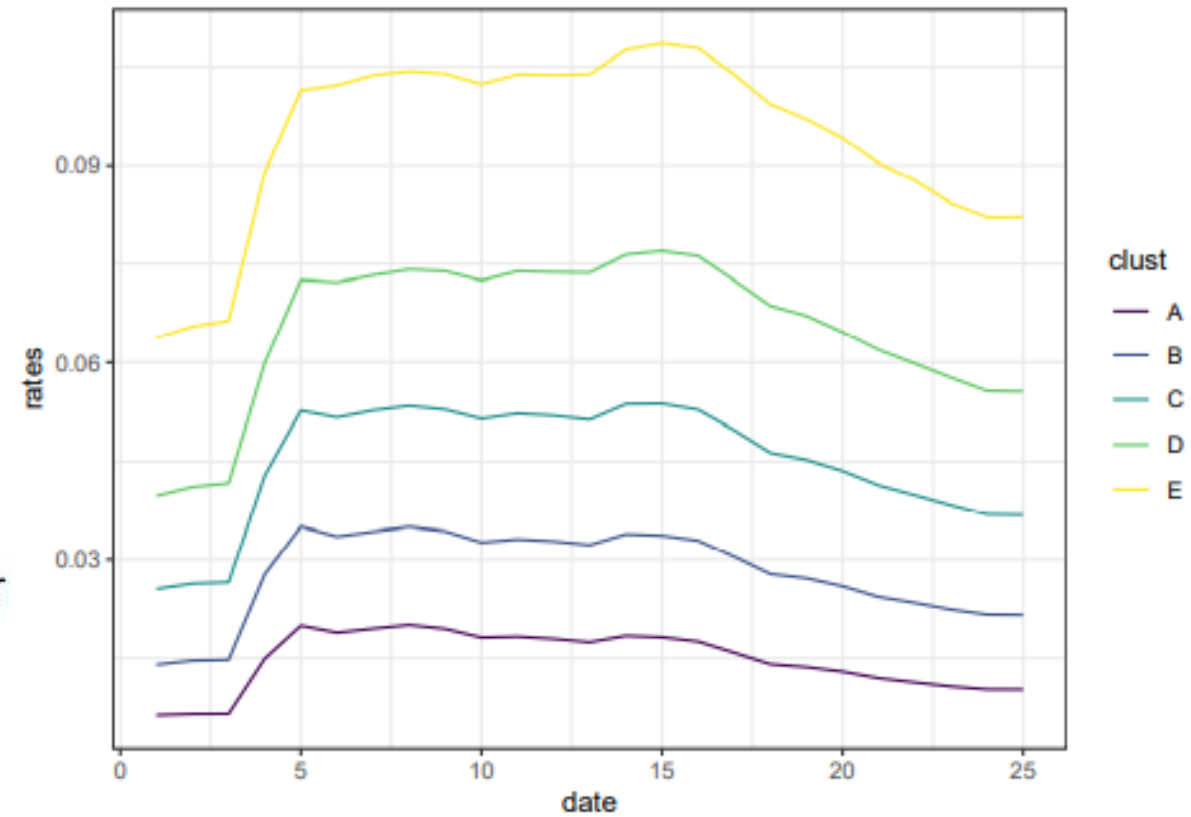
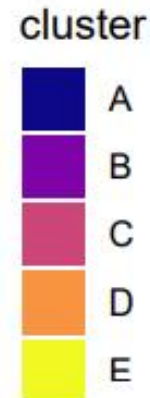
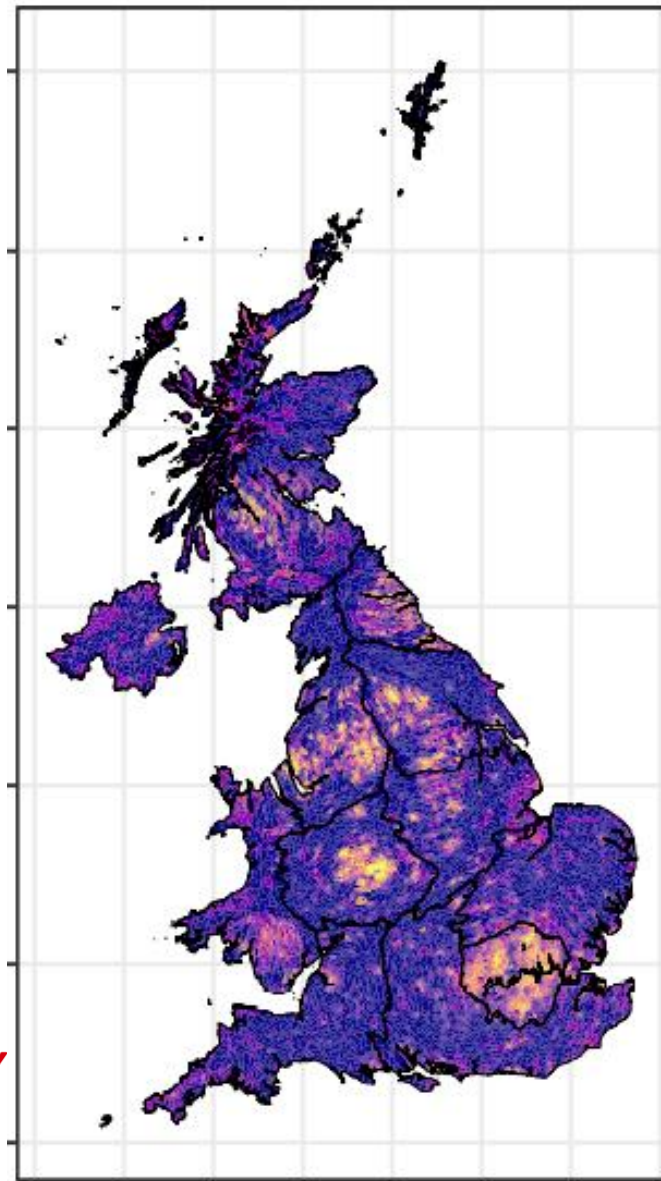
Cartograms: based on square root of area of zones (LSOAs, Data zones, SOAs)

April20



Claimant count trajectories

Clusters of claimant count trajectories derived using *k*-means adapted to time series (R package *kml**)



Median average claimant count value for each of the five trajectory clusters

Month 1= Jan 2020; month 25=Jan 2022

Claimant count vs unemployment and deprivation

Claimant count (CC) trajectory clusters cross tabulated against unemployment 2011 deciles and IMD deciles

1 = highest rates

10 = lowest rates



Dec	A	B	C	D	E
1	7	65	825	2262	1103
2	16	423	2033	1589	201
3	77	1176	2229	733	47
4	296	2052	1616	288	10
5	818	2470	852	117	5
6	1687	2141	407	25	1
7	2504	1597	148	13	0
8	3202	1001	56	2	1
9	3640	590	31	1	0
10	3990	267	5	0	0

CC clusters and unemployment 2011 deciles

Dec	A	B	C	D	E
1	1	35	899	2242	1086
2	7	389	2126	1514	226
3	74	1197	2155	788	47
4	333	2060	1512	350	8
5	834	2440	883	104	0
6	1554	2235	446	26	0
7	2416	1698	141	6	1
8	3140	1091	31	0	0
9	3727	527	7	0	0
10	4151	110	2	0	0

CC clusters and IMD deciles

Summary

- Larger rates of post lockdown job losses in areas with higher rates of claimant counts to start with and poorer recovery by end of period
- Job losses following the UK Covid-19 lockdowns strongly associated with deprivation (and employment) histories
 - However, some significant departures from this
- Need to assess population and housing characteristics at multiple timepoints: why do some areas improve, and others do not?

A first step in a comprehensive assessment of deprivation change and their implications for interventions aimed at reducing spatial inequalities between local areas and UK regions

Project Advisory Group
Thursday 22nd June 2023

Trajectories of deprivation in the UK: proposed outputs



Chris Lloyd

Queen's University Belfast
c.lloyd@qub.ac.uk
@lloydcd

Co-investigators:

Gemma Catney (QUB)

Sara Ferguson (QUB)

David McLennan (deprivation.org)

Michael Noble (deprivation.org)

Paul Norman (University of Leeds)



UNIVERSITY OF LEEDS



Proposed outputs

1. End of project report detailing the key findings, the data resource and providing detailed guidance on the lessons that can be learnt from the case studies for other regions and neighbourhoods of the UK.
2. Deprivation profiles for every local authority in the UK.
3. A web-based mapping platform, enabling full access to the temporally-consistent deprivation measures and classifications.
4. Mid-project workshops which draw together LA representatives from the advisory group to discuss the provisional outputs.
5. An end-of-project dissemination event which will launch the project report, describe the outputs, and provide example studies undertaken with analysts in case study LAs.
6. At least one policy briefing to be released by Queen's University Belfast Policy Engagement (QPol) and at least one press release on the main findings..
7. Journal articles on each work package – both technically-focused articles and articles focusing on deprivation change.

Note: formal project end date is 15th August 2024



Proposed outputs: data

Data from UK Censuses 1971-2021/2; indices of multiple deprivation (IMDs); benefit claimant counts (CC), mid-year population estimates.

Key data outputs:

1. Deprivation variables on consistent geographies (2021/22 Census small areas)
2. New deprivation measures for small areas
3. Deprivation classifications (single time point; separate for Census, IMDs, CC)
4. Deprivation trajectory classifications (separate for Census, IMDs, CC)

Case studies

Provision of deprivation profiles for all LAs in the UK

Identifying selected local authorities who will help to interpret the changes observed in their areas

Include narrative in LA deprivation profiles – possibly linking to other areas with similar deprivation trajectories