Changing commuting and migration trends in British cities over several decades

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In search of UK cities in decline

The study takes a broad view of poverty-related decline in cities...broad in its
* city definitions
* timespan analysed
* decline definition

This broad view of decline required Census data to be linked to other datasets

Inevitably there are compromises in addressing this challenge:
- data for several decades → variable definitions change
- analyse non-standard areas → less data for ‘building blocks’
  ...these are issues for all potentially relevant datasets (but with the Census
  there is little adjustment of past data to be comparable with current data)

Immediately it was decided that commuting and migration data was needed,
Census data became essential (despite the incompatibility through time)
BUT the two flow datasets can’t provide compatible measures of change:
  > commuting change data = 10year change between 2 Census snap-shots
  > migration data covers 12months so reflects 10% of change over 10years
BUT with very different patterns year-on-year, ‘grossing up’ is not feasible
THUS non-Census data becomes essential to estimate migration over 10years
UK cities to be studied

Starting point is the Work Foundation analysis of 64 PUAs

Analysing linkage of economic change and poverty calls for analyses using functional economic areas: Travel-to-Work Areas (TTWAs)

Extending coverage beyond the 64 PUAs allows study of some smaller urban areas whose decline may have different roots

Additional cities are considered in the same way as we identified PUAs:

1 built-up area population of the city is over a set population size threshold
2 this city is the largest settlement in the TTWA that it lies within
3 there is a reasonable ‘best-fit’ to the (grouping of) TTWA(s) when using the boundaries of local authority areas (as they were in 2001)

...we apply these criteria using data c. 2001 as with the original PUAs

  but we set a threshold of 100,000 (not the 125,000 used for PUAs)...

EXTRA CITIES: Bedford, Cheltenham, Chesterfield, Colchester, Eastbourne, Exeter, High Wycombe, Lincoln, Thanet, Torbay

...so identifying 74 PUA+s
PUA+s  (c.70% UK population)

to maximise data comparability, the standard definition is the best-fit based upon 2001 LAs (also avoids loss of granularity in using new Shire Unitaries)

this map shows PUA+s classified by:
- urban population size (symbol)
- broad region (colour)

The identification of decline developed here concentrates on issues linked to risk of poverty, so economic and demographic factors are both key, hence the starting point is to build labour market accounts (LMA/cs)
LMA/cs: past practice and approach here

Past practice was to estimate a series of equalities for each of two dates:

- total working age group = economic active + non-participators
- economic active = employed + seeking work
  - [ and the unemployment rate = seeking work / economically active ]

...with commuting and migration change data in other parts of the LMA/cs

Approach here reflects the more recent policy focus on employment rate
(eg. EU 2020 target of 75% employment of all aged 20-64)

...this means the non-participators are grouped with those seeking work

SO the aim is measuring (non-)employment levels in PUA+s 1981/1991/2011
PLUS the demographic and economic shifts driving these changes

(the aspiration is to later disaggregate by type of work – eg. graduate-level vs. other jobs – rather than by gender as in some of the earlier LMA/cs)

ALL empirical results here are very provisional, illustrative instead of definitive
Labour supply change: demographic components

Policy now implicitly assumes 100% potential participation of all in the EAA (economically active ages), but pensionable age has been changing… SO a simplification here is to aim that in all analyses EAA = ages 16-64

There is policy interest in the effects on labour market outcomes of two demographic processes: population ageing* + net migration which both impact unevenly across the country

Estimating these processes separately at the local level needs data from the Mid Year Estimates (MYEs) whose total change values differ from the results of the Census due to MYEs’ corrections for ‘missing million’ etc. (a lesser issue is that the MYE change calculations refer to ages 15-64)

Approach here departs from “accounting” approach where the supply-side calculations disaggregate the total active labour force (+ residual error): here the interest is in the relative importance of ageing & net-migration for the change in EAA so these calculations use MYE data only:

eg. change in EAA t1 to t2 due to ageing OR net-migration as % EAA t1

*NB “ageing” analyses here are full analysis of natural change in the EAA, but the term “ageing” is used because deaths are few and births are nil
AGEING tended to increase EAA numbers in PUA+s: a key systematic variation is that largest cities are ‘youngest’ and so have most need for local job growth… in so far as the UK is seeing ‘a demographic time-bomb’ this is a surplus not shortage of labour.

MIGRATION by contrast had a more regionally varied impact on EAA numbers, with lower but still positive flows to northern England and its conurbations which is markedly different to earlier decades.

<table>
<thead>
<tr>
<th>urban population size</th>
<th>1980s</th>
<th>1990s</th>
<th>2000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;5m</td>
<td>3.5%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>&lt;5m &amp; &gt;.5m</td>
<td>2.5%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>&lt;.5m &amp; &gt;.275m</td>
<td>2.2%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>&lt;.275m &amp; &gt;.15m</td>
<td>1.8%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>&lt;.15m &amp; &gt;.1m</td>
<td>1.5%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>&lt;.1m (ie. not in a PUA+)</td>
<td>0.1%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>all UK PUAs</td>
<td>2.4%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>
Labour market consequences

The principal interest in the construction of LMA/cs is in the consequences for an area’s residents of interacting processes of labour market change.

Clearly if local job availability change is zero then a rise in EAA numbers will lead to an increase in non-employment (decreasing employment rate).

However changing local job availability is itself the result of two processes:

change in number of jobs in the area MINUS change in net* in-commuting *ie. the number of in-commuters MINUS the number of out-commuters

Estimating the commuting changes at the local level needs data from the Special Workplace Statistics (SWS) and their successors in Census 2001 that have an inconsistent age range coverage: the assumption here has to be that 10 year change in net flows across the boundaries of PUA+s (which are labour market areas and so internalise most commuting) primarily involve the EAA group who are the key concern here.

For consistency of data coverage, Census commuting datasets on where the commuters work are used here as measures of job availability.
Labour market consequences

The cities of midland and northern England saw a gradual recovery in their job numbers since the 1980s – while not matching the London region growth – and the 2001-11 mix of city boosterism and recession furthered both trends.

Employment growth in this decade was linked to net international in-migration, but simple interpretations of the link ignore the various dynamics at play.

**Employment change by decade (English PUA+s)**

- London & environs
- Other south/east
- Midland
- Northern
Impact of commuting change 2001-11

LMA/cs highlight the influence of the change in the size of net in-commuting flows to an area on the availability to resident EAA people of local jobs.

nb. Increases in net in-commuters can stem from lower out-commuting (eg. due to lower competitiveness of the local residents) as much as from a bigger flow of in-commuters from elsewhere (‘job creation deadweight’)

Regional variation is unclear but the strong tendency is that larger cities have higher proportionate ‘leakages’ of local job opportunities to in-commuters.

BUT 2001-11 saw declining net inflows for most city types BAR London
How did the 2000s compare to the 1990s?

2001-2011 contrasted with the 1991-2001 may reflect policy shifts under Labour Analyses of the English & Welsh PUA+s [data problems in Scotland/N.Ireland] …correlate each type of change against PUA+ employment rates in year 1 BOTH decades show overall “progressive” effects of labour market dynamics as employment rate inequalities declined [year1 employment rates were negatively correlated against the growth in employment rates] BUT NOTE this inequality reduction was stronger in the 2000s than it was in the 1990s Job numbers grew slightly faster in low employment rate cities in the 2000s, whereas the 1990s saw much stronger growth ‘where it was less needed’ The major rise in the 2000s of international in-migration was spatially dispersed (especially compared to the familiar intra-UK migration north-south ‘drift’), and so lower equilibrating positive correlation with city employment rates

<table>
<thead>
<tr>
<th>correlations with y1 employment rate</th>
<th>2001-2011</th>
<th>1991-2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>employment rate growth</td>
<td>-0.538</td>
<td>-0.358</td>
</tr>
<tr>
<td>local jobs growth</td>
<td>-0.147</td>
<td>0.491</td>
</tr>
<tr>
<td>net in-commuting growth</td>
<td>0.161</td>
<td>0.046</td>
</tr>
<tr>
<td>EAA growth</td>
<td>0.332</td>
<td>0.648</td>
</tr>
<tr>
<td>net-in migration as % of end year EAA</td>
<td>0.330</td>
<td>0.592</td>
</tr>
</tbody>
</table>
Some observations from these analyses

ALL the empirical results here must be considered to be very provisional

Far from seeing a ‘demographic time-bomb’ eroding the numbers in the EEA, Britain’s relatively young age structure leads to growth of its labour force, with this pressure on labour demand strongest in the largest cities.

The major rise in the 2000s of international in-migration was spatially dispersed (especially compared to the familiar intra-UK migration north-south ‘drift’); migration’s role in equilibrating city employment rates was thus reduced.

The impact of changing commuting patterns was far lower (or less consistent).

What are the observations so far on the uses made here of the Census?

LMA/cs strictly need statistics reported consistently (eg. identical age bands)

...Censuses don’t provide all the data needed, leading to non-comparability...

...this is worse when analysing long periods...data availability issues rise with small sub-national – especially non-standard – areas like PUA+s

Here the use of Census data is selective and LMA/cs became only a guide-line.

Analysing local commuting pattern change depends on Censuses but it is very difficult even if helped by WICID, due to areal unit change (England&Wales) [and the flow datasets are always ‘last’ ...local migration data still awaited!]