Urban economies and urban inequalities

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Three takes

- **Geographic / radical political economy** (Harvey, Massey): rich, theory-driven accounts of modes of spatial capitalism

    – Phases of essentially chaotic accumulation, spatial inequalities

- **Urban economists** (Roback, Glaeser): incorporates Neoclassical + Keynesian elements

    – Uneven development and within-place inequalities
    – Long-run, a particular form of convergence: spatial equilibrium
    – Recent wave of work challenging convergence

- **Economic geographers** (Jacobs, Storper): econ + institutions, political economy, non-market processes

    – From econ-adjacent to evolutionary frameworks

What I'll talk about

Part 1: Why are spatial disparities persistent?

- Build a picture using concepts and tools from first wave of urban economics
- Uneven development; big nominal disparities between places
- BUT long-term convergence to 'spatial equilibrium'

Part 2: challenges to convergence

- Will convergence happen at all?
- Review second wave research on job polarisation; housing market failure; lack of mobility
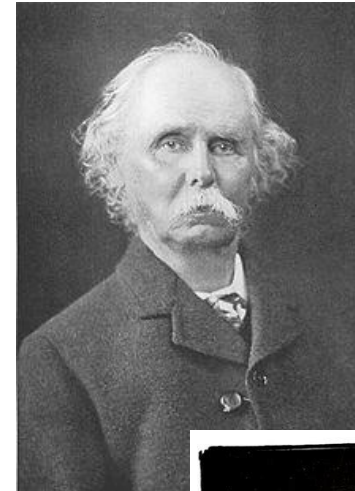
Part 3: policy responses

Part 1: urban economics and spatial disparities

Agglomeration

- **Key idea 1: cities help firms and workers become more productive**. 'Agglomeration economies' make this happen

- Duranton and Puga (2020) divide these into:

    – **Sharing** – benefits of shared infrastructure, e.g. public transport
    – **Matching** – deep labour markets help workers and firms find the best job / people at any point
    – **Learning** – generating new ideas, learning from others

- **Production side**: cities help people connect and maintain economic links; observe, learn from each other

- **Consumption side**: urban scale supports a rich set of products, services, experiences

Clusters

- **Colocation, interaction and collaboration by firms in cities** fosters innovation, growth (Marshall 1918)

- In the jargon, 'industrial production districts' or 'milieux' in cities

  - **Clusters may involve firms in the same industry** (Marshall)

  - **… or involve knowledge spillovers across industry** (Jacobs, 1969)
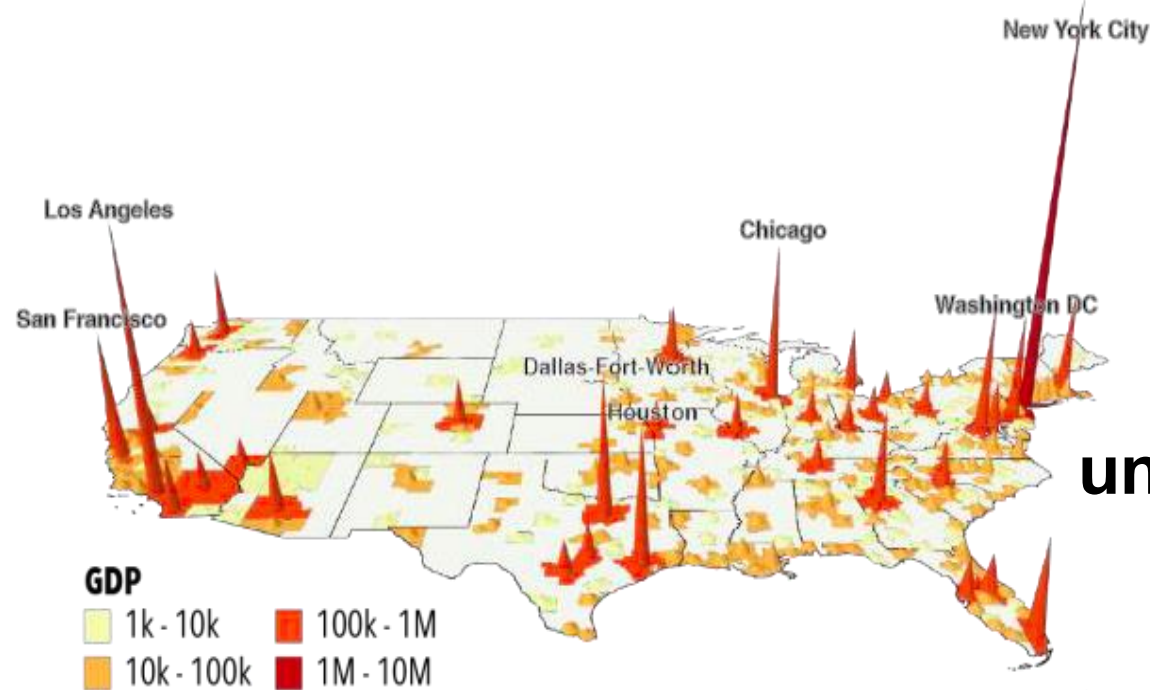
The urban wage premium

- **Key idea 2: there is an 'urban wage premium' for workers in cities**, compared to similar people outside cities

  - Agglomeration economies ~> productivity ~> wages
  - More skilled / experienced / higher ability ~> bigger wage premium
  - The wage premium stays with you after you leave a city
    Glaeser and Maré 2001, Baum-Snow and Pavan 2012, D'Costa and Overman 2014, De La Roca and Puga 2016, Card et al 2025

- This helps explain spatial inequality *between cities* (bigger vs. smaller places) and *within cities* (how experienced you are)

Push-pull forces

- **Key idea 3 = push-pull dynamic in urban systems**

- **Agglomeration is self-reinforcing,** pulling productive people and firms in, which in turn amplifies place effects

  - This means that **some cities will grow faster than others**
  - Disparities come from **mix of place + people + industry effects**
  - Card et al 2025: around 50% of US wage gaps across cities come from worker sorting, the rest from agglomeration; limited role of industry mix

- **At the same time, growing cities have 'diseconomies',** which act to push people and firms out

  - **More congestion, more pollution, higher rents, higher cost of living**
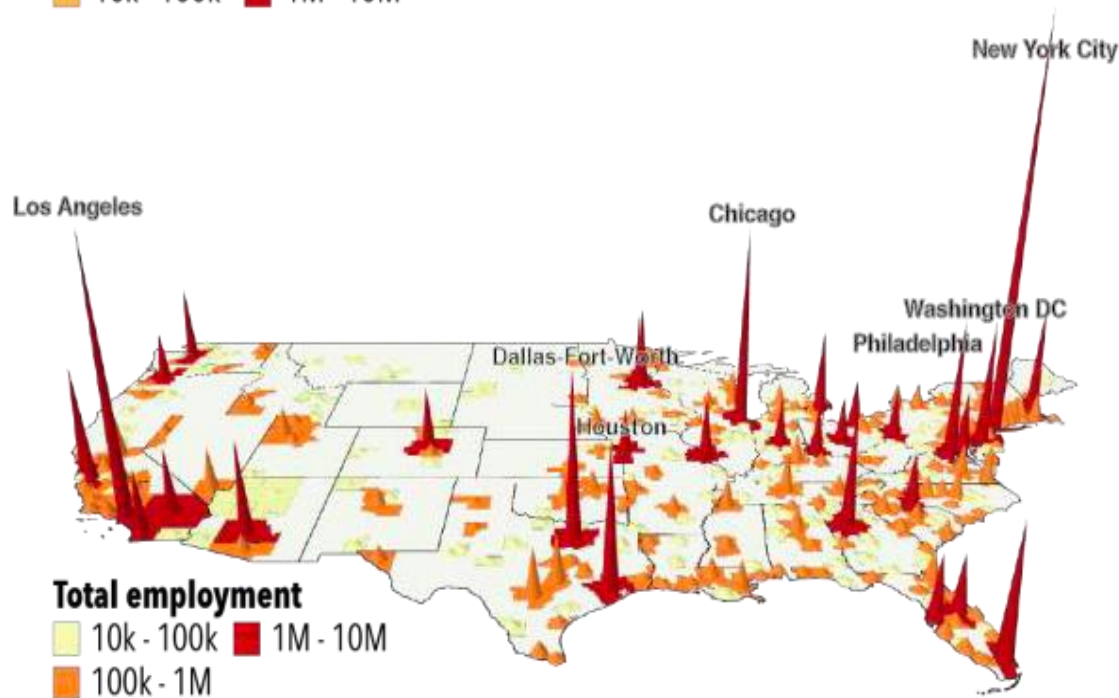 - When do agglomeration diseconomies > economies?

Spatial equilibrium

- **Urban systems characterised by push-pull dynamics**

- Urban economists argue that these forces can organise into **'spatial equilibrium'** (Glaeser 2011, Roback 1982)

  - **Firms and workers can 'sort' into 'optimal' locations,** given their skills, needs and preferences
  - Popular cities have **higher wages *and* living costs**; unpopular places have lower wages and costs
  - **These wage / cost differences flatten out**, so that 'real incomes' are ~ equal across locations

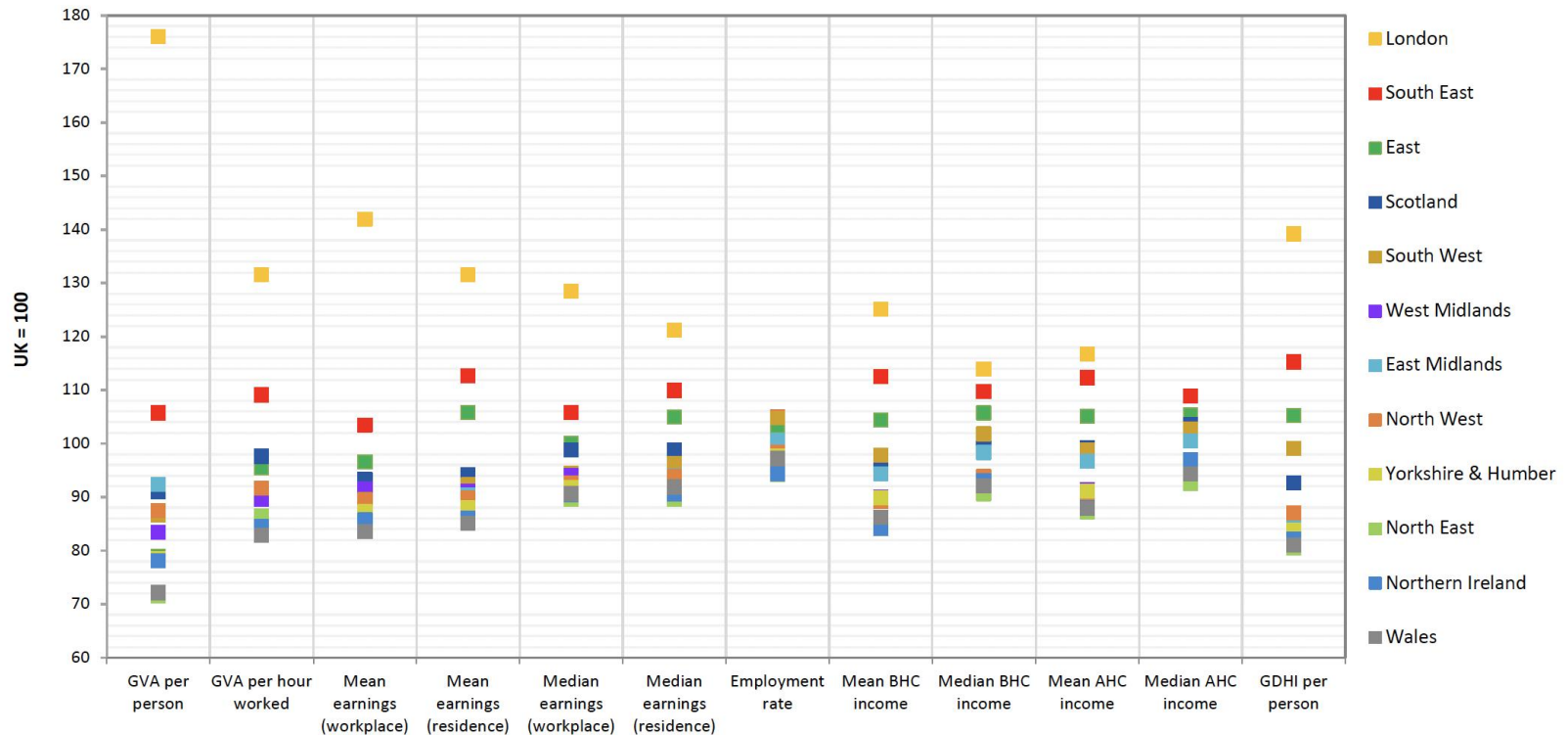**Firm and worker sorting leads to uneven development**

GDP and employment are highly concentrated in a few urban cores

More complex activities, and more skilled workers cluster into these places

Balland et al (2020)

10

Higher GDP => wages => living costs

Note: Earnings data are from 2019 and are for full-time workers. GVA per person, GVA per hour worked and GDHI data are from 2018, as are employment rate data, which are for those aged 16–64. AHC and BHC incomes are the average for 2016–17, 2017–18 and 2018–19. The patterns would be the same if shown for the latest year for which all variables are available (i.e. 2018).
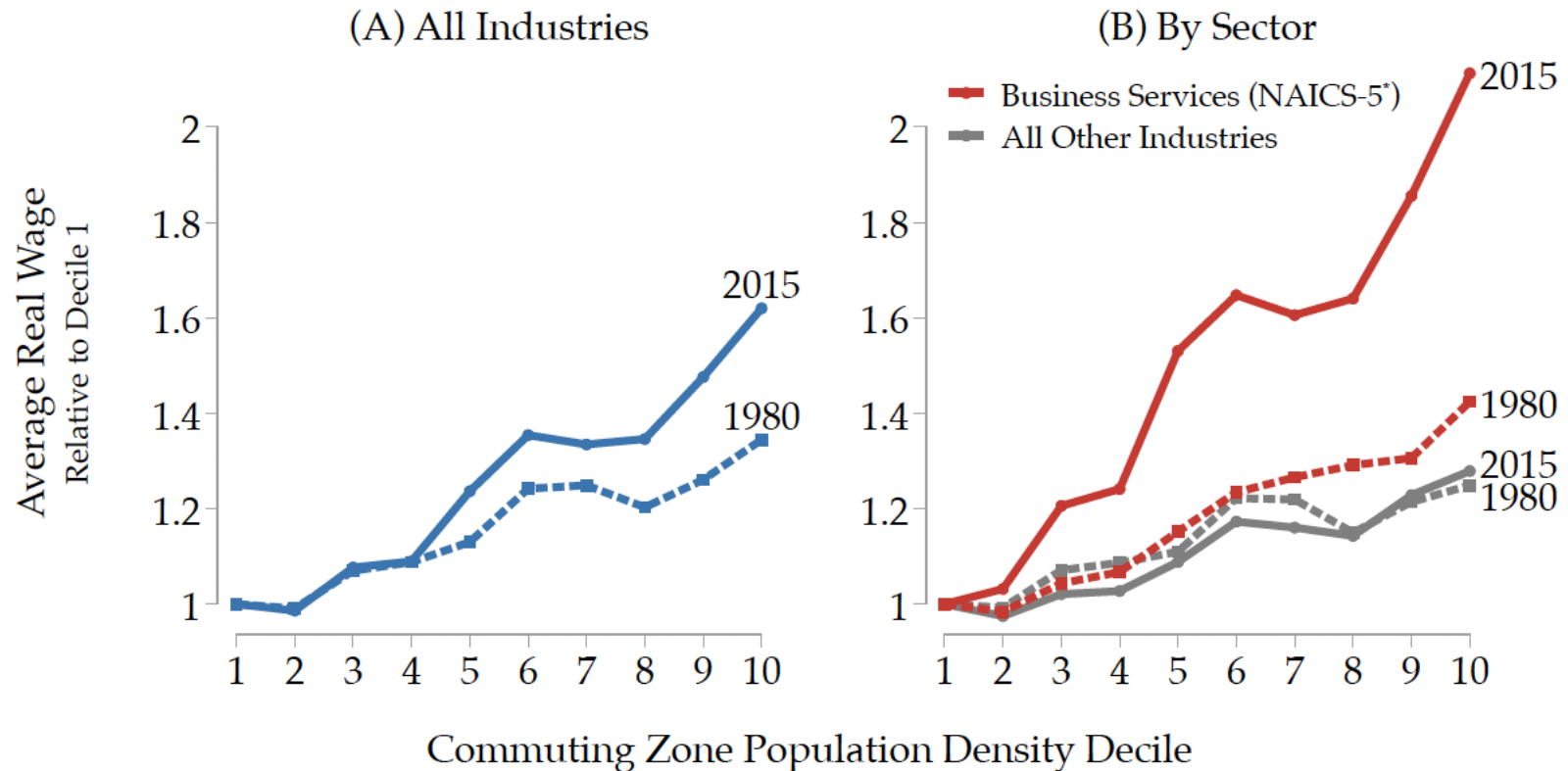
Agrawal and Phillips (2020)

London is very productive => its urban wage premium is higher

But London housing is very expensive. Real incomes are lower

11

Part 2: challenges to convergence

Challenges to spatial equilibrium

- **Recent work in urban economics challenges the idea that urban systems converge, in real terms, in the long run** (Fajgelbaum and Gaubert (2020)

- **The urban wage premium stops working**, at least for some
  - This drives up income disparities both *between* and *within* places

- **Housing supply fails**, esp in the most popular locations
  - Rising cost of living eats into urban wage premium …
  - … and pushes workers out of big cities / prevents others moving in

- **Limits to worker / household mobility**
  - Either from money constraints, social ties or both

Urban-biased growth

(A) All Industries

(B) By Sector

Business Services (NAICS-5*)
All Other Industries

Average Real Wage (Relative to Decile 1)

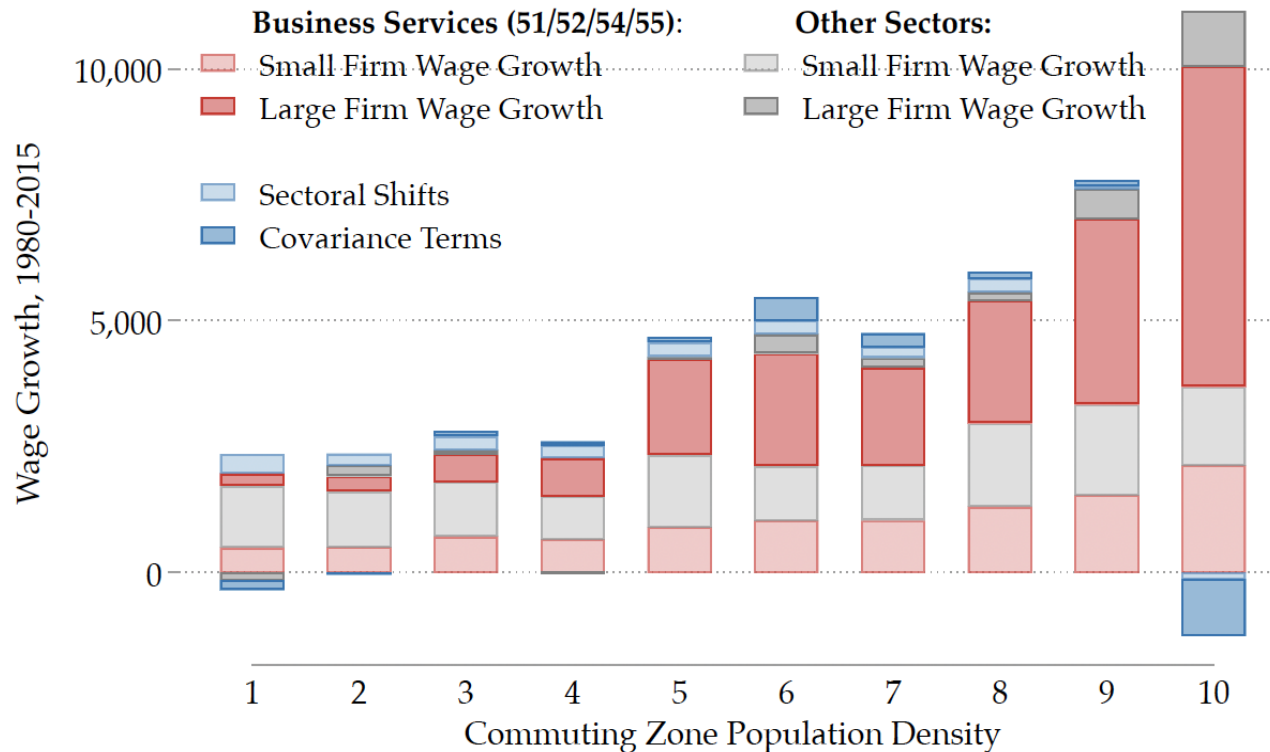Commuting Zone Population Density Decile

Eckert et al (2022).
Data from US Census Bureau Longitudinal Database. Commuting Zones popdensity measured by 1980 deciles

14

Big city, big firm-biased growth

FIGURE 8: URBAN-BIASED GROWTH AND LARGE FIRMS

Business Services (51/52/54/55):
- Small Firm Wage Growth
- Large Firm Wage Growth

Other Sectors:
- Small Firm Wage Growth
- Large Firm Wage Growth

- Sectoral Shifts
- Covariance Terms

Wage Growth, 1980-2015
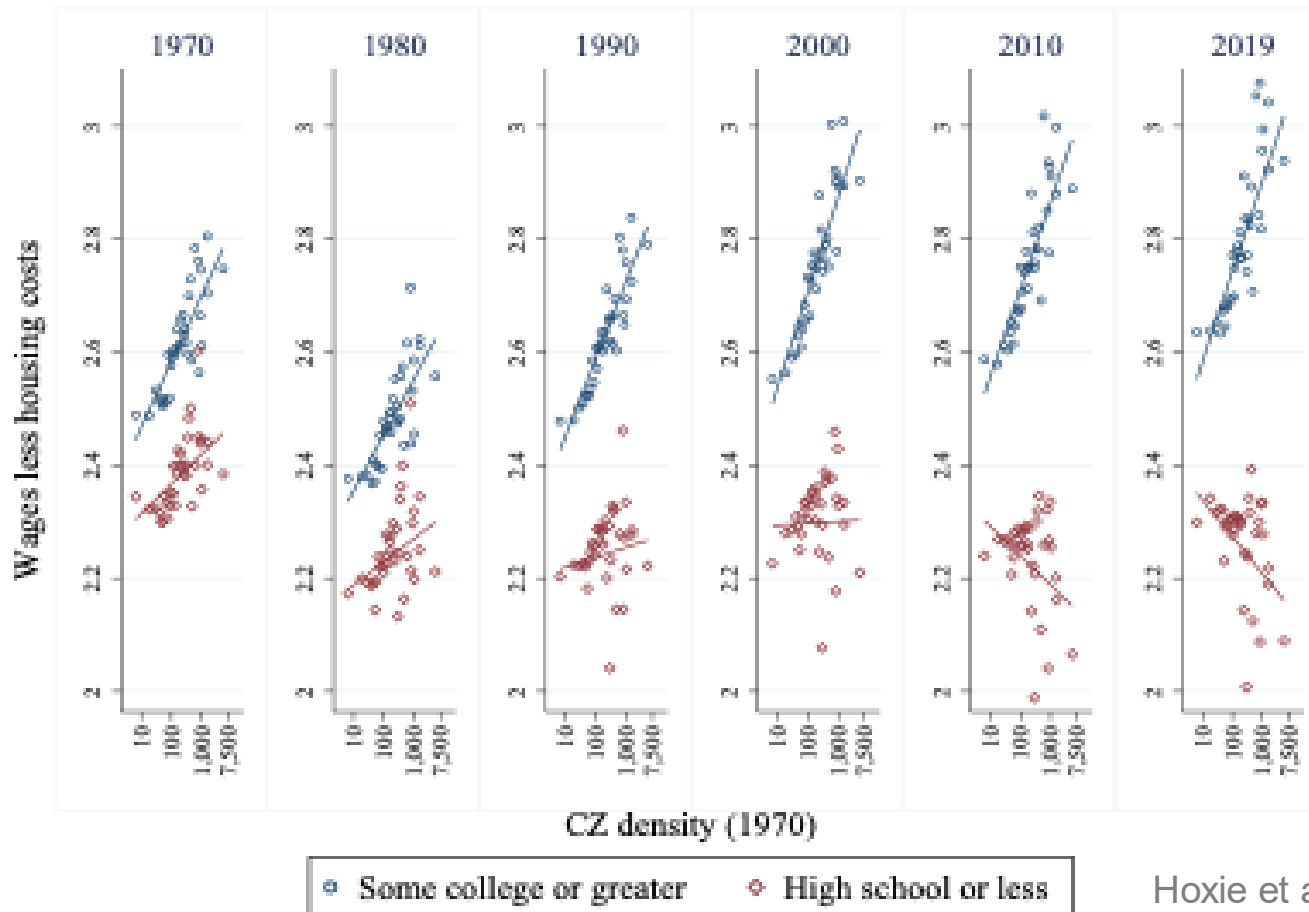
Commuting Zone Population Density

Eckert et al (2022).
Data from US Census Bureau Longitudinal Database. Commuting Zones popdensity measured by 1980 deciles. Large firms have >1,000 employees

Challenge 1: unequal cities

- **In theory, everyone earns more in bigger cities** – your urban wage premium should cushion against higher costs

- **Is this still true in practice?** Eckert et al implies no

- Hoxie et al (2023) look at real wages (income less cost of living) by skill group in US cities, between 1970 and 2015, building on key paper by Autor (2019)

  – Rising urban wage premium for graduates
  – Flattening ~> negative urban wage premium for non-graduates
  – Especially for those aged under 40, i.e. Millennials and Gen Z
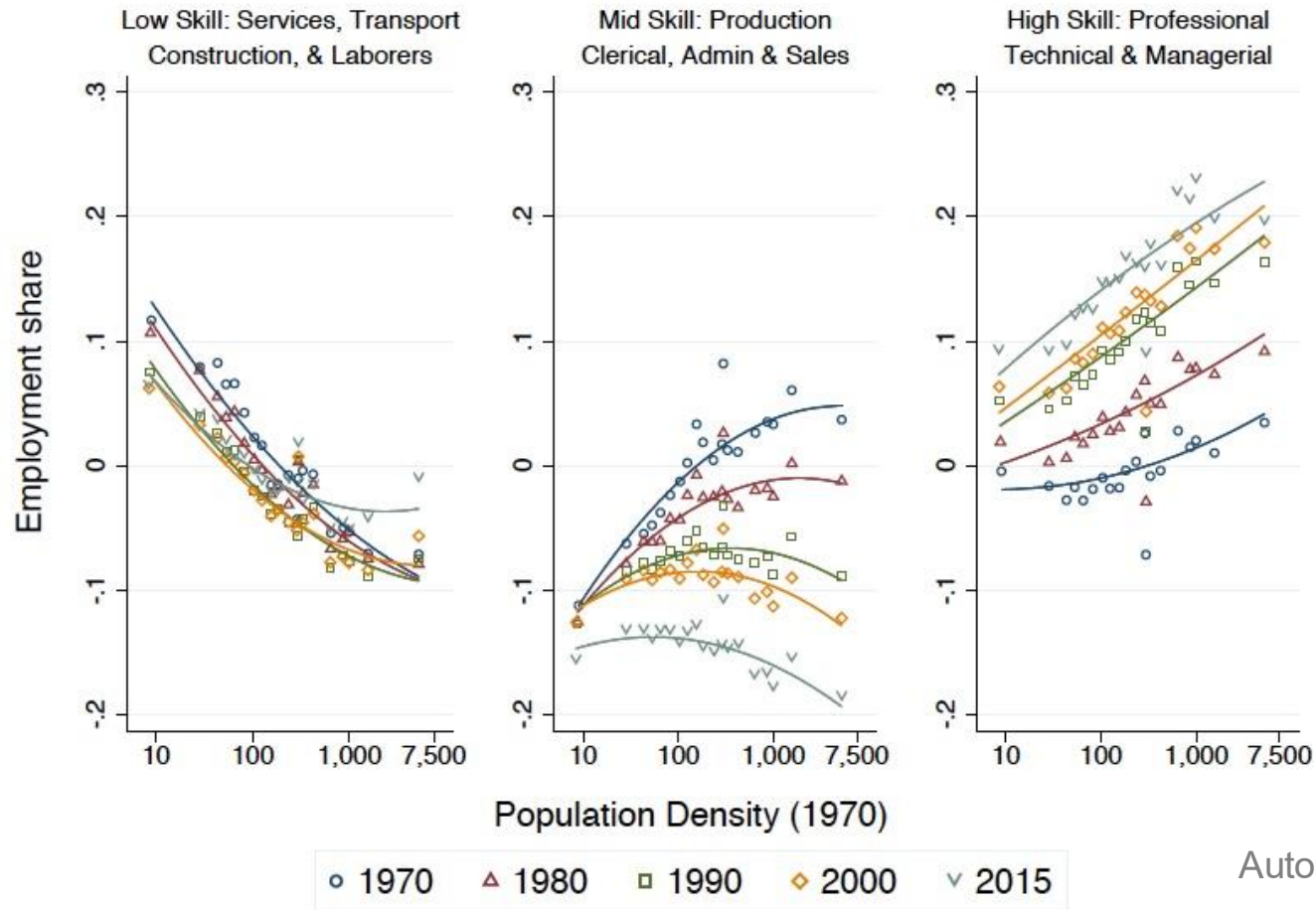
Unequal cities

Hoxie et al (2023)

Rising wage premium for college graduates (blue)

Flattening ~> negative wage premium for non-graduates (red)

What explains these shifts?

- **Autor is clear that the main driver of change is 'job polarisation'** – that is, growth in high-wage and low-wage work, and shrinking of mid-wage work

- What drives this? Autor is clear that **technological change (computerisation, automation) is one of the main forces**, at least in the US

- Other forces: trade shocks, weakened unions …

- **These macro shifts have an urban footprint, and generate winners and losers in cities**

Geography of job polarisation

Low Skill: Services, Transport Construction, & Laborers

Mid Skill: Production Clerical, Admin & Sales

High Skill: Professional Technical & Managerial

Employment share

Population Density (1970)

∘ 1970 △ 1980 □ 1990 ◇ 2000 ᵛ 2015

Autor (2019)

US cities have seen growth in lowest-paid and highest-paid jobs

Biggest changes in the biggest cities

19

'New work'

Table 1: Examples of New Job Titles by New Work Category and Decade

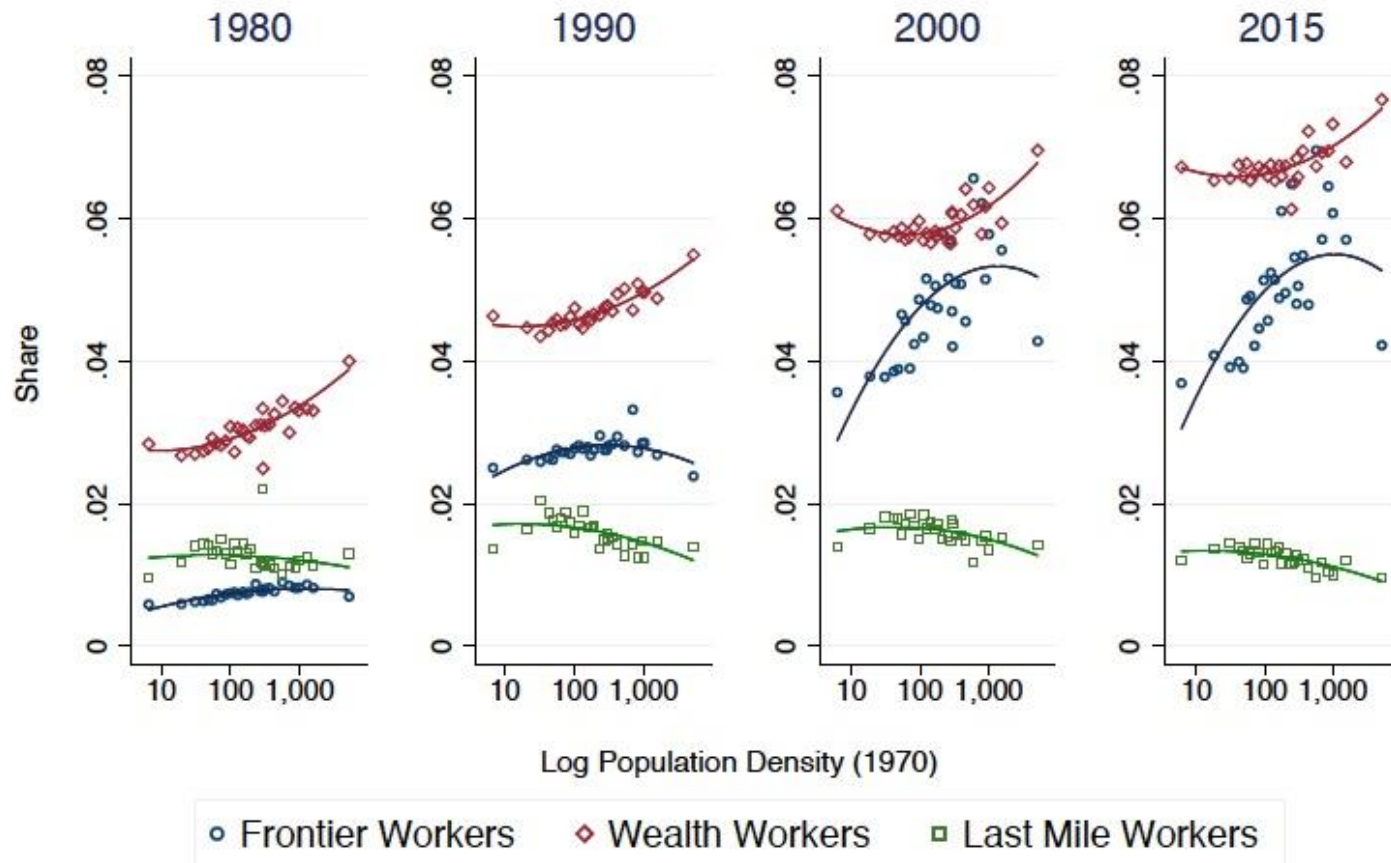|	Frontier work	Last Mile Work	Wealth Work
1980	Supervisor, Word Processing Controller, Remotely-Piloted Vehicle	Check Writer Tamale-Machine Feeder	Hypnotherapist Gift Wrapper
1990	Circuit Layout Designer Robotic Machine Operator	Vending-Machine Attendant Film Touch-Up Inspector	Dance Therapist Singing Messenger
2000	Artificial Intelligence Specialist Echocardiographer	Chat Room Host/Monitor Bicycle Messenger	Counselor, Marriage-Family Employee Wellness Crdnr
2010	Technician, Wind Turbine Intelligence Analyst	Underground Utility Cable Locator Technician, Prepress	Exercise physiologist Sommelier

Table reports examples of new job titles added to the 1977 and 1991 Dictionary of Occupational Titles, and the 2000 and 2010 Census Classified Indices of Occupations.

Autor and Salomons look how new types of job have appeared over time

Three groups of job, organised by tasks

Differ by a) qualifications b) salary c) gender

20

'New work' in cities

Higher-skilled and better-paid types of 'new work' cluster in bigger cities

Clustering has got stronger over time

21

Centre for Cities, City Monitor 2023
Affordability = ratio of mean house price / mean annual earnings

Legend:
- 5.2 - 7.2
- 7.2 - 9.2
- 9.2 - 11.1
- 11.1 - 13.1
- 13.1 - 15.1

Challenge 2: urban housing markets

Source: Land Registry 2022, Price Paid Data, 2022 data; Scottish neighbourhood statistics 2022, Mean , 2022 data.

Note: Northern Ireland data not available so the figure for Great Britain is shown. ONS 2022, Earnings and employment from Pay As You Earn Real Time Information, seasonally adjusted, 2022 data. CPI inflation adjusted (2019=100). Earnings data is for employees only.
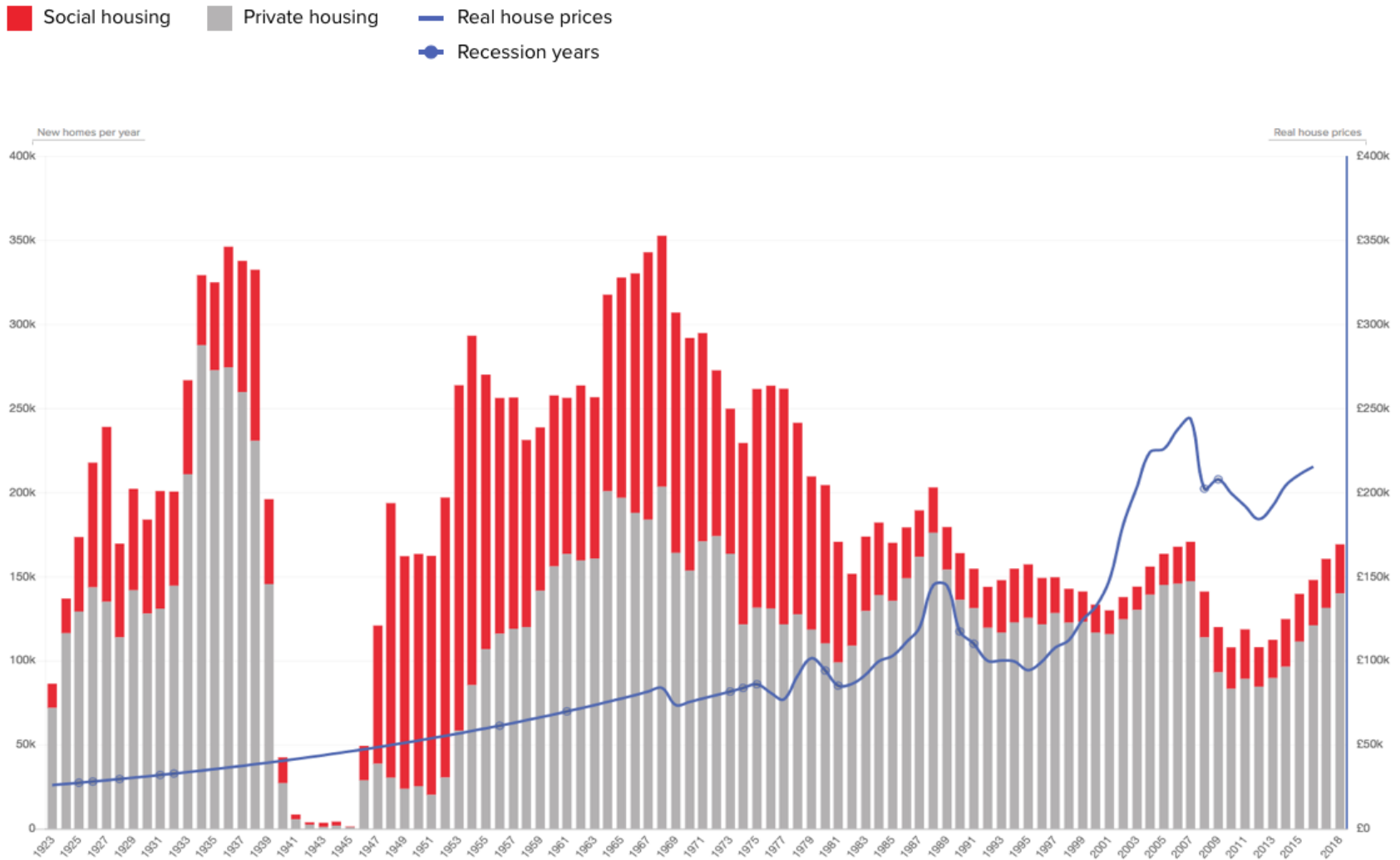
Causes of the crises

- **Key idea = two competing explanations for the urban housing crisis, supply side and demand side**

- **Supply side** – we're not building enough housing, including affordable housing. The planning system is too restrictive, especially in the most popular places. NIMBYs make this worse. Build more and prices will come down.

- **Demand side** – the problem is who's buying. Housing has become financialised. We're building for investors and speculators, especially from outside the UK. This is why cities are full of luxury flats. Restrict that, and prices will fall.

The supply side

- **Key idea = UK planning system is based on development control. Homeowners have strong incentives to resist new building. This restricts supply in popular places**

  - Hilber and Vermeulen (2016): house prices in England would be 35% lower – if all planning restrictions ended

  - Hilber and Mense (2021): problem worst in 'superstar cities': supply constraints plus richer workers sorting in

  - NIMBYs: existing homeowners want to restrict supply, so their homes get more valuable (Cheshire et al 2014)
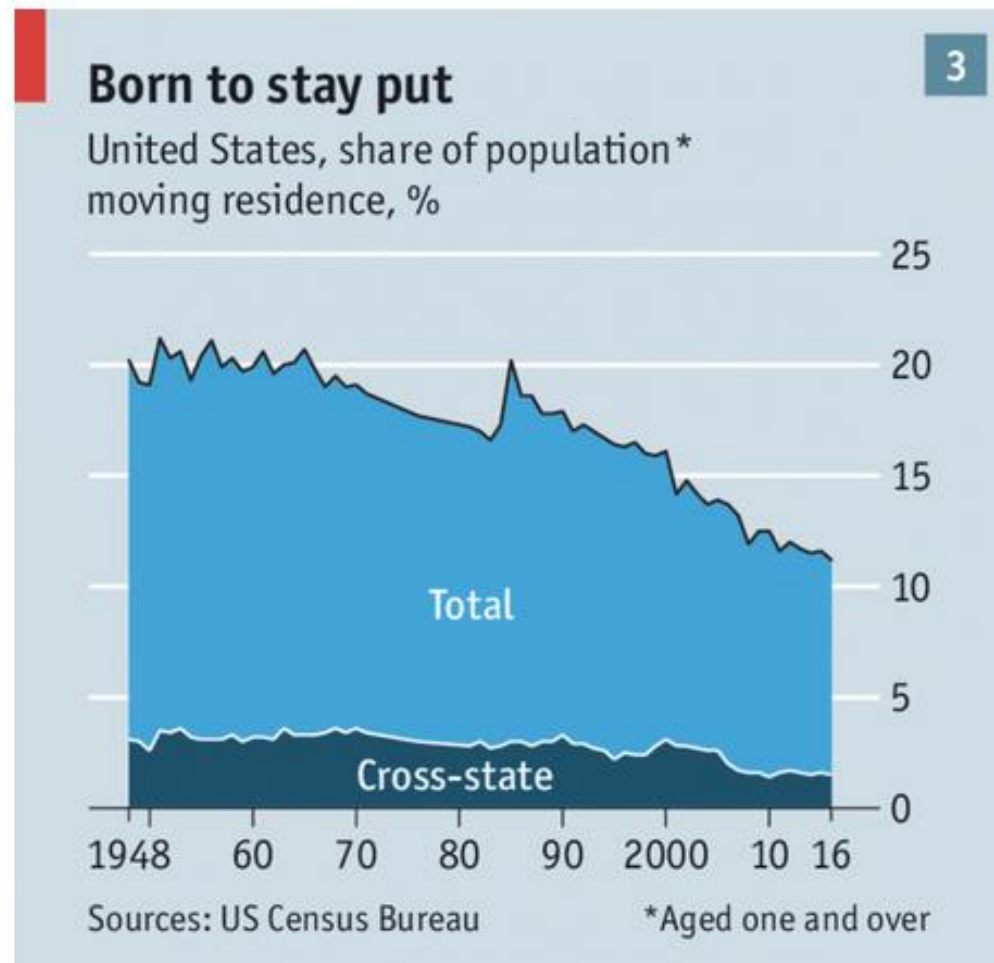
The demand side

- **Key idea = we've turned housing into an investment class**
- Ryan-Collins (2018) in summary:

  - Banks lend you money to buy homes
  - Finite supply of land, limited supply of houses
  - Limited supply of mortgage credit ~ this limits demand, and thus prices
  - BUT liberalising finance hugely increases *demand for housing*
  - Housing becomes an asset, including for international investors
  - And: more borrowing ~> higher demand ~> higher prices

- **Lots of truth in this, especially in London**
- **But – why is housing so attractive an investment in the first place?** In part because it's in short supply …

Huge drop in *total* housebuilding after 1983, driven by drop in social housing

Increasing consensus that market can't fill the gap alone

Challenge 3: falling mobility

Born to stay put

United States, share of population* moving residence, %

Total

Cross-state

1948 60 70 80 90 2000 10 16

Sources: US Census Bureau   *Aged one and over

Economist.com

Avent (2017)

Why is immobility high?

- Bosquet and Overman (2019) look at UK mobility patterns:

  – Nearly 44% of people only ever work in the place they were born

  – Immobility is higher for people with low qualifications, or none

  – Lack of mobility is also related to your parents' social class

- **Large minority of people *never* move**

- **Lack of income** – linked to lower qualifications – partly explains this. Hoxie et al (2023) suggest that lower-qualified US workers are less and less likely to move to biggest cities

- But others **may not want to move.** UE generally doesn't talk about **attachments to places and communities; 'bonding social capital'**

Part 3: summing up

Summary

- Economic activity is uneven – between countries, cities and neighbourhoods

- This is partly the result of big 'macro' forces, such as technological change and job polarisation

- Cities help people and firms get more productive …

- … but urban economies also produce disparities between and within cities.

Summary (2)

- Urban economists have argued that urban systems should move towards 'spatial equilibrium', with people sorting to the right places

- This smooths out some of the inequalities we worry about

- More recent work shows three challenges to this picture:

- **Challenge 1:** the urban wage premium is disappearing, for the lowest-paid workers in big cities

- **Challenge 2:** housing in many big cities is unaffordable, and building rates (in some countries) are very low

- **Challenge 3:** many people can't or don't want to move, in the way theory says they 'should'

Policy responses

- **"Mainstream" –** make markets work better
  - Fix co-ordination failures between actors in a market
  - Fix market failures (spectrum from regulation direct provision)

- **"Mainstream ++" –** shape market direction
  - Missions approach: set social goal and organise market and noo-market actors to achieve it

- **"Critical / radical" –** reshape market power
  - Includes competition policy and anti-trust at the mainstream end …
  - …. through to nationalisation / collective ownership

Policy responses: disparities

- **Key idea = policies for people vs. policies for places** (Cheshire et al 2014)
- In practice, you need a mixture of both

- **Less radical:** skills training, active labour market policy
- **More radical:** Living Wages, UBI

- **Less radical:** business support, workspace, tax breaks
- **More radical:** sustained area-based investment in e.g. R&D, infrastructure and skills; devolve powers to do it
  - UK2070 Commission: to close economic gaps between towns and cities in the UK, need to spend £1tn over 20 years!

Policy responses: housing

- **Supply side responses …**

- **Change the planning system** – move UK to masterplanning systems as in Netherlands, Germany

- **Build up and out in cities** – higher density, more tall buildings, more building on the Green Belt

- **Demand-side responses …**

- **Tighter mortgage finance regs** – make it harder to own

- **Restrictions on investors** – dampen financialisation, penalise Buy To Let

- **Build more affordable homes!**

Policy responses: immobility

- **What's driving this?** Partly things we've covered today: flattening urban wage premia; unaffordable housing in cities

- But also, economists' assumption that people 'sort' across space is not that realistic

- In 'left behind' places, rather than encouraging mobility, it is smarter to **improve public services and quality of life**

- This is what Coyle (2017) calls 'universal basic services'

Thanks!

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References

- Agrawal and Phillips (2020). Catching up or falling behind? Geographical inequalities in the UK and how they have changed in recent years. London, Institute for Fiscal Studies.

- Autor (2019) Work of the Past, Work of the Future, *AEA Papers and Proceedings* 109, 1-32

- Autor and Salomons (2019) New Frontiers: The Evolving Content and Geography of New Work in the 20th Century, mimeo

- Avent (2017) 'In the Lurch', *Economist*, 21 October

- Balland, Jara-Figueroa et al (2020) Complex economic activities concentrate in large cities, *Nature Human Behaviour* **4**(3): 248-254

- Baum-Snow and Pavan (2012) Understanding the City Size Wage Gap, *The Review of Economic Studies* **79**(1): 88-127

- Bosquet and Overman (2019) Why Does Birthplace Matter So Much? *Journal of Urban Economics*, **110**(3), 26-34

- Card, Rothstein and Yi (2025). "Location, Location, Location." American Economic Journal: Applied Economics **17**(1): 297–336.

- Centre for Cities (2023) *City Monitor 2023*, London, Centre for Cities

- Cheshire, Nathan & Overman (2014) Urban Economics and Urban Policy, Cheltenham: Edward Elgar

- Crookston and Reades (2021) Why Face to Face Still Matters, Bristol: Polity

- D'Costa and Overman (2014) The urban wage growth premium: Sorting or learning? *Regional Science and Urban Economics* **48**: 168-179

- De La Roca & Puga (2016) Learning by Working in Big Cities, *Review of Economic Studies* **84**(1): 106-142

- Duranton & Puga (2020) The Economics of Urban Density. *Journal of Economic Perspectives* **34**(3): 3-26

- Eckert, Ganapati and Walsh (2022) Urban-Biased Growth: A Macroeconomic Analysis. *NBER Working Paper Series* 30515, Cambridge, MA: NBER

- Fajgelbaum and Gaubert (2020) Optimal Spatial Policies, Geography, and Sorting *The Quarterly Journal of Economics* **135:959-1036**.

- Glaeser (2022) Urban Resilience, *Urban Studies* **59:3-35**.

- Glaeser (2011) The Triumph of the City, London: Pan MacMillan

- Glaeser and Maré (2001) Cities and Skills, *Journal of Labor Economics* **19**(2): 316-342

- Hilber and Vermeulen (2016) The Impact of Supply Constraints on House Prices in England, *Economic Journal*, **126**(591), 358–405

- Hoxie et al (2023) Moving to density: Half a century of housing costs and wage premia from Queens to King Salmon, *Journal of Public Economics*, **22**, 104906

- Jacobs (1969) The Economy of Cities, London: Vintage

- Marshall (1918) Principles of Economics

- Moretti (2012) The New Geography of Jobs, NYC: Haughton Mifflin Harcourt

- ONS (2023) Income estimates for small areas, England and Wales: financial year ending 2020, https://tinyurl.com/ymh8ru3z

- Roback (1982) Wages, Rents and the Quality of Life. *Journal of Political Economy* **90:1257-1278**.

- Ryan-Collins (2018) Why Can't You Afford a Home? Bristol: Polity

- Shelter (2018) A Vision for Social Housing, London: Shelter

- Stansbury, Turner; and Balls (2023) Tackling the UK's regional economic inequality. *M-RCBG Associate Working Paper No. 198*. Cambridge, MA: Harvard Kennedy School.

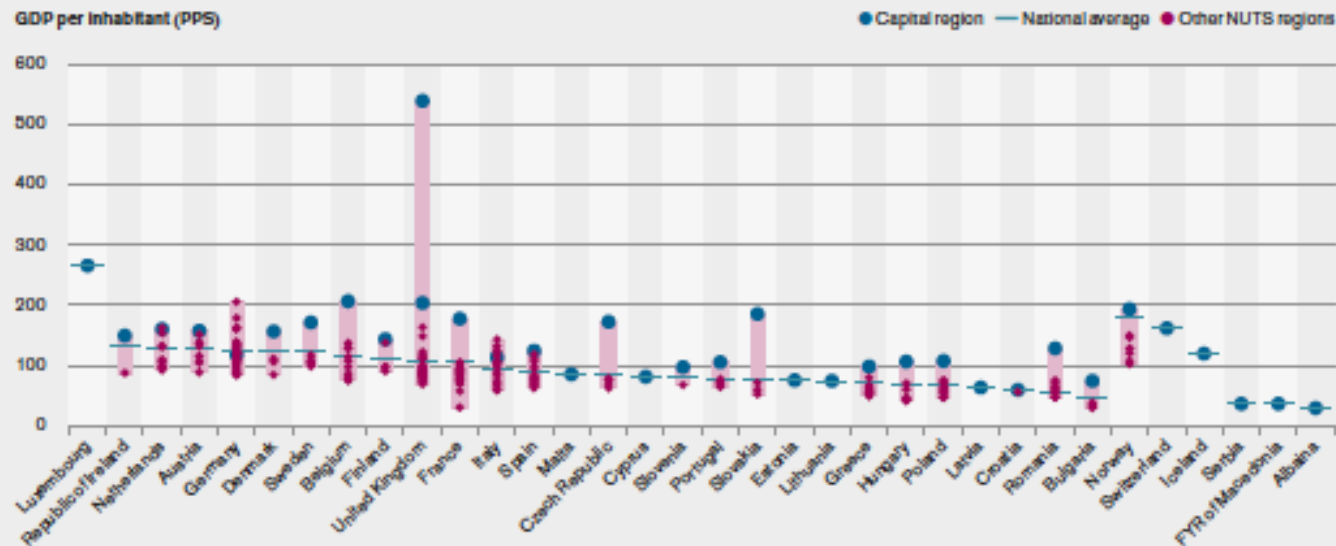# Appendix: measuring spatial disparities

Measurement issues

- **Two main challenges when measuring area inequality / disparities between places**

- **Metrics** – need to avoid distortions caused by urban processes, especially commuting across areas
  - Residence-based measures will overstate outcomes in places where many people work, but don't live
  - Really big issue for global cities like London
  - Example: GVA/hour or GVA/worker > GVA/ resident

- **Scales** – need to avoid results being driven by the units we choose for the analysis
  - The 'Modifiable Areal Unit Problem' (MAUP)
  - Using regions give you different results than using neighbourhoods

Example 1: metrics

Figure 2: Regional variations in GDP per inhabitant, in purchasing power standard (PPS), by NUTS 2 regions, 2014
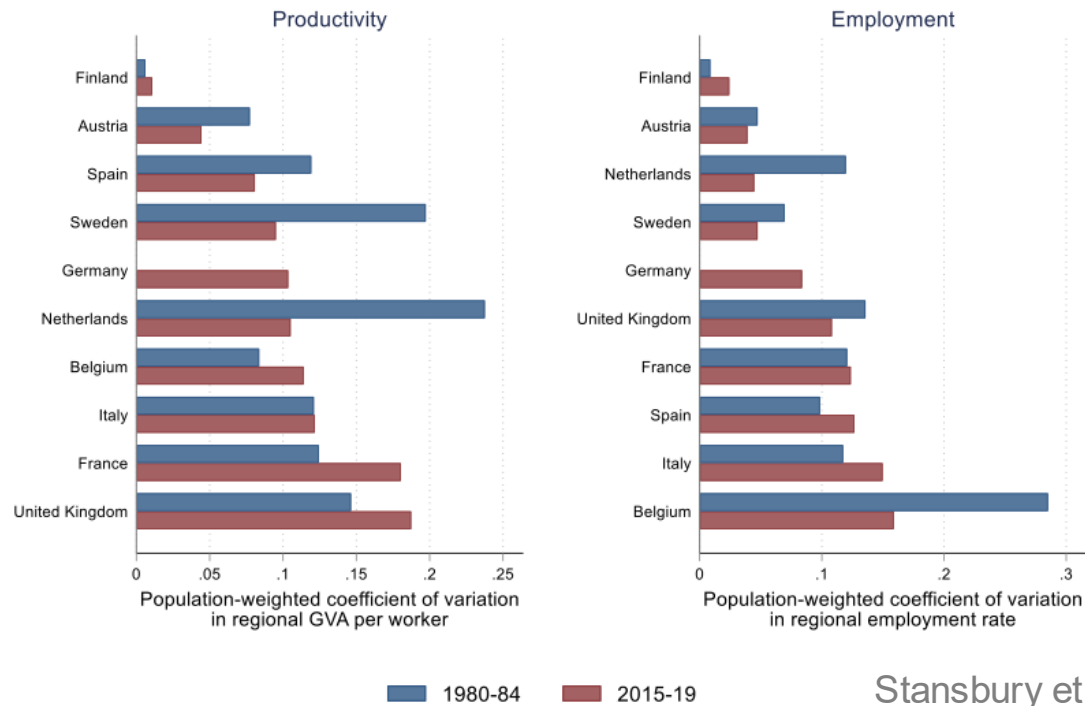
The UK is a massive outlier, and this is driven by London

The study uses **GVA/resident, so the result is partly driven by commuting**
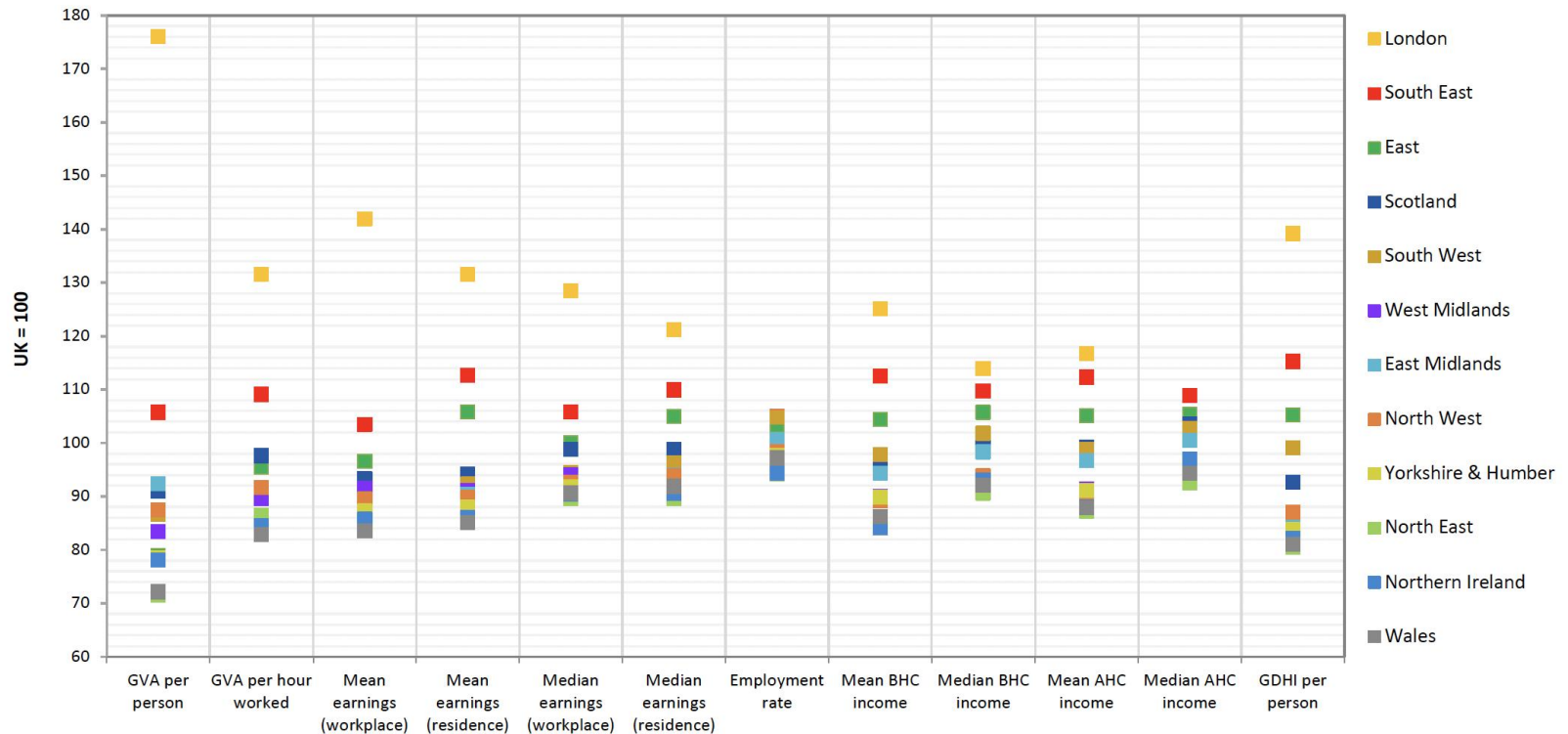
Example 2: metrics

Figure 1. Regional inequality in productivity and employment, Western Europe

Source: ARDECO. Note: Regions defined at NUTS 1 level. We do not include Germany data pre-reunification.

Stansbury et al (2023)

This analysis uses **GVA/worker, a workplace measure**

The UK still has area disparities, but is no longer such an outlier

NB units are bigger here (NUTS1 > NUTS2)

42

Example 3: scales

Note: Earnings data are from 2019 and are for full-time workers. GVA per person, GVA per hour worked and GDHI data are from 2018, as are employment rate data, which are for those aged 16–64. AHC and BHC incomes are the average for 2016–17, 2017–18 and 2018–19. The patterns would be the same if shown for the latest year for which all variables are available (i.e. 2018).
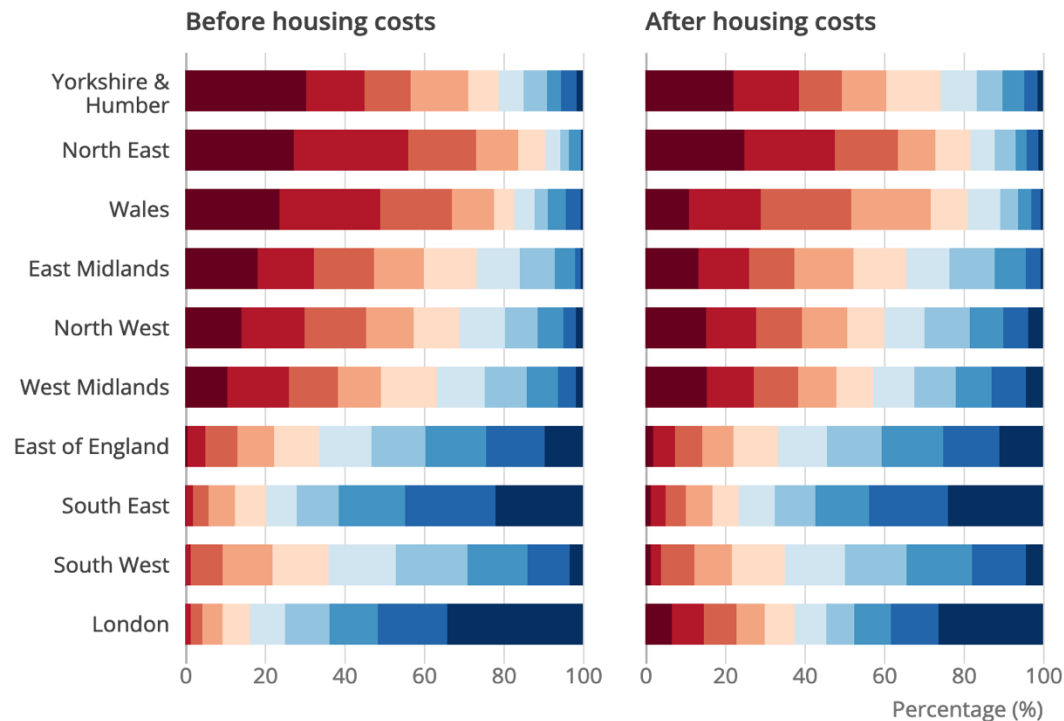
Agrawal and Phillips (2020)

London is very productive, but also very expensive to live in. Regional productivity gaps are much bigger than real wage differences

But … what about differences *within* regions?

43

Example 4: scales

Percentage of local areas (MSOAs) in each rank decile for the regions of England and Wales

- Lowest income decile
- Middle income deciles
- Highest income deciles

ONS (2023)

Using regions as units hides a lot of important variation!
Controlling for housing costs doesn't make disparities go away

44