Levelling Up:
Designing Policy to Fit Places

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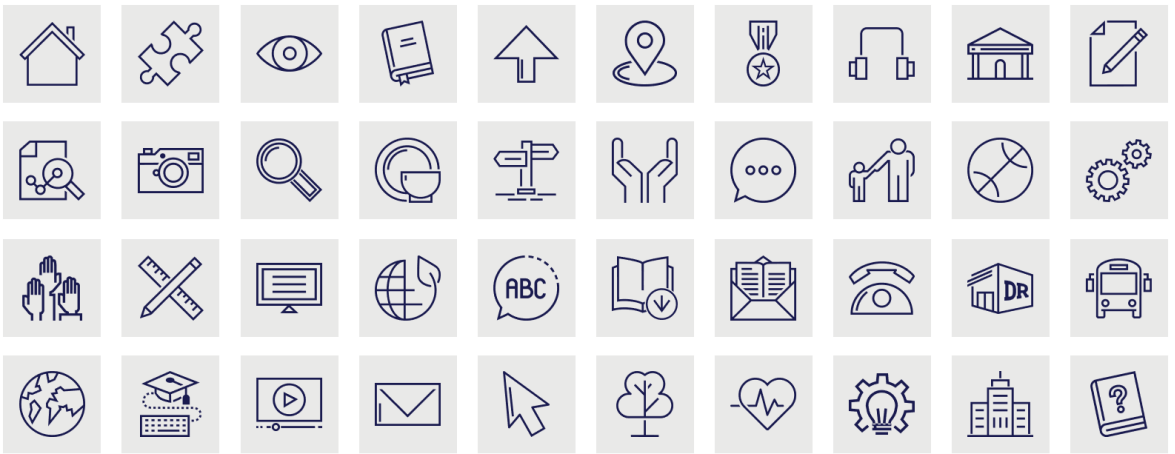


Summary

- The UK's growth and productivity challenge has a highly uneven local geography, disrupted by the pandemic. This has created new patterns in inequality across the UK that has increasingly been seen as a policy priority despite a long history of regional policy making in the UK.

- Policymakers face choices over the level of geographic intervention, from devolved nations, to regions, to lower geographies; and choices over how to group geographies together as recipients of common interventions.

- Targeting of policy interventions requires a granular understanding of places. This research uses new forms of highly detailed data that is available with short lag times between data generation and data availability.

- Our data allow us to measure consumer spending, consumer mobility, consumer and business financial distress, and business expectations in close to real-time for lower-level geographies.

- We use modern machine learning methods to identify clusters of similar local authorities arising from statistical patterns in the data. Using these methods, we develop a typology of six clusters of local authorities including clusters we describe as *struggling cities, boom towns and country*, and the *work from home economy*.

- Our research shows that economically similar places at the local authority level, are spread geographically across the regions: economically contiguous places are not necessarily located in geographically contiguous areas. This suggests that policy interventions need to be targeted at the local, rather than, regional level.

- We advocate an approach to sub-national economic policy based upon policy design for types of place, such as the clusters we uncover in our research, without an overt geographic of regional focus. For example, common policy solutions are needed for *struggling cities* and the *work from home economy*, defined by their economic experience not their geographic location.

- The new data we draw upon allows us to form a granular, up-to-date view of places. We encourage policymakers to draw upon these granular, up-to-date forms of data for their design and analysis of future levelling up economic policy.

Introduction

The UK's growth and productivity challenge has a highly uneven and longstanding local geography. The UK boasts some of Europe's highest productivity and innovation concentration localities in Europe, but also localities suffering entrenched deprivation. As the government introduces new policies aiming to level up the UK, such as the Towns Fund, Levelling Up Fund, and place-based interventions such as Freeports and new devolution deals, good policy design requires an up to date understanding of the economic geography of the UK.

Policymakers face choices over the level of geographic intervention, from devolved nations, to regions, to lower geographies; and choices over how to group geographies together as recipients of common interventions. The right understanding of the UK's current economic geography requires an up-to-date view of the experience of places in the post-pandemic era. In this report, we partner with providers of real-time economic data on places to produce a machine-learned statistical model of the economic geography of the UK.

New forms of data to understand places

Sub-national economic policy in the UK has a long history but more recently has increasingly adopted a local focus, requiring local data. Interventions such as Freeports and Innovation Zones are highly localised, with the right data key to their placement. Whereas UK governments tended to think of sub-national policy historically as regional-level interventions, in recent decades the focus on localism has resulted in a move to much more geographically focused policy.

Optimal targeting of policy interventions at the local level requires a granular understanding of places for which timely economic data is not easily available. UK economic statistics have historically not been configured to deliver data on local places. Moreover, the pandemic has disrupted and displaced much economic activity in the UK, with the surge in work from home and accelerated decline in in-store retail sales creating a rapidly changing economic and social picture of places. The available measures of local economic characteristics, such as the Index of Multiple Deprivation available only with a two-year lag, offer limited insight into the economic experience of places today.

To build the latest view of the economic experience of local places, we therefore partner with providers of highly detailed data that is available with short lag times between data generation and data availability. Experian provide consumer and business credit file data drawn from their UK bureau. Fable provides transaction level credit card spending data. Huq provide mobile phone location data. Each data source contains geo-location data recording the location of the consumer / business, the credit card spend, and the movement of the mobile phone.

Using these data, we create indexes of economic activity at the local authority level for: the change in consumer financial distress, firm financial distress, consumer spending and mobility since January 2020. In addition, we use bespoke data from large surveys of UK businesses, providing near real-time employer and employee perspectives on current and future activity together, these eight indices form the data input to the model.

Panel A: The economic geography of sub-national policy in the UK has become increasingly localised. Historically, heavy industry was concentrated in regions (Fig. 1), which gave rise to regional development priorities and Regional Development Agencies in 1999 (Fig. 2). The introduction of Local Enterprise Partnerships in 2012 (Fig. 3) signalled a move to more localised interventions, together with Devolution Deals in 2014 (Fig. 4).

Recent levelling up policies have been again more localised, implemented at the local authority level. Freeports (Fig. 5) are a highly localised intervention at the postcode level, with the geography of future interventions such as Innovation Zones yet to be confirmed.

Figure 1: Location of heavy industry in England and Wales in 1975

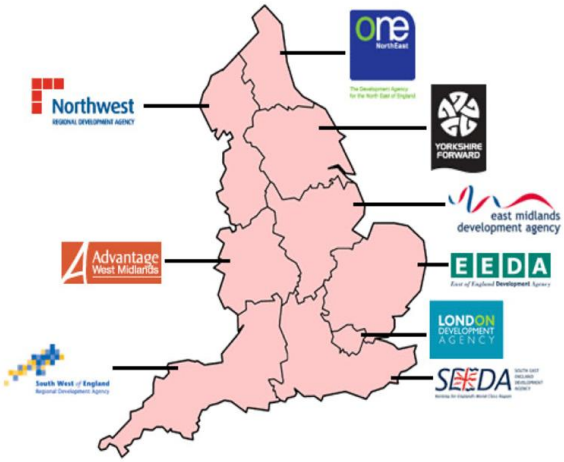


Figure 2: Regional Development Agencies

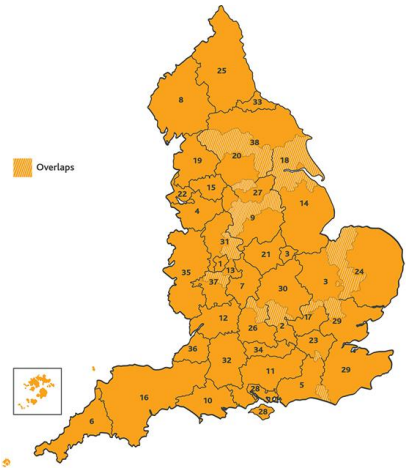


Figure 3: Local Enterprise Partnerships

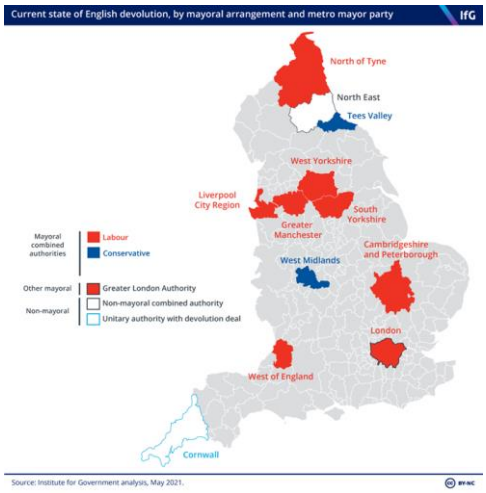


Figure 4. Devolution Deals

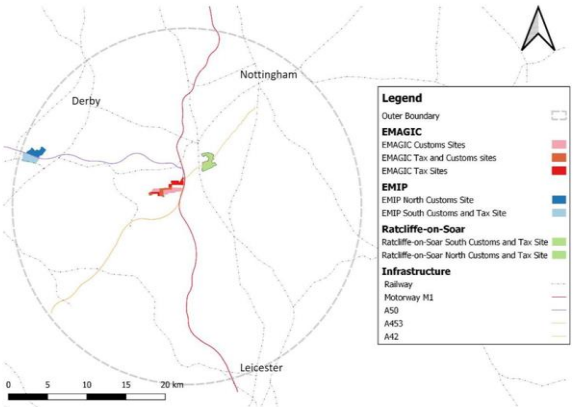


Figure 5. East Midlands Freeports

Machine-learned economic clusters

Understanding how local authorities across the broad geography of England, Scotland and Wales relate to each other as measured through our set of variables is complex. Modern machine learning methods, however, allow us to draw upon a suite of clustering algorithms to identify clusters of similar local authorities arising from statistical patterns in the data. Using these methods, we develop a typology of six clusters of local authorities. These are illustrated in Panel B.

The clusters are defined by statistical patterns in the data, but analysis of the contributions of the variables used to each cluster allow us to create narrative descriptions of the distinctives of each grouping. These are described in the table below:

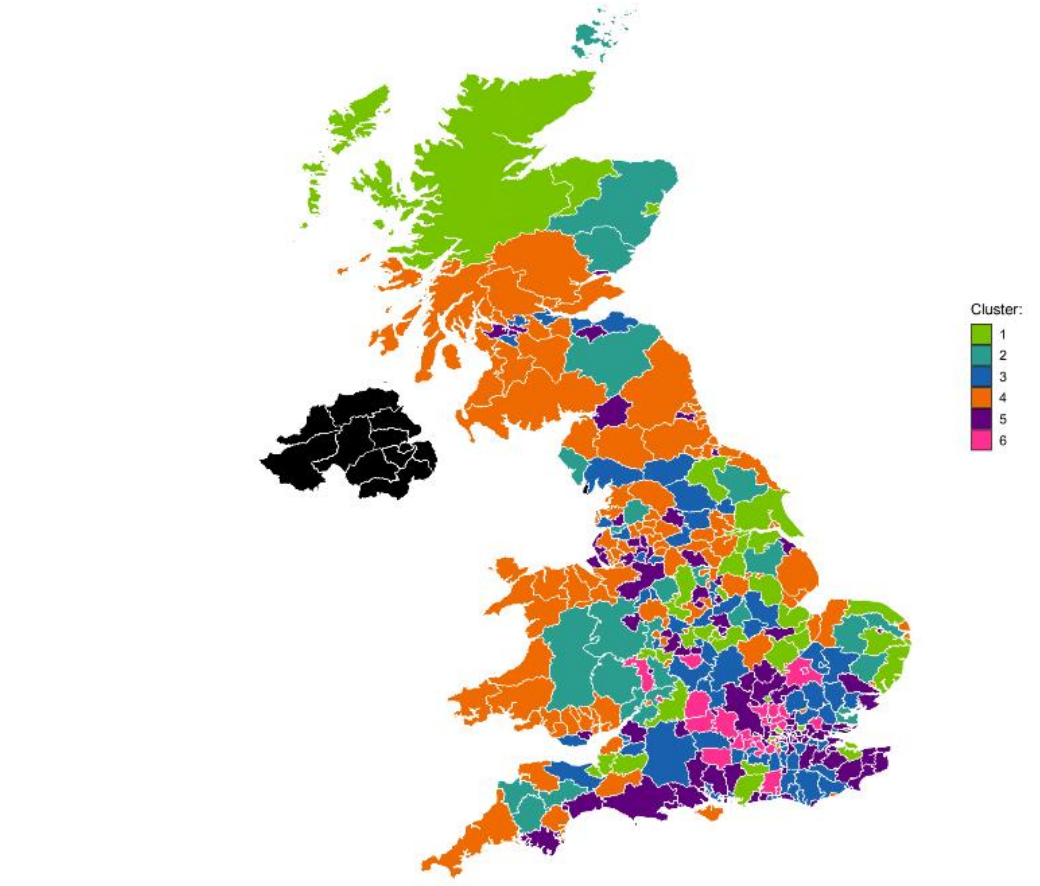
Cluster	Description
1	***Boom towns and country***: high consumer spending growth outside large cities
2	***Rebounding real economy***: high growth in capital investment, high travel-to-work areas, inland areas
3	***Stagnant commuter belt***: low consumption, flat economic activity, rising deprivation
4	***Coastal recovery***: high mobility and expected employment growth, reduced consumer and firm distress
5	***Struggling cities***: reduced mobility, increased firm and consumer delinquencies, income deprivation,
6	***Work from home economy***: reduced travel, high sales and employment growth, low poverty but financial distress

Economic similarity vs geographic proximity

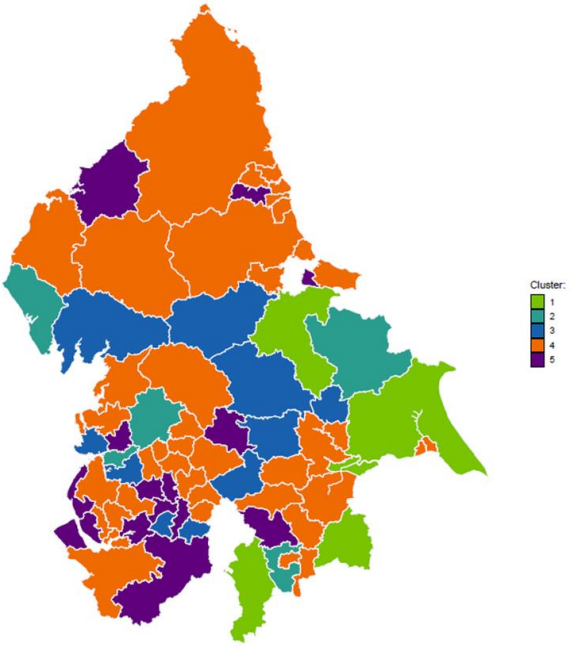
A key finding from the clustering of local authorities is that economically similar places are spread geographically across the regions of England, Scotland and Wales. Each region features local authorities assigned to each cluster. This is counter to the traditional narrative of regional divides – here we see that economically contiguous places are not located in geographically contiguous areas, they are distributed across the broad geography of the regions.

We see this picture of economic diversity within regions reflected within the local authorities that make up the Northern Powerhouse and the Midlands Engine, illustrated below. In each grouping we see local authorities drawn from a variety of the six clusters identified by the machine learning model. This emphasises that, even in areas traditionally viewed as being economically homogenous, such as the north of England, we observe a wide variety of economic experiences across local authorities

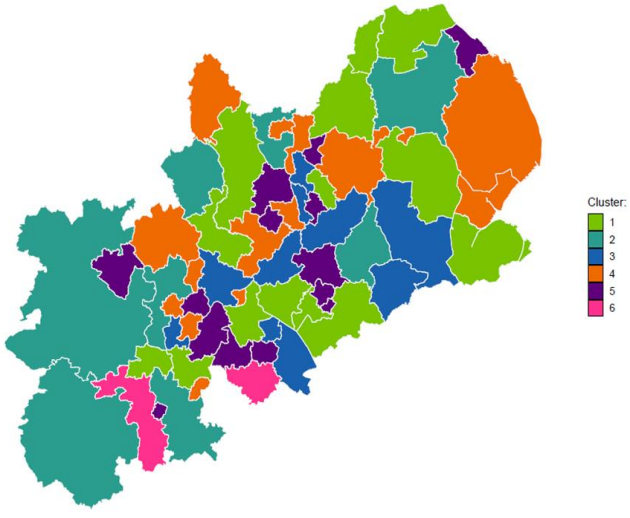
Panel B: An illustration of the clustering of local authorities across England, Scotland and Wales in the six clusters identified by the machine learning algorithm. These economically similar places within clusters are distributed broadly across England, Scotland and Wales. The Northern Powerhouse and Midlands Engine areas are notably diverse in the types of local authorities situated within their boundaries.



Northern Powerhouse



Midlands Engine



Implications for sub-national economic policy

The picture of local economic geography derived from these new forms of data combined with the machine-learned clusters is one of a rich variety of types of places across the geography of England, Scotland and Wales. Hence the economic experience of places economic policy seeks to address is neither characterised by the extremes of broad regional homogeneity or universal local diversity. Instead, policy should be designed for economically similar types of places that are geographically dispersed.

What does this form of policy look like in practice? We advocate an approach to sub-national economic policy based upon policy design for types of place, without an overt geographic of regional focus. For example, in our analysis, Cluster 5 reflects struggling cities with declines in consumer spending, footfall, increased delinquencies and rising levels of income deprivation. This cluster needs economic policy focused on the future of cities, without an overt geographic focus.

Some recent developments in sub-national policy reflect the insights from our research. For, example, the Towns Fund reflected the need to specific forms of support for towns outside of large urban centres. We would suggest that this line of policy development might be scaled more widely, but also recognise that there are common policy solutions within each cluster. A model of individual local authorities bidding for loosely defined eligible types of resource could be superseded by packages of economic development policies and resourcing design for the cluster.

Our report illustrates how new forms of data can be used to form an understanding of current economic geography. The new data we draw upon allows us to form a granular, up-to-date view of places. Our research does not create a definitive view of places in all their economic and social dimensions, and we would encourage government to consider what range of data could be added to this picture in future analysis.

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The academic paper, “Post-Regional Economic Geography”, on which the briefing note is based, is available from the authors on request.

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