

# South Yorkshire's past, present and future: what does the data say?\*

Dan Olnier

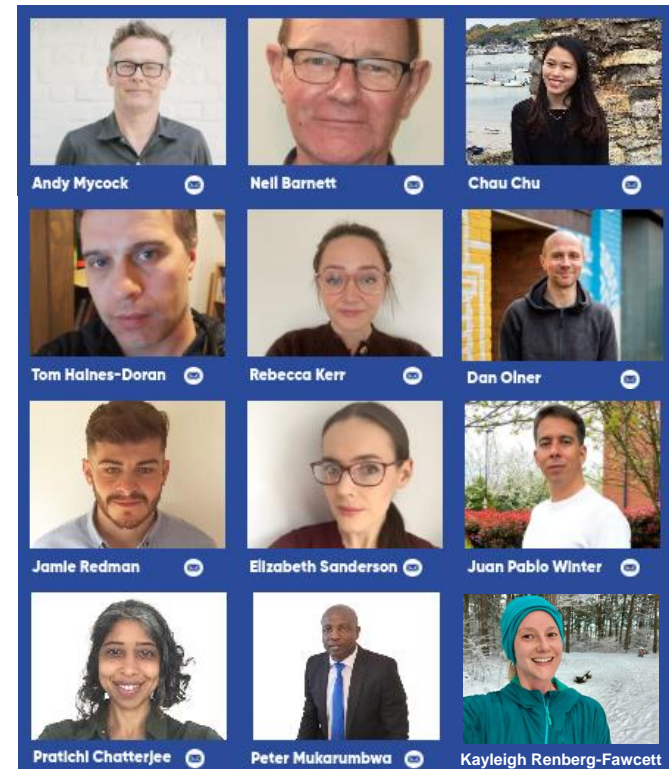
Y-PERN policy fellow

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\* For a very narrow slice of “the data” ...

# Y-PERN

- Research England funded project
- Aim: **strengthening the glue** between Yorkshire & Humber's universities and its local and mayoral authorities
- Team of **policy fellows** –we're working directly with policymakers across the region
- I'm seconded to **SYMCA** working on data / evidence for growth plans + evidence strategy
- More at [y-pern.org.uk](https://y-pern.org.uk)

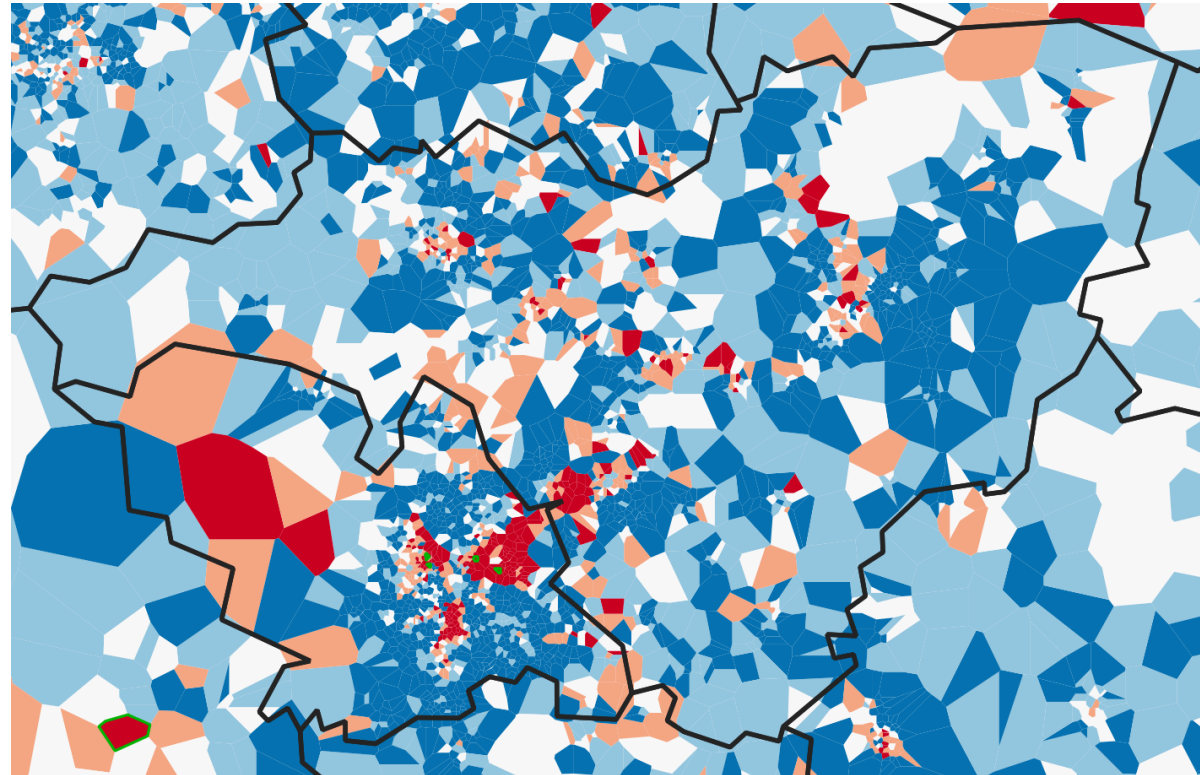


- **We'll look at:**

- Historical Census data from 1971 onwards, harmonised across decades
- Employment history and what it says about the region's present
- Economic / sectoral / jobs history from 1998 –different to carry on digging into structural change
- A few other bits and bobs if time...



- **Setting scene...**
- **South Yorkshire 1971.**
- South Yorkshire County Council (1974-86, led by Sir Ron Ironmonger) is still 3 yrs away...
- Some 'slum clearances' still ongoing e.g. in Walkley
- **This map:** proportion of properties with **no inside toilet**
- Quintiles: **red** is highest fifth in GB
- (Tiny green outline zones: places with **no** inside WC)



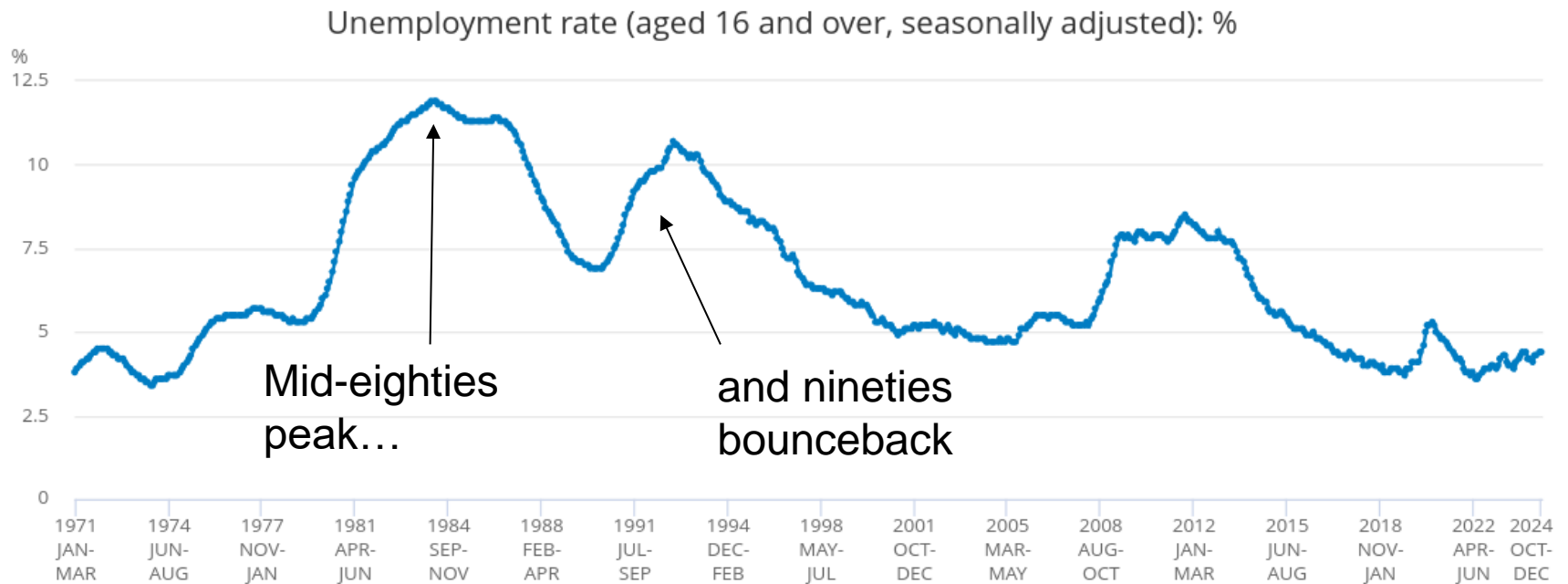


# South Yorkshire employment and its impact

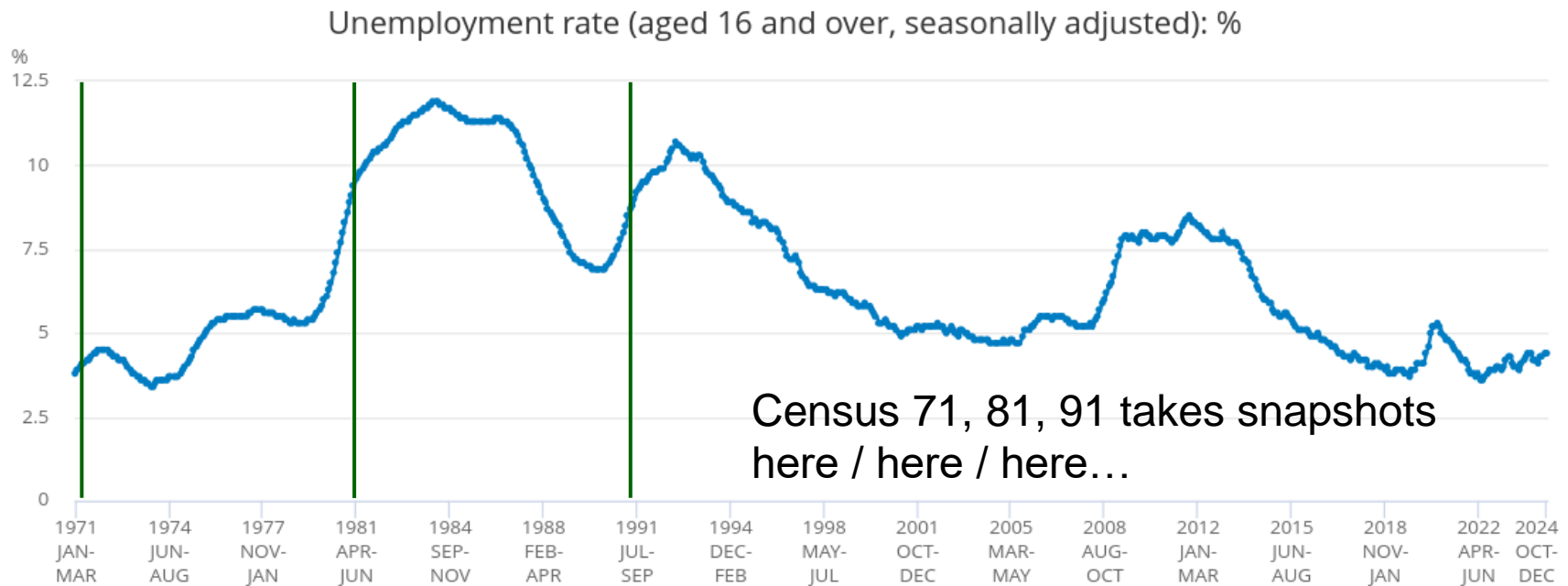
- Two days ago: SY mayor marking **40 years** since the end of the miners' strike
- In the peak of which →



# Unemployment: national context

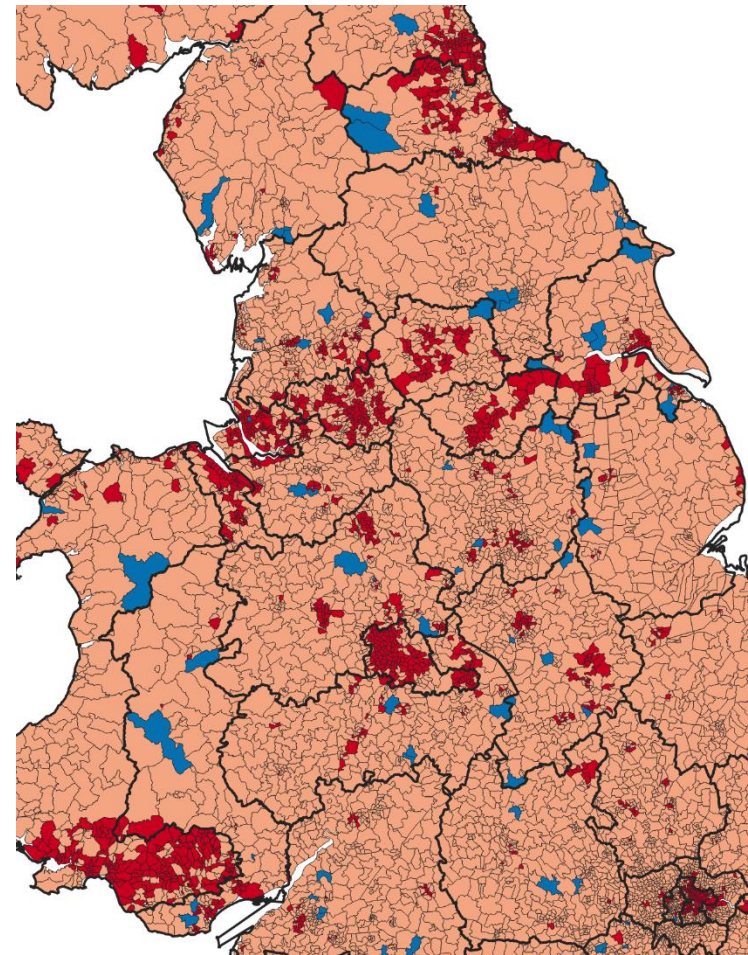


# Unemployment: UK time series



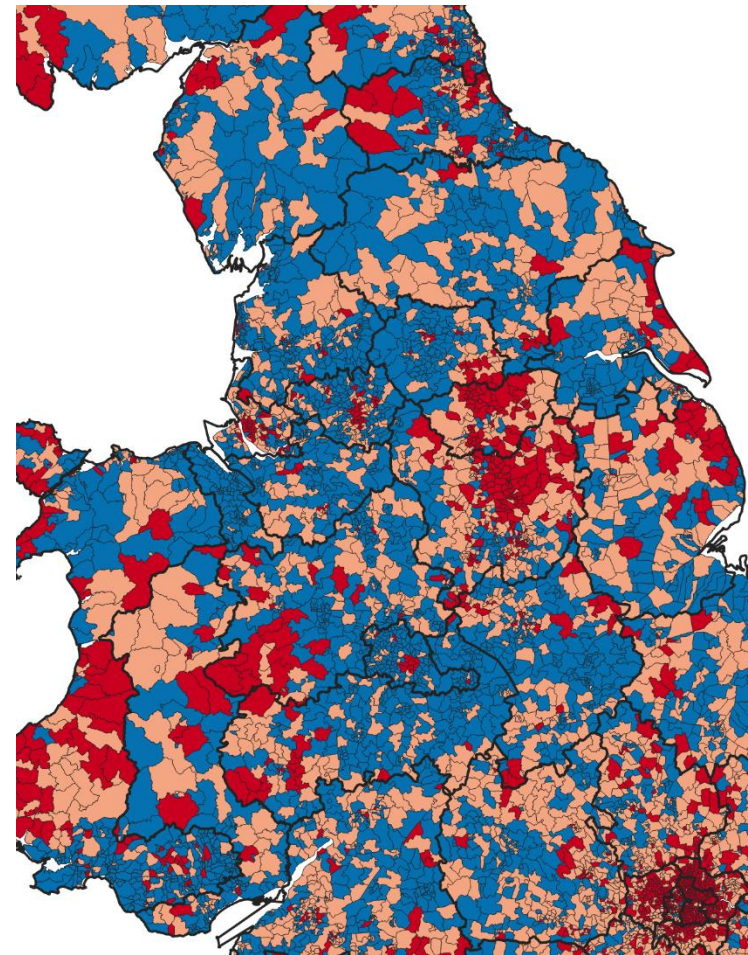


- **1971 to 81 change in employment** (in percentage points), zoomed in to England
- **Unemployment goes up *almost everywhere*** (apart from occasional **Blue zones**: only places in UK where employment grew 71-81)
- **Red zones**: 1/5 of wards *worst affected (largest ppt drop)*
- A band right across North (plus S Wales, Midlands, London, NE, Glasgow off edge of map)



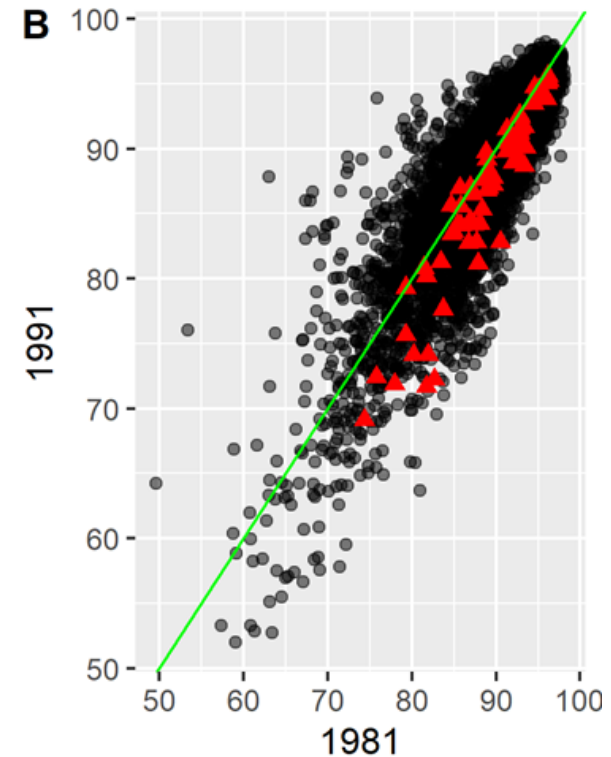
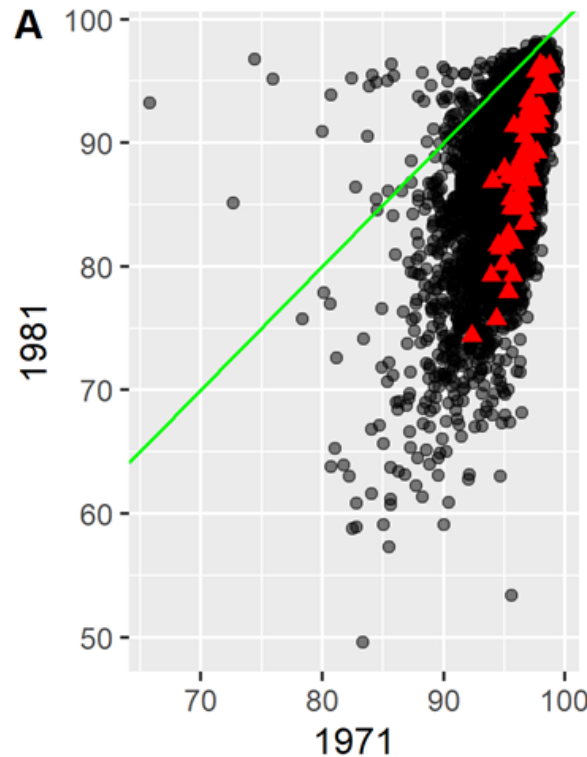


- **1981 to 91** ppt change in employment
- As in last map, **blue zones** are where employment **grew** – bounceback evident all across England/Wales...
- ... but other places *continue to see employment levels drop*
- **SY / Derbyshire** – large clusters in **worst-affected fifth** again
- Plus **lighter colour**: jobs still being lost here too (quite a concentration around SY)



# “Scarring”?

- Idea from Rice/Venables 'scarring' paper\* (with our more granular geogs)
- From work with Jay Emery + Gwilym Pryce
- Two plots show same data as two maps: **employment change** 71-81 and 81-91 on opposing axes
- Anything below **green line** had **higher employment** in earlier Census
- **Huge structural upheaval** from 71-81. **Sheffield wards in red**: 1971 all had 90%+ employment. Some places drop ~15-20ppt.
- Bounceback '81-'91 but Sheffield still seeing employment drop (right of line) – some very substantial (~10ppt)



Employment percentages per 1991 electoral ward in UK. Earlier census on the x axis. Subsequent census on the y axis. Sheffield wards in red. Wards below the line had higher employment at the earlier census.

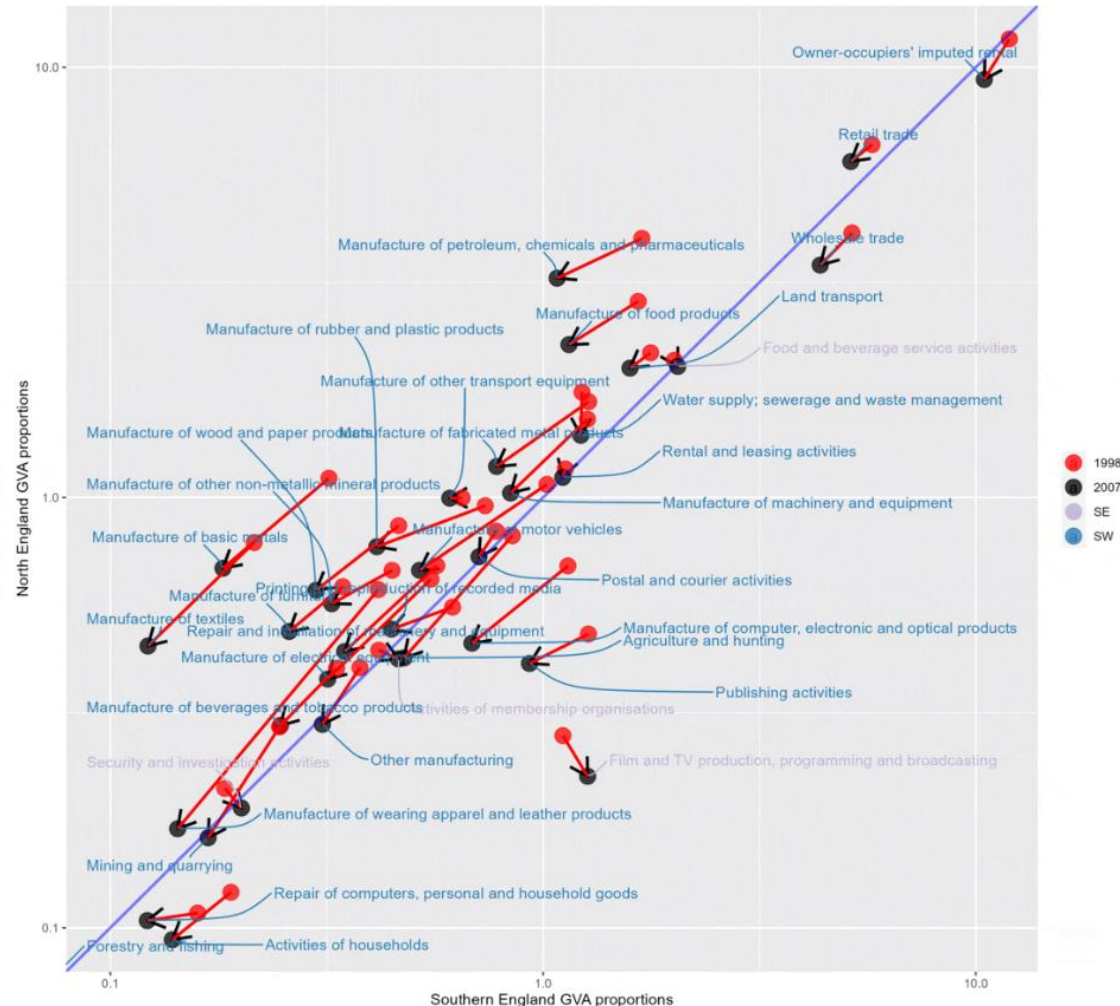
- That **1971-81 shock** had a **lasting effect on deprivation +employment** - shown for Sheffield/Rotherham & London here
- The “shock deciles” put all wards into a decile based on **how negative impact of 71-81 shock was** on employment levels
- Wards in decile 1 (**red**) were the ten percent worst affected **nationally**, decile 2 (**green**) the second worst affected
- Lower on y axis = **more deprived (IMD 2019)**
- Lower on x axis = **worse employment in 2011**
- 71/81 worst affected – in present day have worst employment / deprivation





## What happened to UK North vs South economy between 1998-2007?

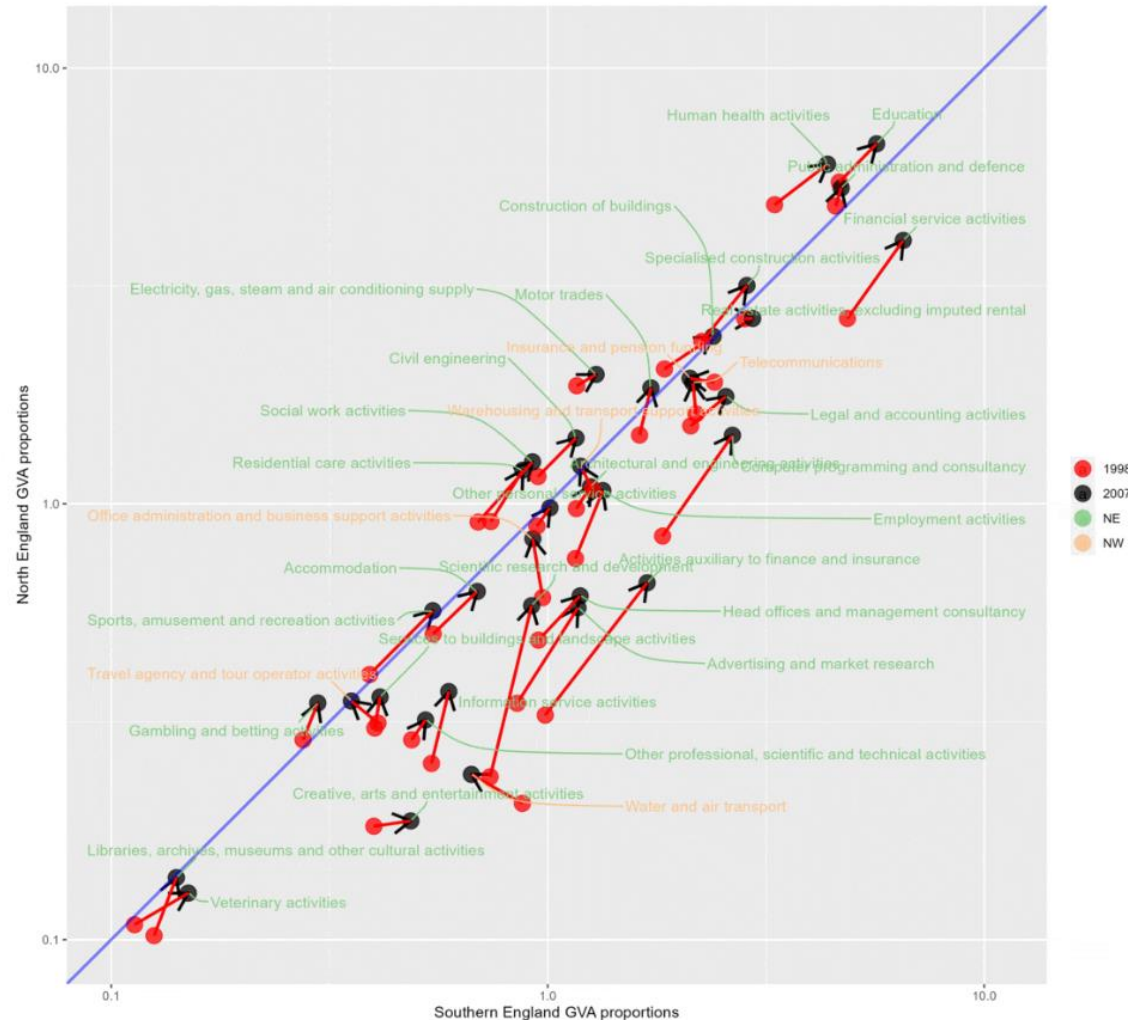
- Here we have **economic sectors** as percentage of Northern economy (y axis) vs **South** (x axis) (both log scale)
- **Arrows point to change over time: 1998 to 2007**
- Showing *just*\* sectors that **shrank as a proportion of UK economy** (going 'SW')
- To left of **diagonal line** = sector more concentrated in North
- So: *Contracting* sectors were more heavily concentrated in the North (& mostly manufacturing)
- \* Includes the few sectors that shrank in North while growing in South ('SE') – very few because structural change was same across the board ...
- But making this point, same as next slide: structural change was UK-wide – but geographical impact varied.



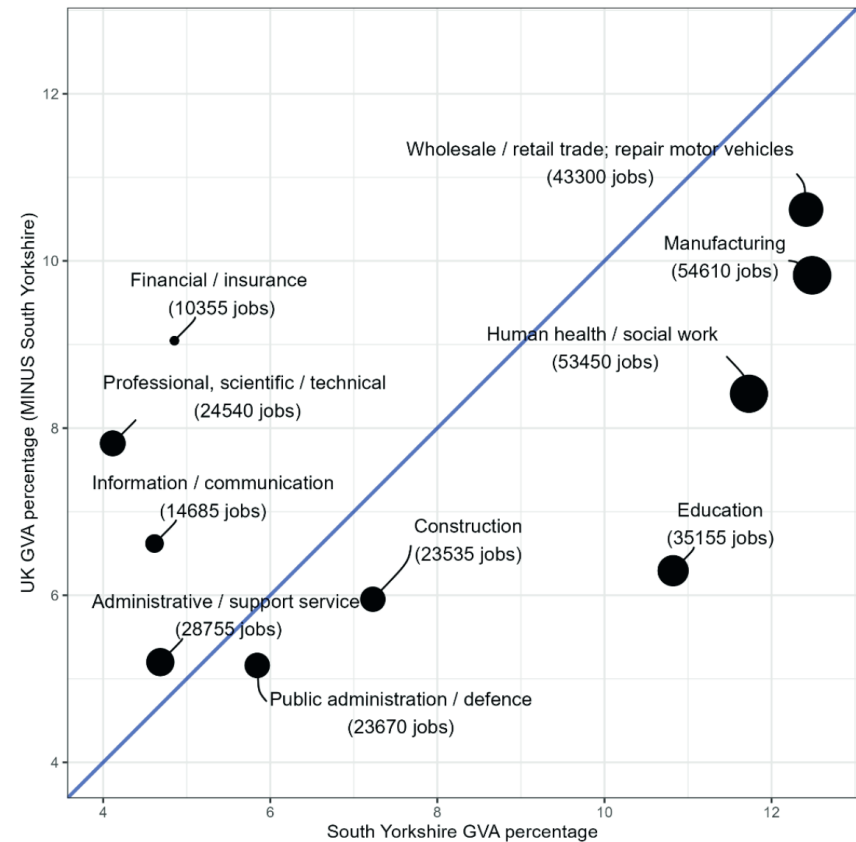


## UK North vs South economy 1998 to 2007

- Looking at the **opposite direction** →
- This is sectors that **expanded across the UK** – those were **largely concentrated in the South** (right of **diag line**)
- And largely service based
- Again – these sectors present everywhere, but **heavier presence in South**
- Telling same story of **structural change** seen in earlier Census data

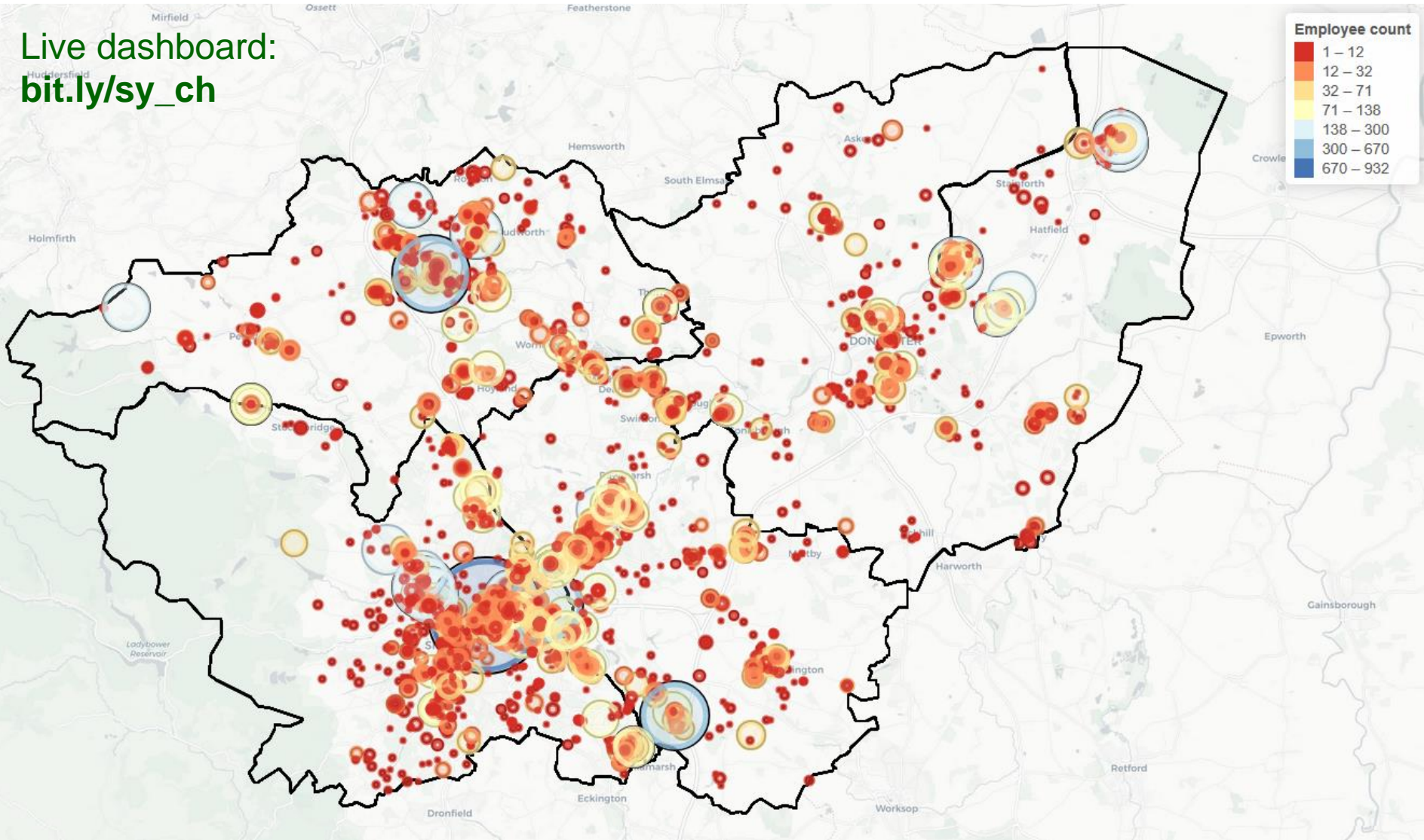


- **Most recent part of story, starting with:**
- **NOW!\*** South Yorkshire broad sector breakdown
- Right of line – more concentrated in SY than UK as a whole (minus SY)
- Despite structural shifts, manufacturing still important
- Digging into that a bit more →



\* Actually, 2021 (2022 is latest available data). This version used for SYMCA growth plan support

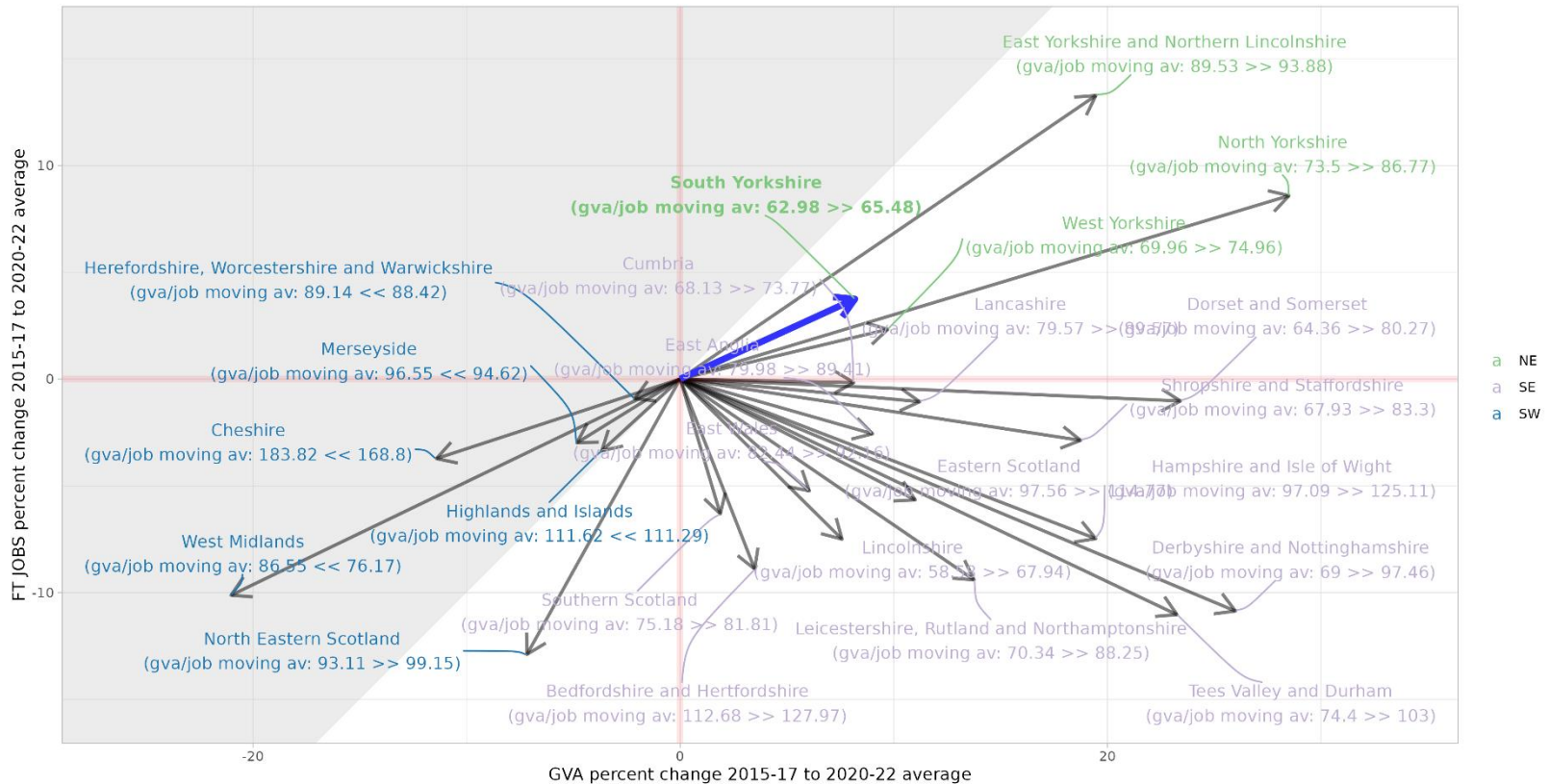
Live dashboard:  
[bit.ly/sy\\_ch](https://bit.ly/sy_ch)



Manufacturing firms with 1+ employees: ~27700 employees in 2221 firms



# Most recent part of story: 2015 to 2022 – structural change in same direction?

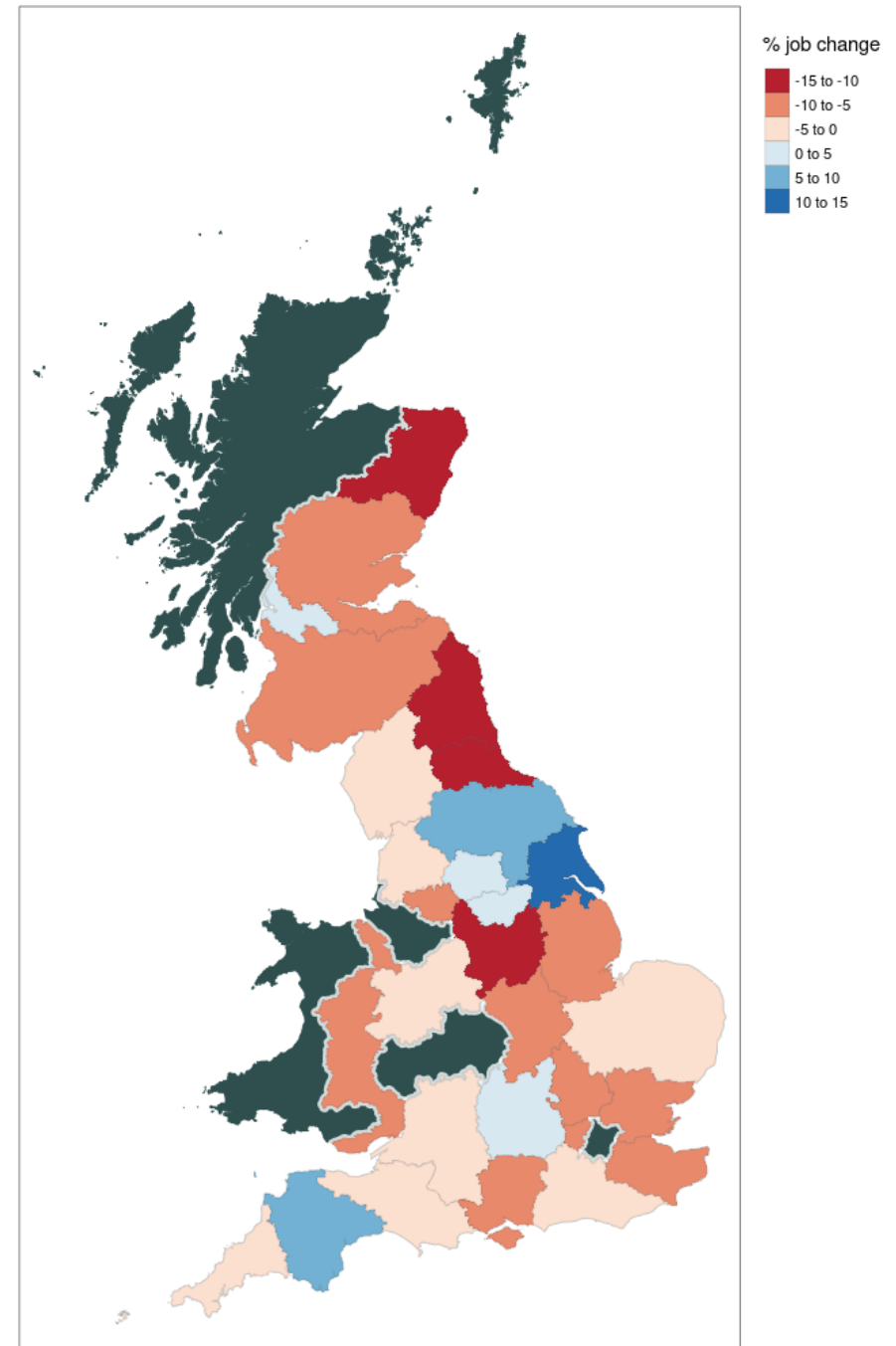


- **MANUFACTURING PRODUCTIVITY** via % change 15/17 to 20/22 GVA and jobs\*
- (For places where manufacturing > 10% of local economy 2020-22 av)
- Total GVA is of course a function of job numbers... but this shows: **grey diagonal half** = productivity (gva/job) **decreased**
- Arrows pointing **down in bottom right quadrant (+ ½ of left)** = job numbers **dropped** while productivity went **up**
- Arrows pointing **up in top right quadrant**: **productivity AND job numbers increased** in manufacturing

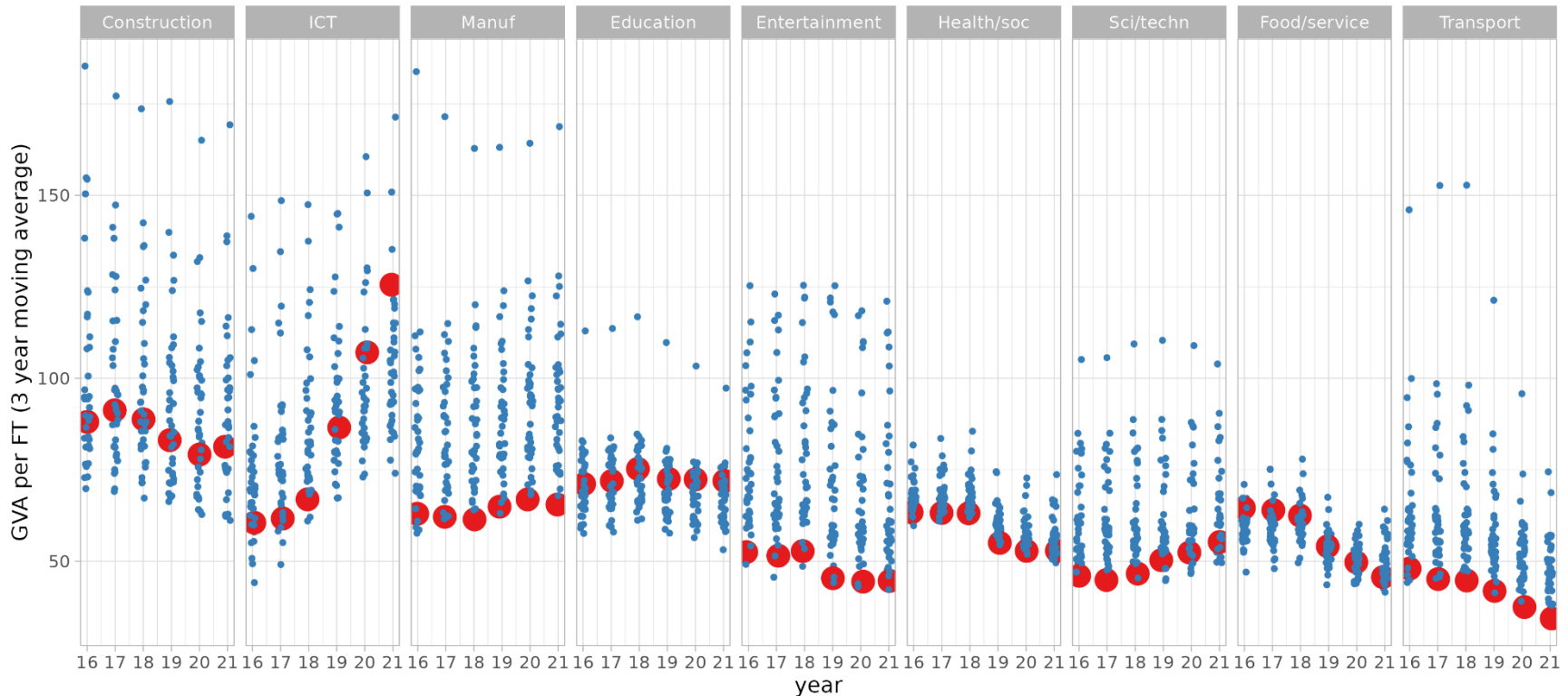
\* 3 year averages at each end to smooth



- Taken from same data →
- This map shows **all those places where manuf GVA grew** (& only places where 10%+ of GVA comes from manufacturing)
- AND compares where **jobs grew** (blues) vs **shrank** (reds)
- Y&H cluster **growing both GVA and jobs**
- Most other places – increasing productivity, dropping job numbers
- **But...**

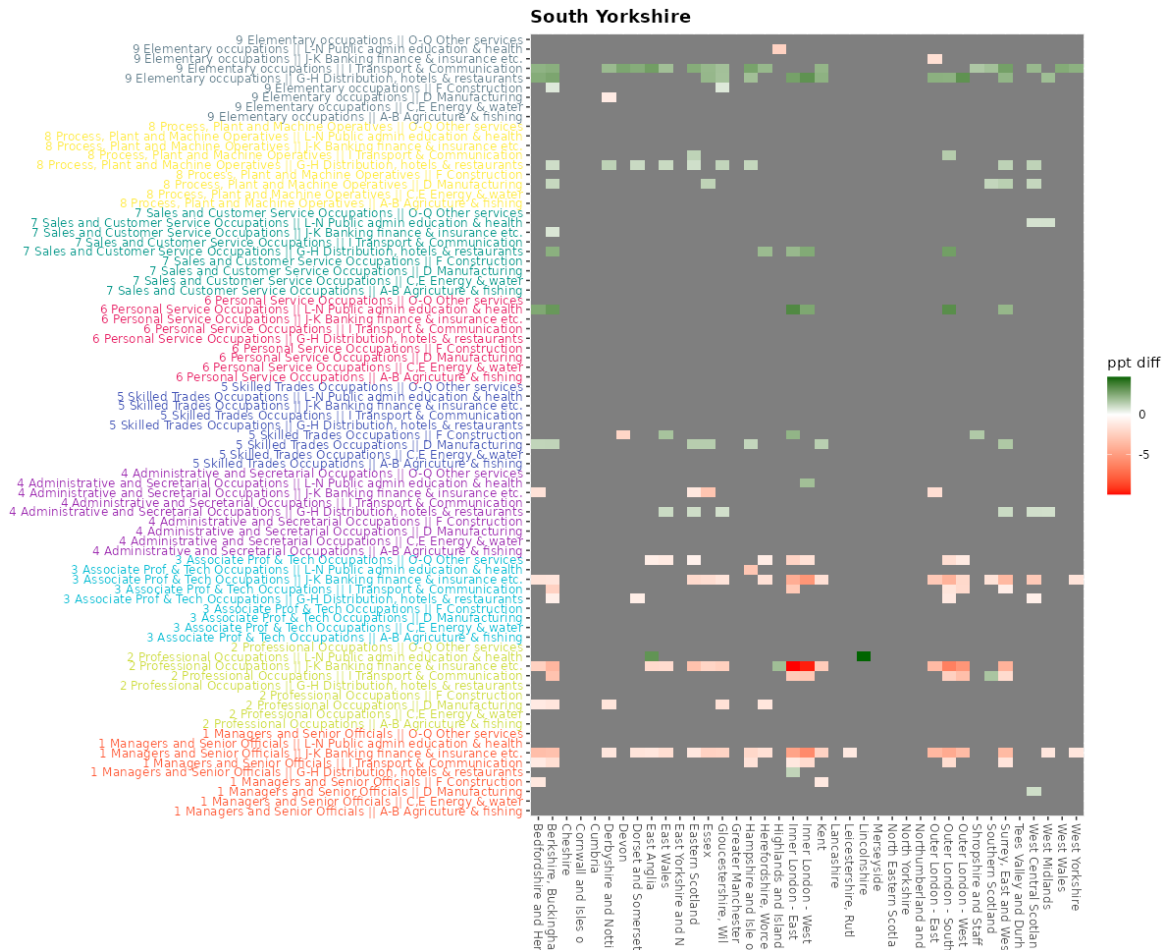


# SOUTH YORKSHIRE Productivity Over time / compared to rest of UK



- GVA per FT job / 3 year moving av / South Yorkshire highlighted in **RED** against all other ITL2s
- Headlines: SY average manufacturing productivity **stuck down bottom of rankings** (another scarring legacy?)
- **ICT rapid climb** (against national growth) is **stand out** in all results for SY
- Education is a SY productivity success story: rising, relative to UK drops

- **And a skills issue?**
- Is SY history visible in its modern sector/skills profile?
- This statistically separates proportions for each skill/sector combo – only coloured red/green are significantly different in SY from other places
- Top of plot is less skilled occupations, bottom highest skilled
- SY: green shows up elementary transport / services, some skilled manuf trades, but lower props for higher skilled
- Low skill equilibrium?\*



\* Anne Green, "Low skill traps in sectors and geographies: underlying factors and means of escape". Uni of Warwick 2016

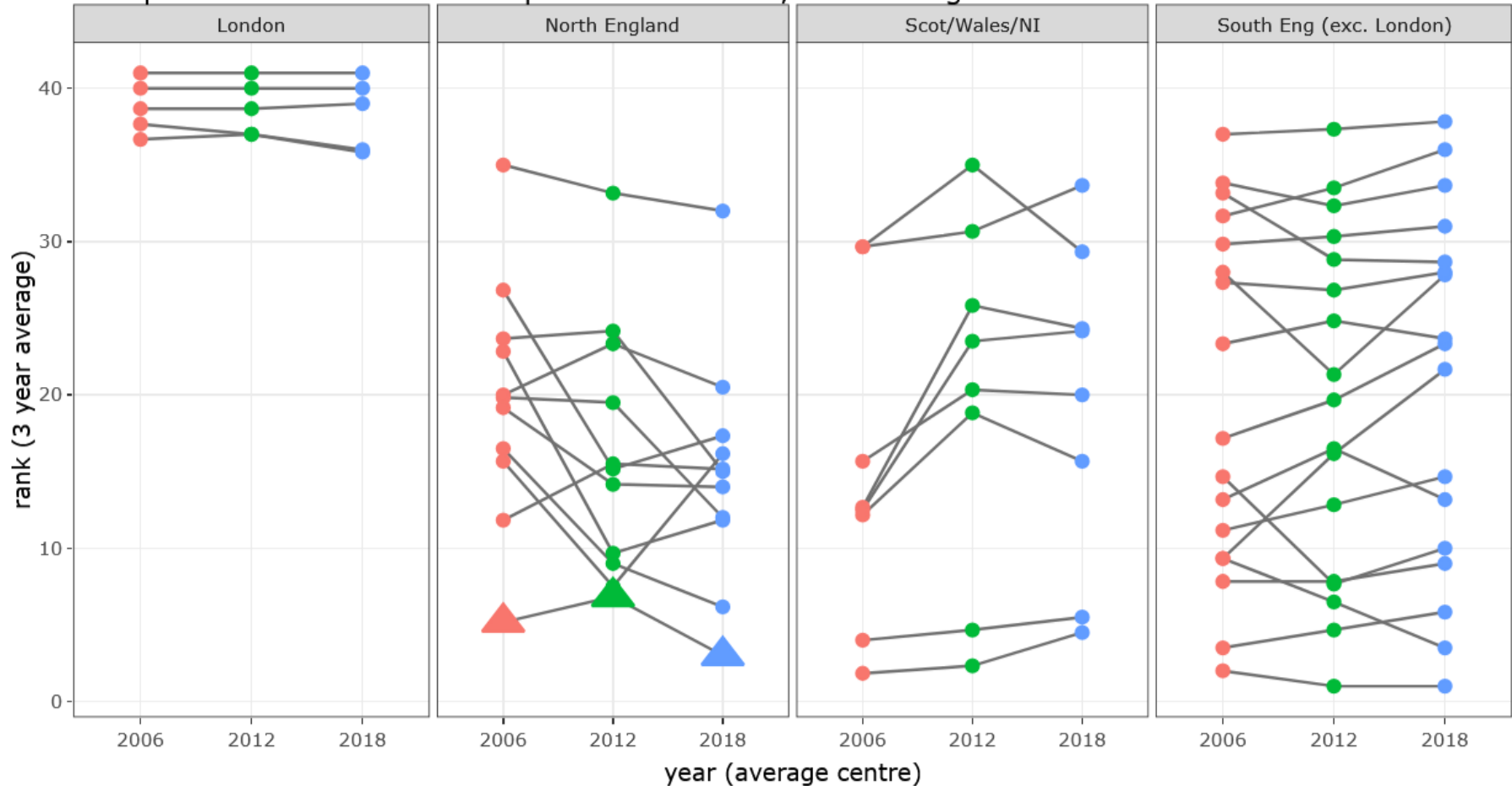




**A couple of “The North and South  
Yorkshire are not monolithic”  
slides...**



GVA per hour: ITL2 zones rank position over time, SY is triangle.



- North vs South places' positions – much overlap
- Point: diversity across the UK, **story not black and white** “South more productive”
- **Though SY remains very low** (closest to South West and Lincolnshire)



# And the future...?





And the future...?



# Steering SY into the future using more meaningful data

- **On one hand:** much data (like used here) is top down and **full of blind spots**
- **J.C.Scottian issue:** if the data we use is our map to the future – those maps “transform as well as describe”. *How do we make better maps?*
- 1. **Make existing data more relevant to regions:** e.g. econ output data like GVA is designed for national insight; needs shaping to be more useful for devolved regions (and build capacity to use it across all regional bodies)
- 2. Yes, we still need good national econ data to know where we’re going but →
  - **Data alone isn’t enough** – we need **dialogue between data and ground truth (both within-region and region <> national)** -->
  - **We know our regions, we can use that**
  - Examples like Liverpool Civic Data Coop / Sheffield work on neighbourhood mapping
  - Let’s call this **data action** after Sarah Williams’ book of same name\*.

## Missed out big chunks... e.g.

- Foundational economy, theories “beyond GDP” (CRESR work on this plugging into regional policy)
- Net zero economy – changes everything, data/evidence very slow to catch up with that
- Another excellent SY data-driven deep dive: the SYICB strategy-supporting “pop health needs assessment” - [bit.ly/syicbpop](https://bit.ly/syicbpop)





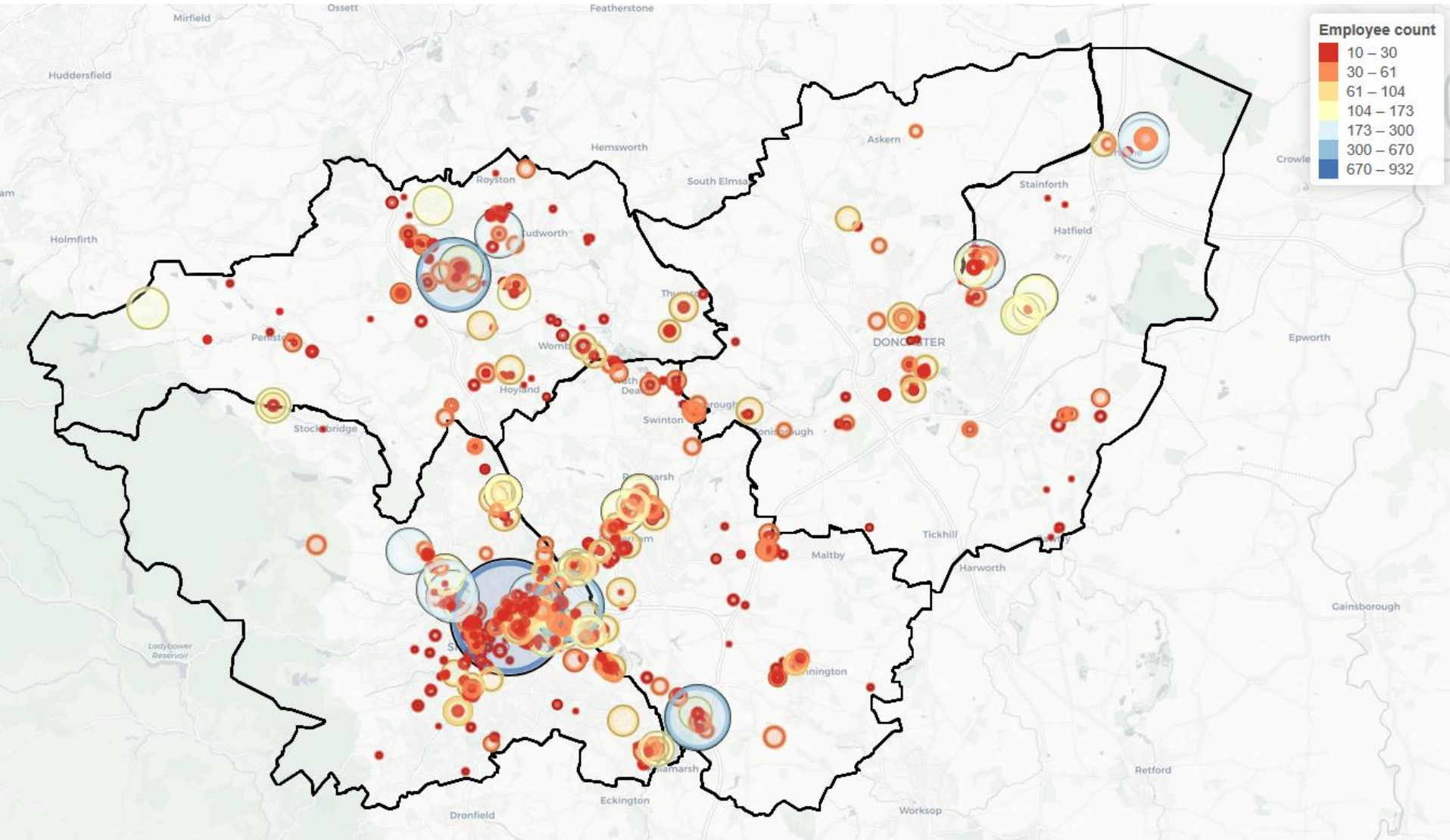
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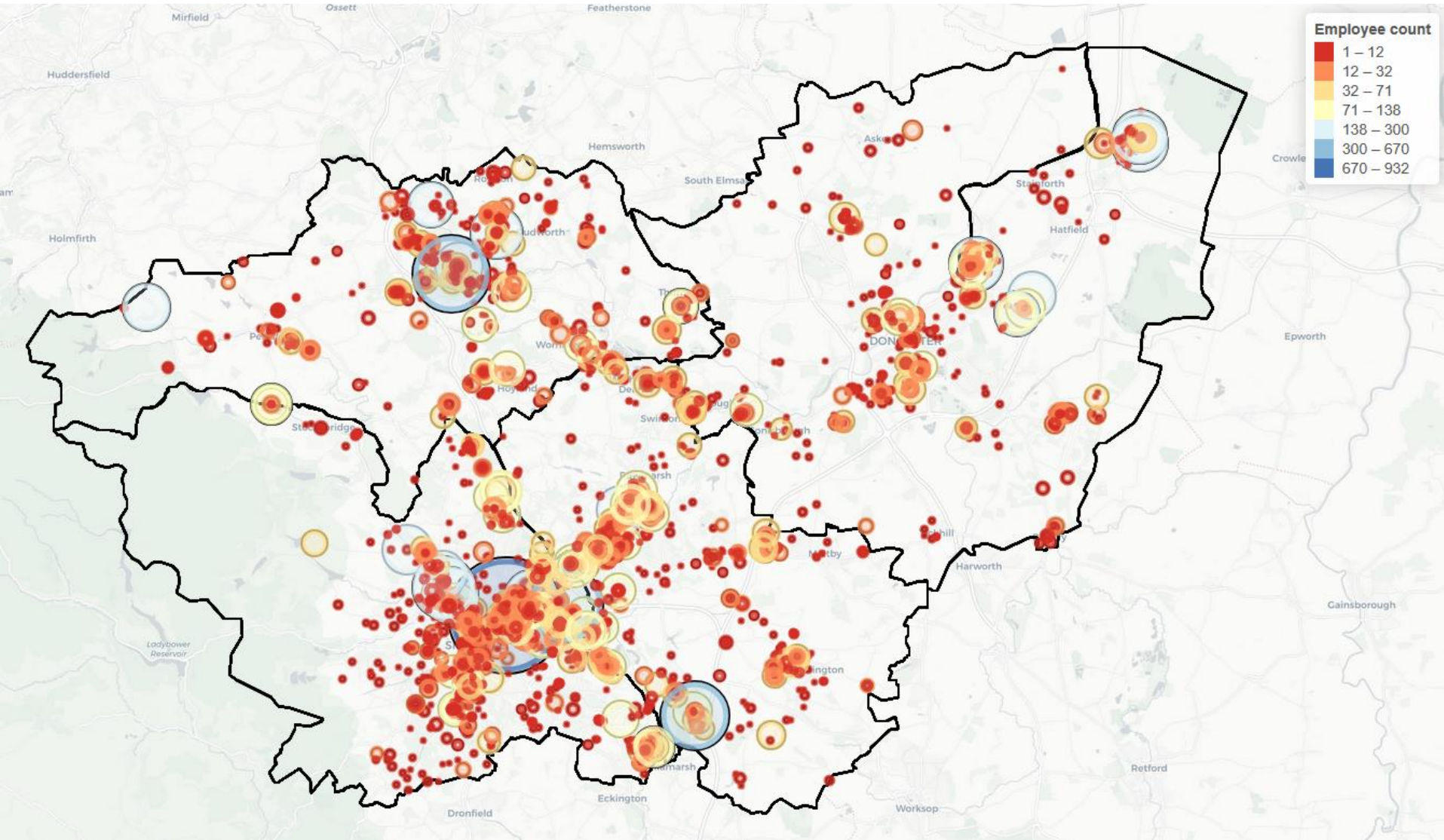
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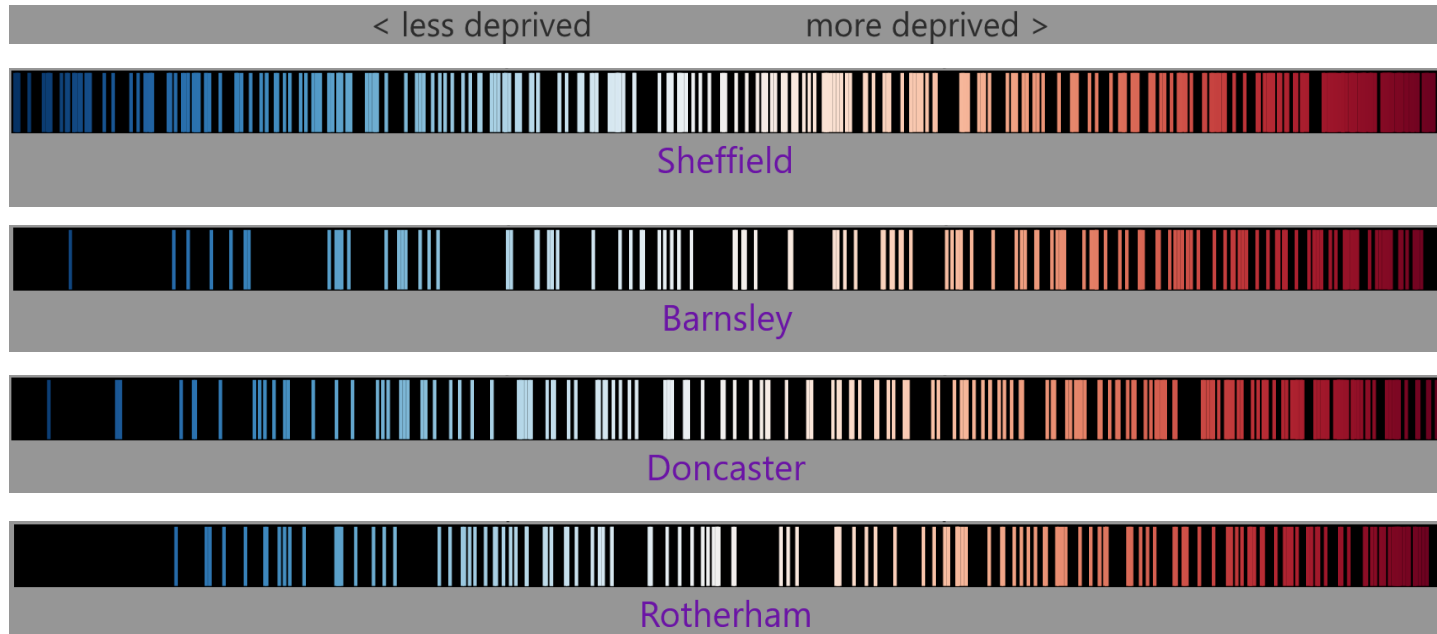


Manufacturing firms with 10+ employees: ~22600 employees in 629 firms



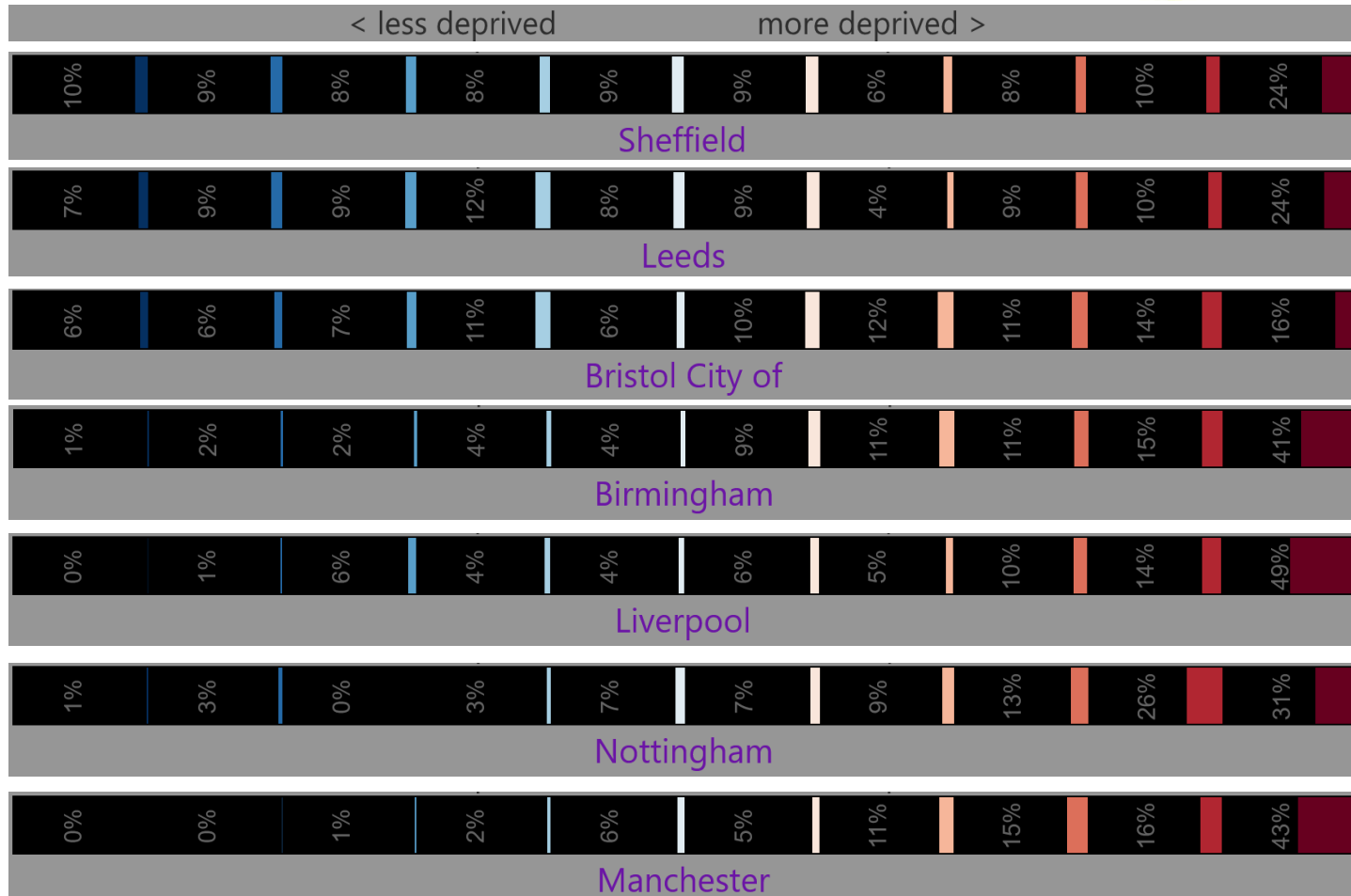


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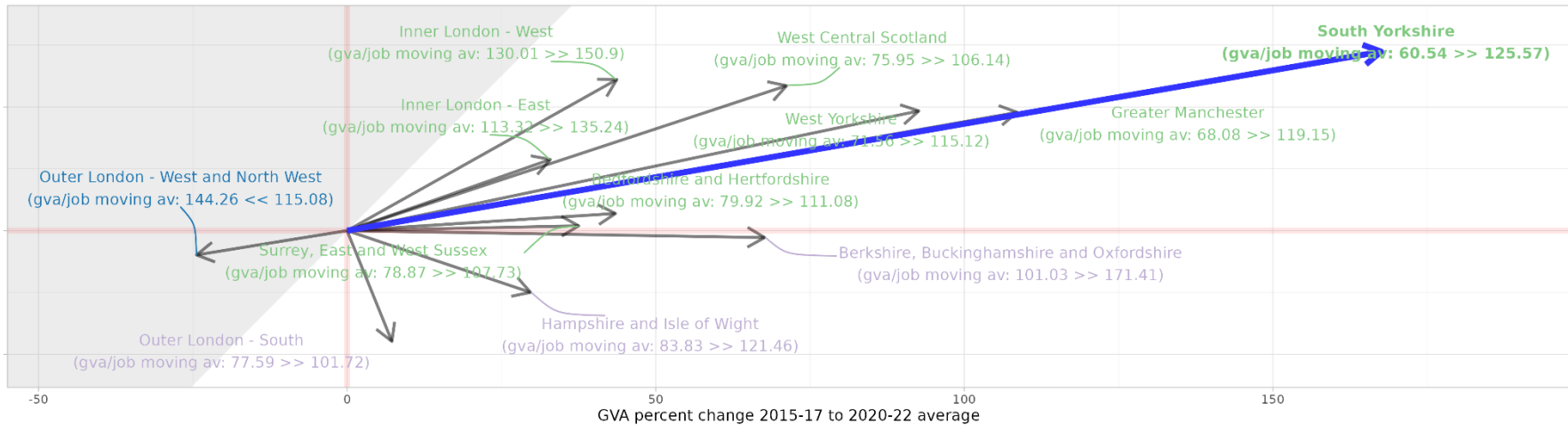








FT JOBS percent change 2015-17 to 2020-22 average

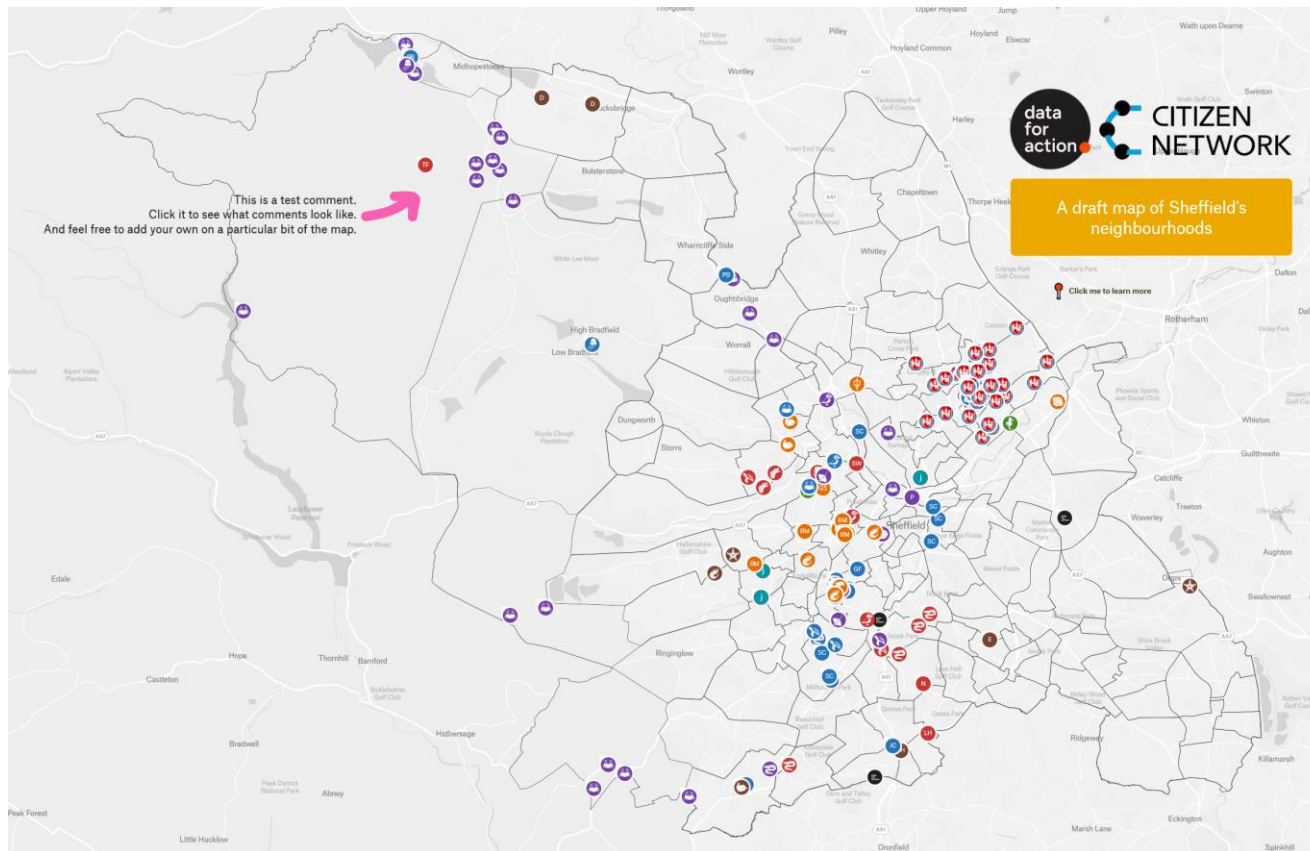


a NE  
a SE  
a SW

- **ICT % change total GVA and total jobs**
- (For ITL2 places where **ICT > 5% of local GVA 2020-22 av**)
- (Separate work on identifying which places growing more significantly than others – South Yorkshire doing well there)

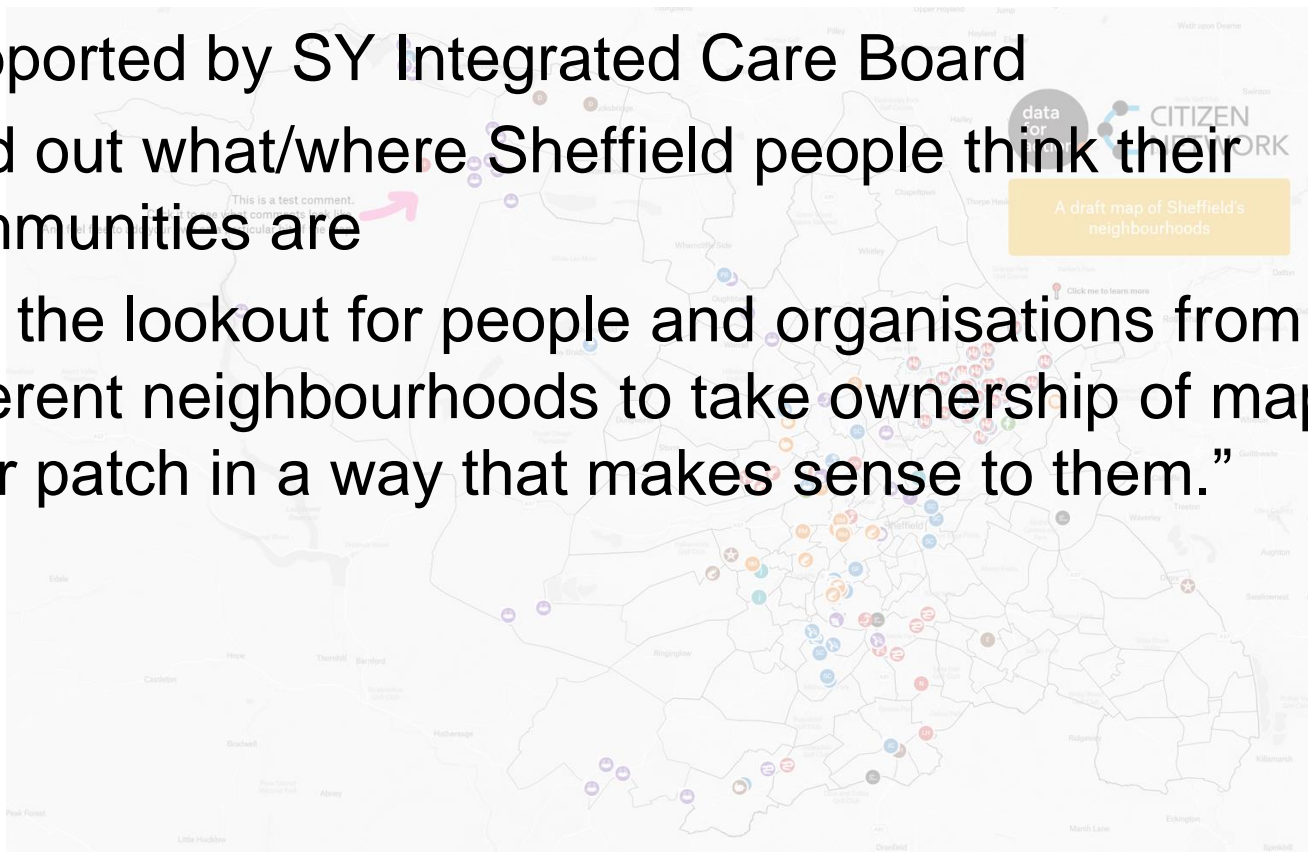


# Sheffield neighbourhood mapping

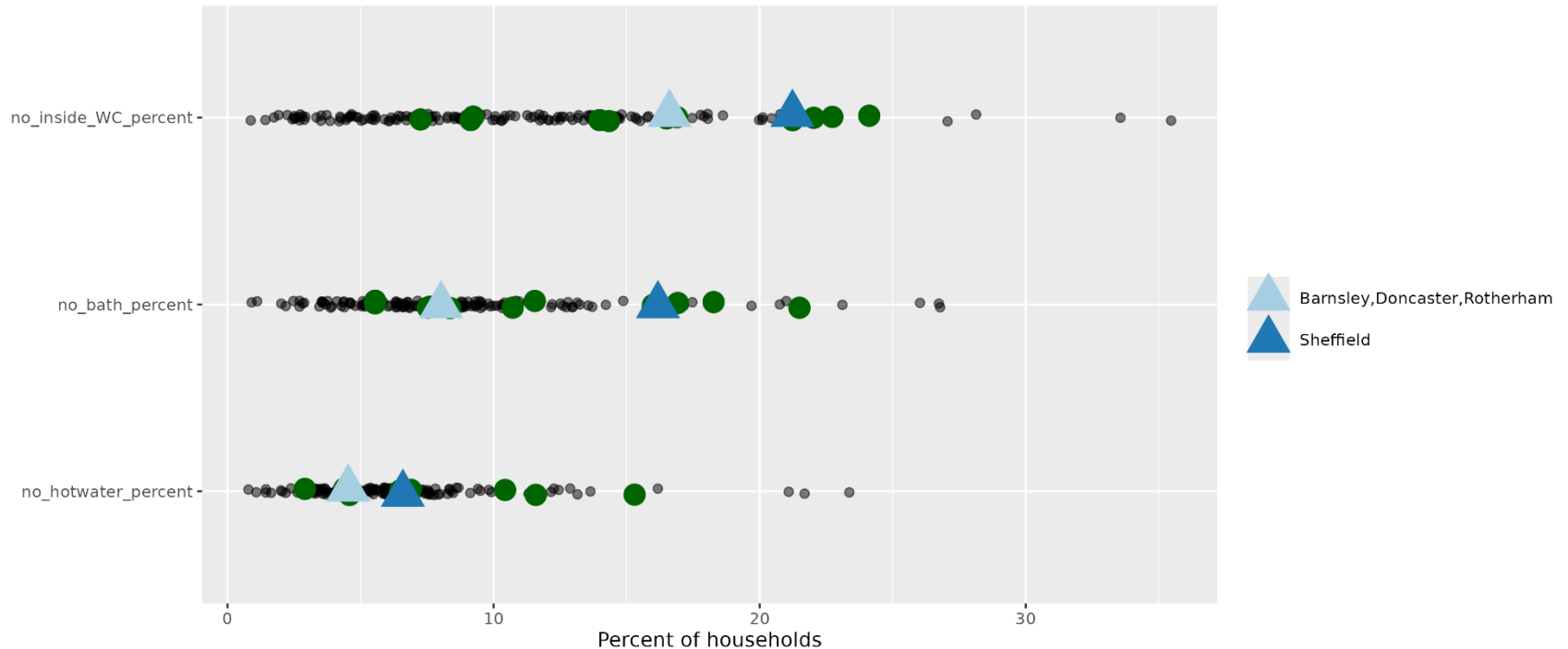


# Sheffield neighbourhood mapping

- Supported by SY Integrated Care Board
- Find out what/where Sheffield people think their communities are
- “On the lookout for people and organisations from different neighbourhoods to take ownership of mapping their patch in a way that makes sense to them.”







- Putting that in national context →
- 1971: Percent of households with no inside WC / no bath / no hot water
- All ITL3 zones; 'core cities' in green
- **Sheffield** v **Barnsley, Doncaster, Rotherham** overlaid (triangles)
- So high on some measures of housing quality 'deprivation' but not all

