

Cities and urban economies

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UNDERSTANDING CITIES AND THEIR SPATIAL CULTURES: WEEK 9

18 March 2020

What you've covered so far ...

- ‘The urban’ at different scales
- Different perspectives on cities and urban social reality
- Different methods of exploring urban space
- Today: urban economies, cities as economic systems

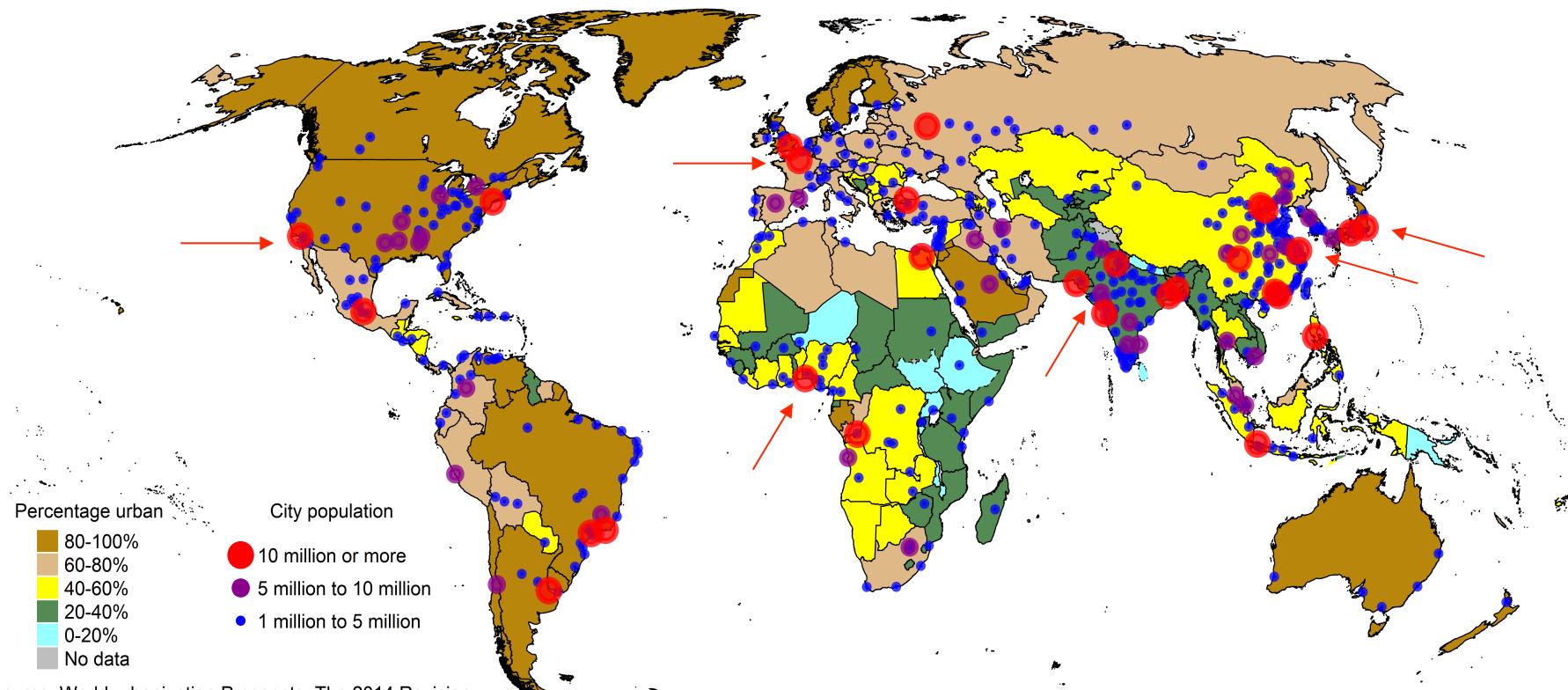
What we will cover today

- Today: urban economies, cities as economic systems
- **Part 1: overview**
- How economic activity varies across space: cities' role in this
- **Part 2: theory**
- Urban economics: the key ideas
- **Part 3: back to the real world**
- Economic inequality, between and within cities
- **Written before COVID-19. Much of this is going to look very different in a year's time.**

Part 1: overview

The urban world: 2014

55% of the world's population lives in urban areas



Data source: World urbanization Prospects: The 2014 Revision

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

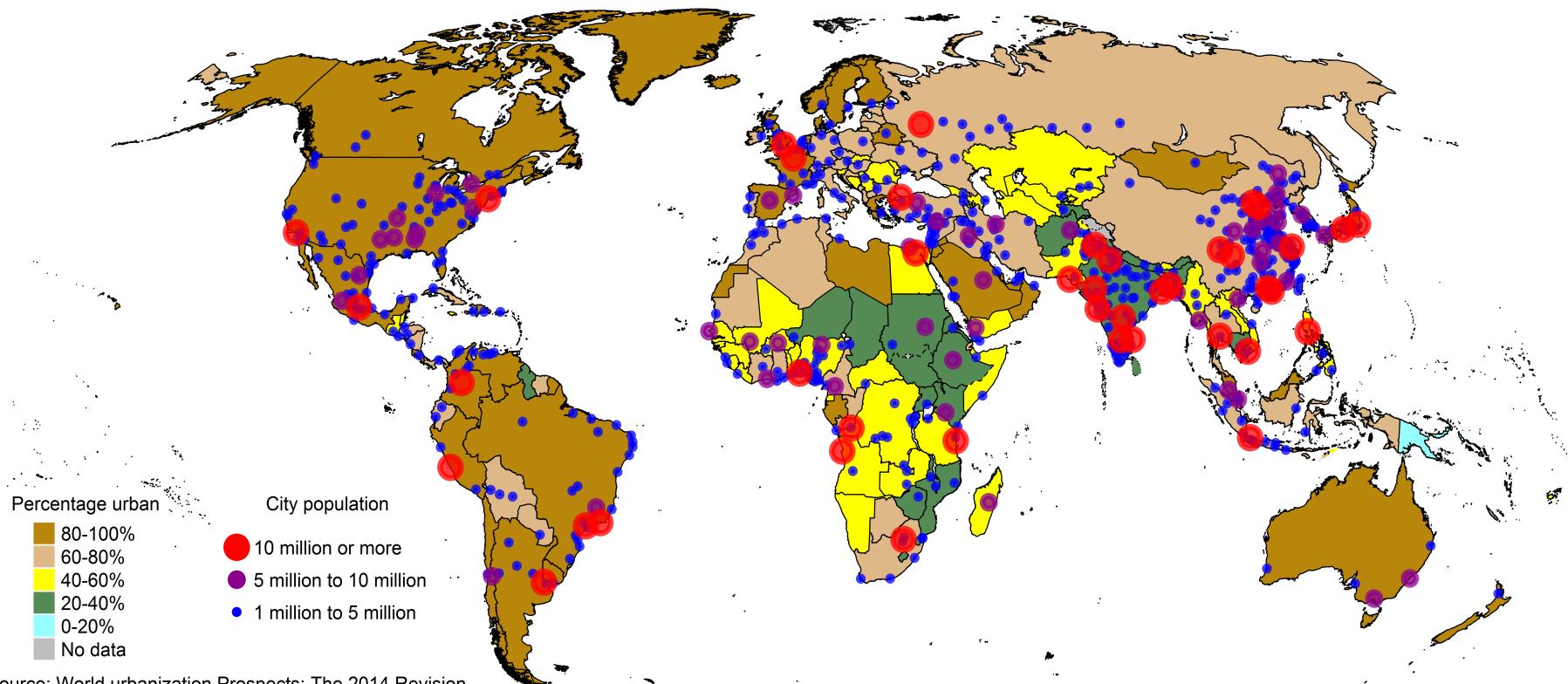
Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan.

The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

The urban world: 2030

60% of the world's population will live in urban areas. 41 megacities



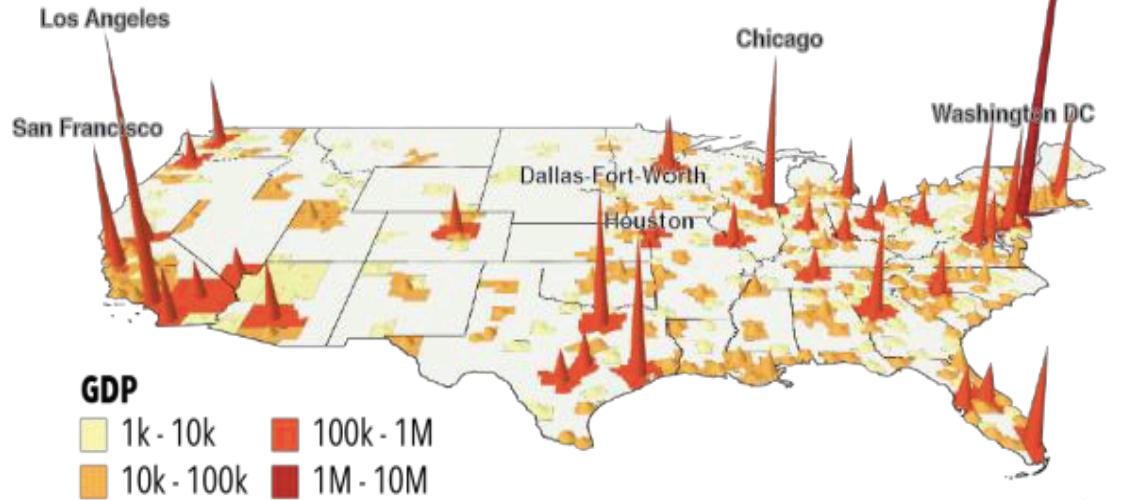
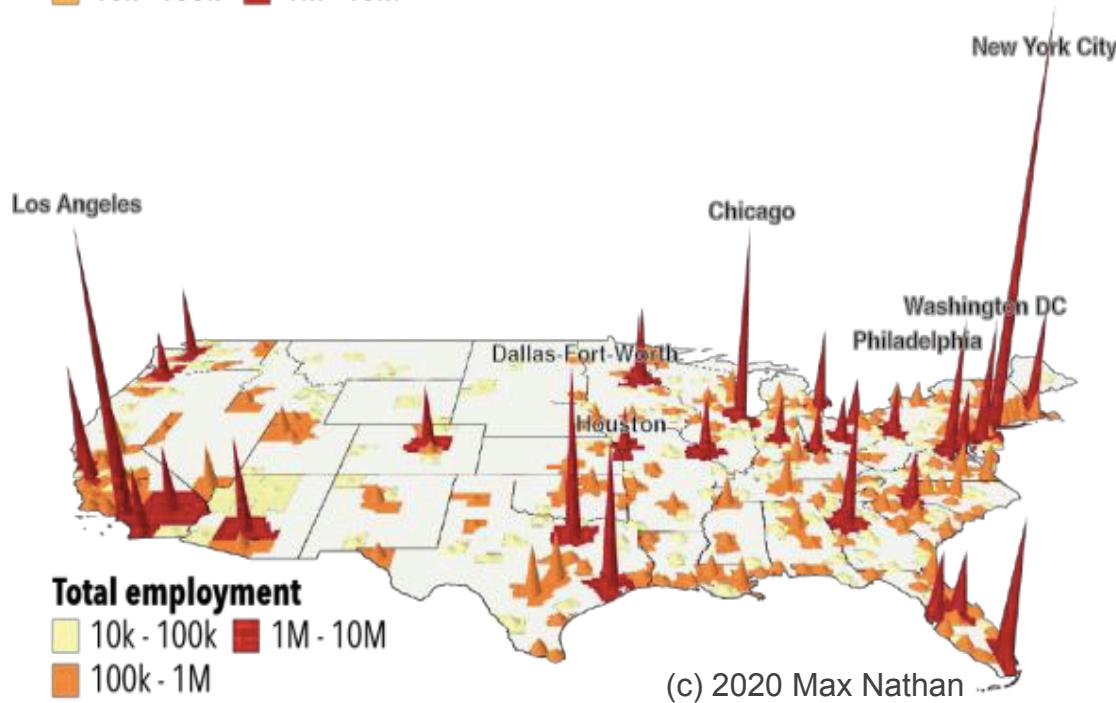
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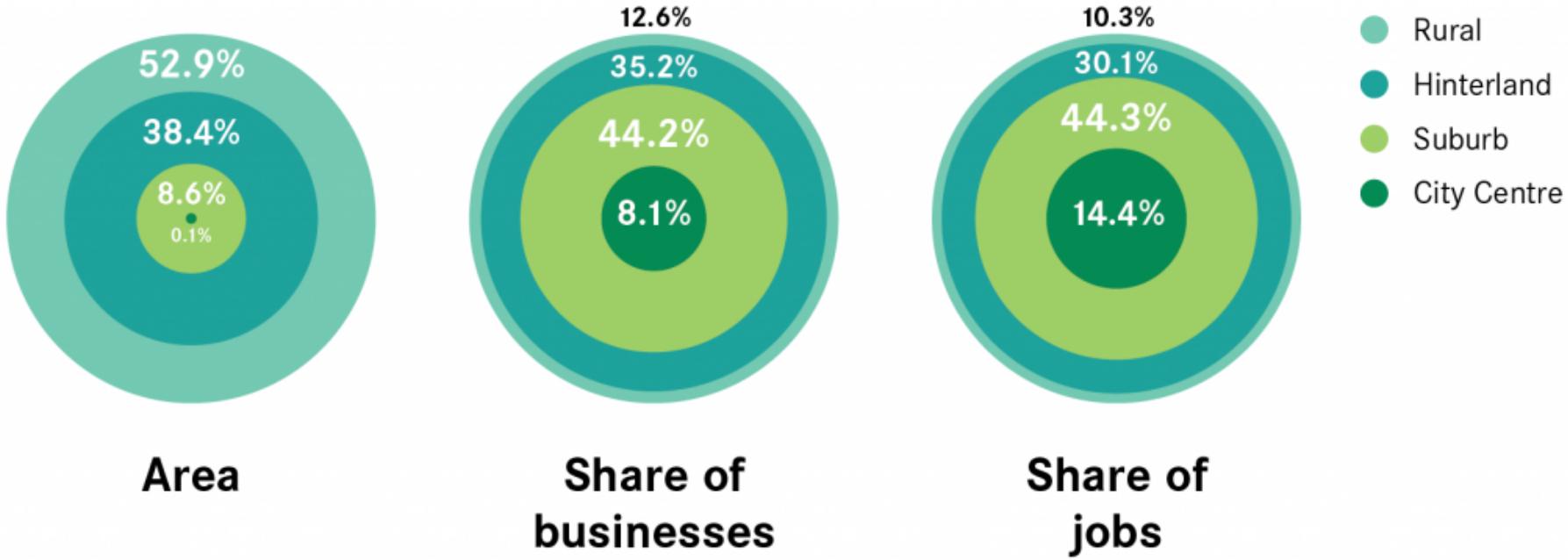
C**D**

The world is spiky

Economic output, employment and many other measures are highly concentrated in a few urban cores

Balland et al (2020)

In the UK, cities dominate the economy

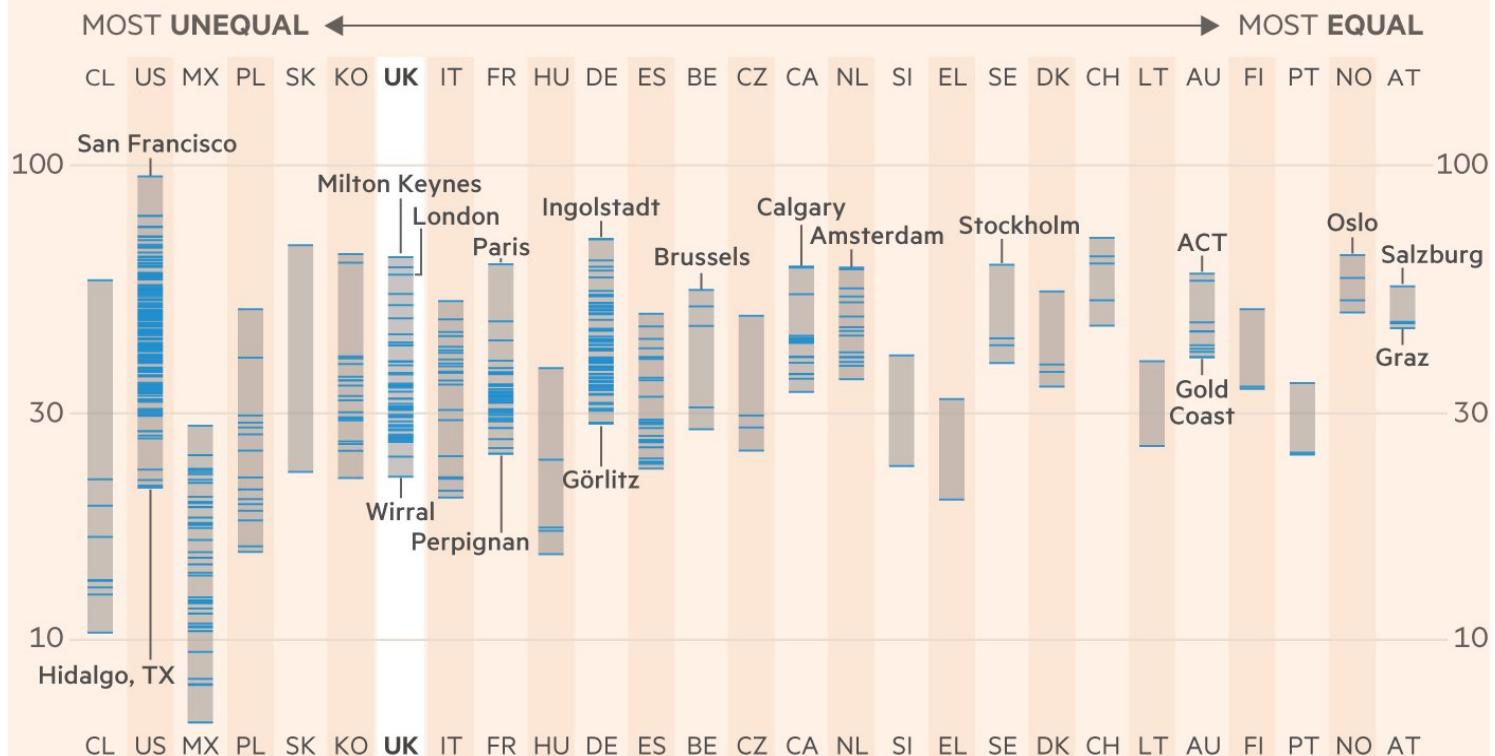


In 2016, British city-regions cover 47% of land ... but have 87% of all businesses, and have about 90% of all jobs

Big differences between cities (but how you measure matters)

Using city boundaries, the UK looks much more geographically equal

Metropolitan GDP per capita 2016 (thousands of 2010 USD*, log scale)



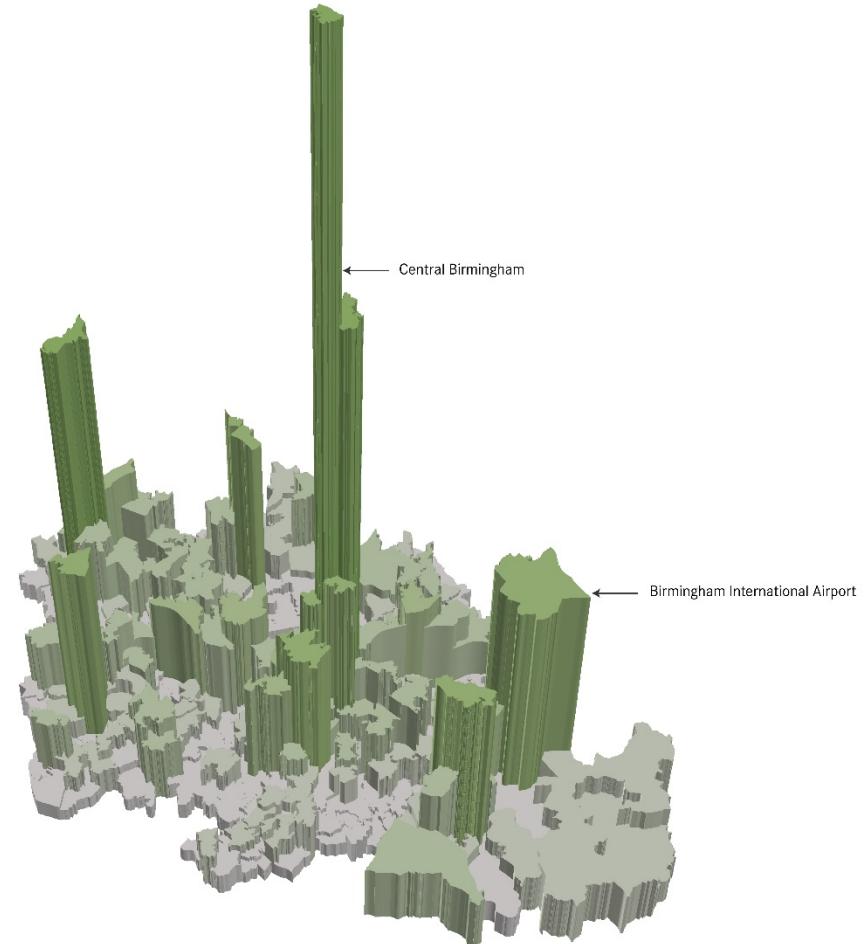
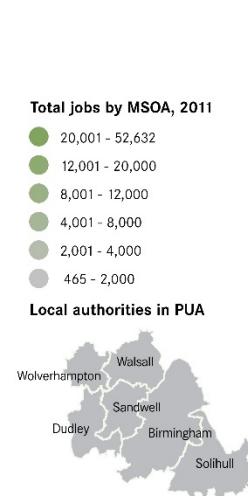
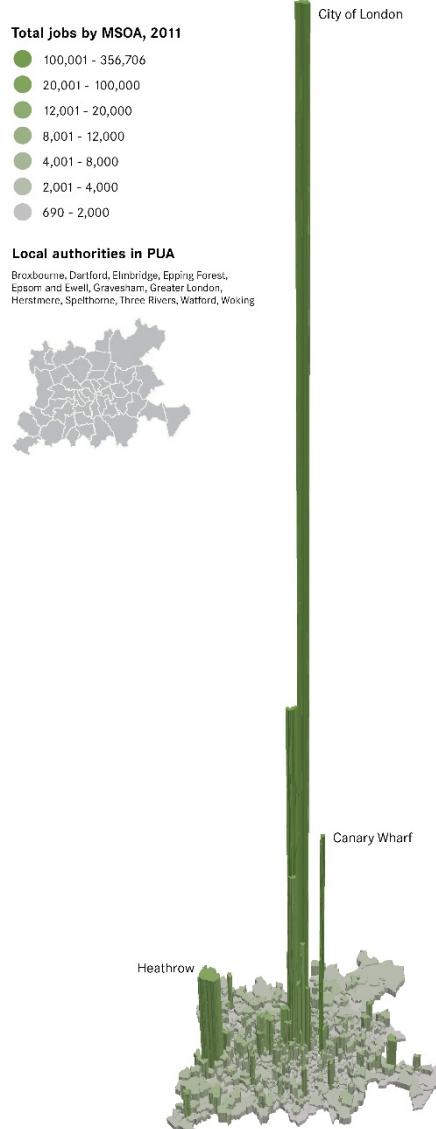
*Adjusted for the cost of living in each country

Source: OECD

Graphic by John Burn-Murdoch / @jburnmurdoch

© FT

Big differences *within* cities too



<http://www.centreforcities.org/city-by-city/>
Built-up area geographies

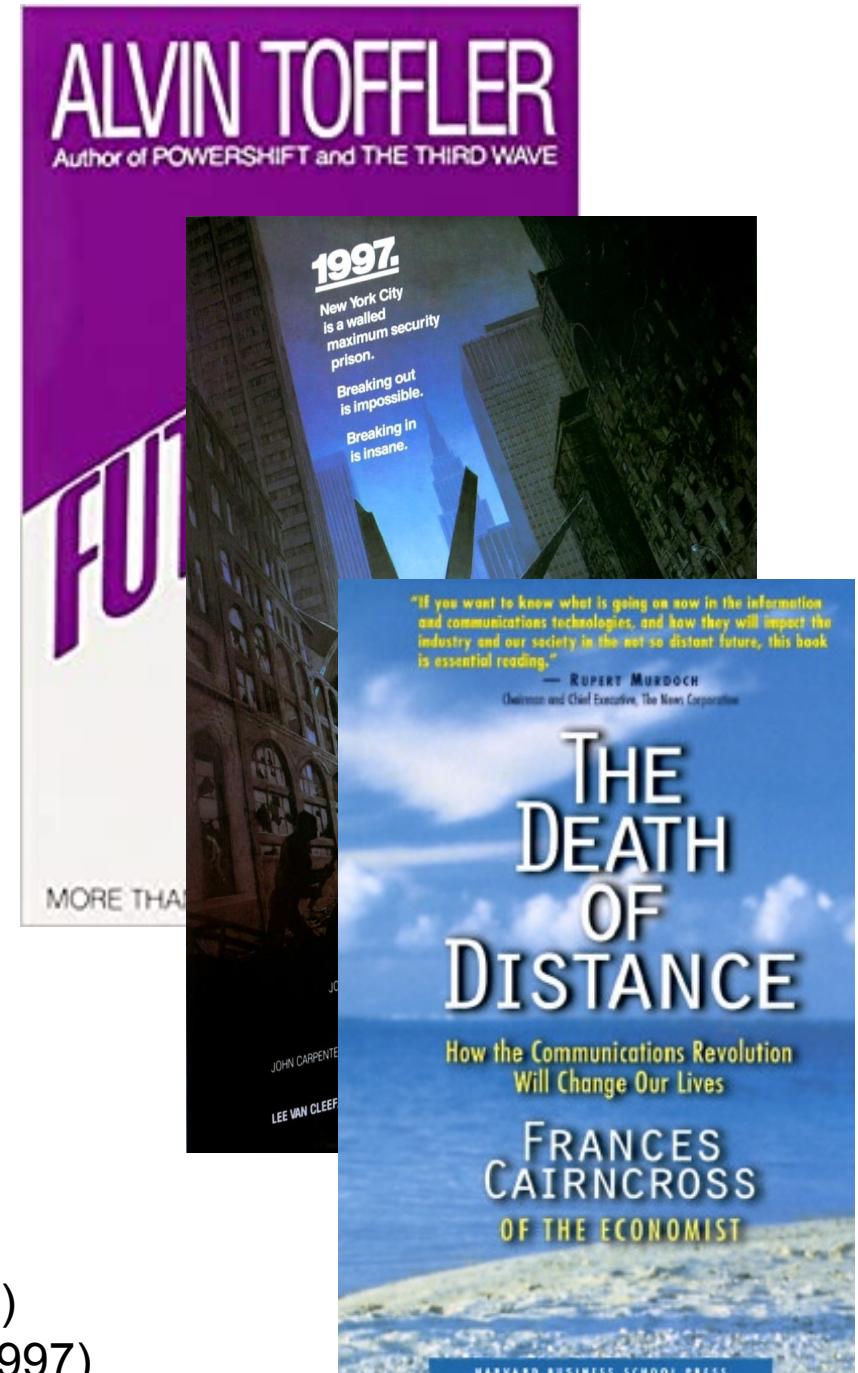
But back in the 1970s and 1980s, many people thought cities were dying ...

*Deindustrialisation
Physical decay
Crime and social problems*

*Technology would allow us to
'work from anywhere'*

We're about to test this!

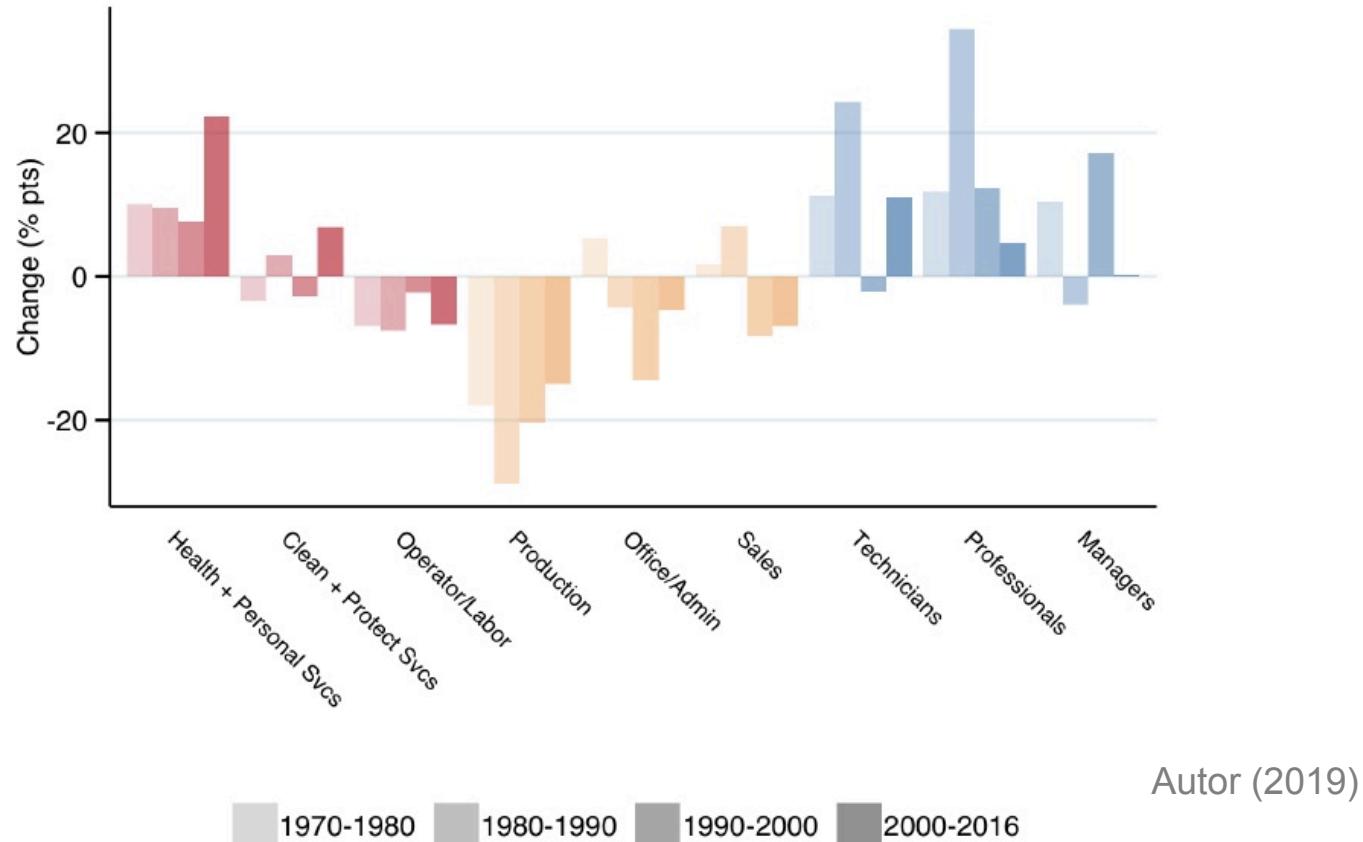
*Future Shock, Alvin Toffler (1970)
Escape from New York, John Carpenter (1981)
The Death of Distance, Frances Cairncross (1997)*



Why hasn't it happened (yet)?

- **Interaction of global / macro processes ...**
 - ‘Western’ economies shift from industrial to post-industrial, as work is outsourced and offshored under globalisation
 - ‘Skill-biased technical change’: increasing demand for skilled / highly qualified workers
 - **Hollowing out** of middle-income / middle-skills jobs
- **And economic features of cities ...**
 - Complex activity is still best done face to face ... (so far)
 - Technology complements face to face activity (so far) ...
 - Many governments have invested in cities, especially public services and environments

Labour market polarisation



Big growth in highest-paid and lowest-paid jobs since 1970.

Automation is one factor helping drive this trend

Economic features of cities

“The central paradox of the modern metropolis:
proximity has become ever more valuable as the cost of
connecting across long distances has fallen”

(Glaeser, 2011)

To address this paradox,
we need to understand **how urban economies work**

Part 2: theory

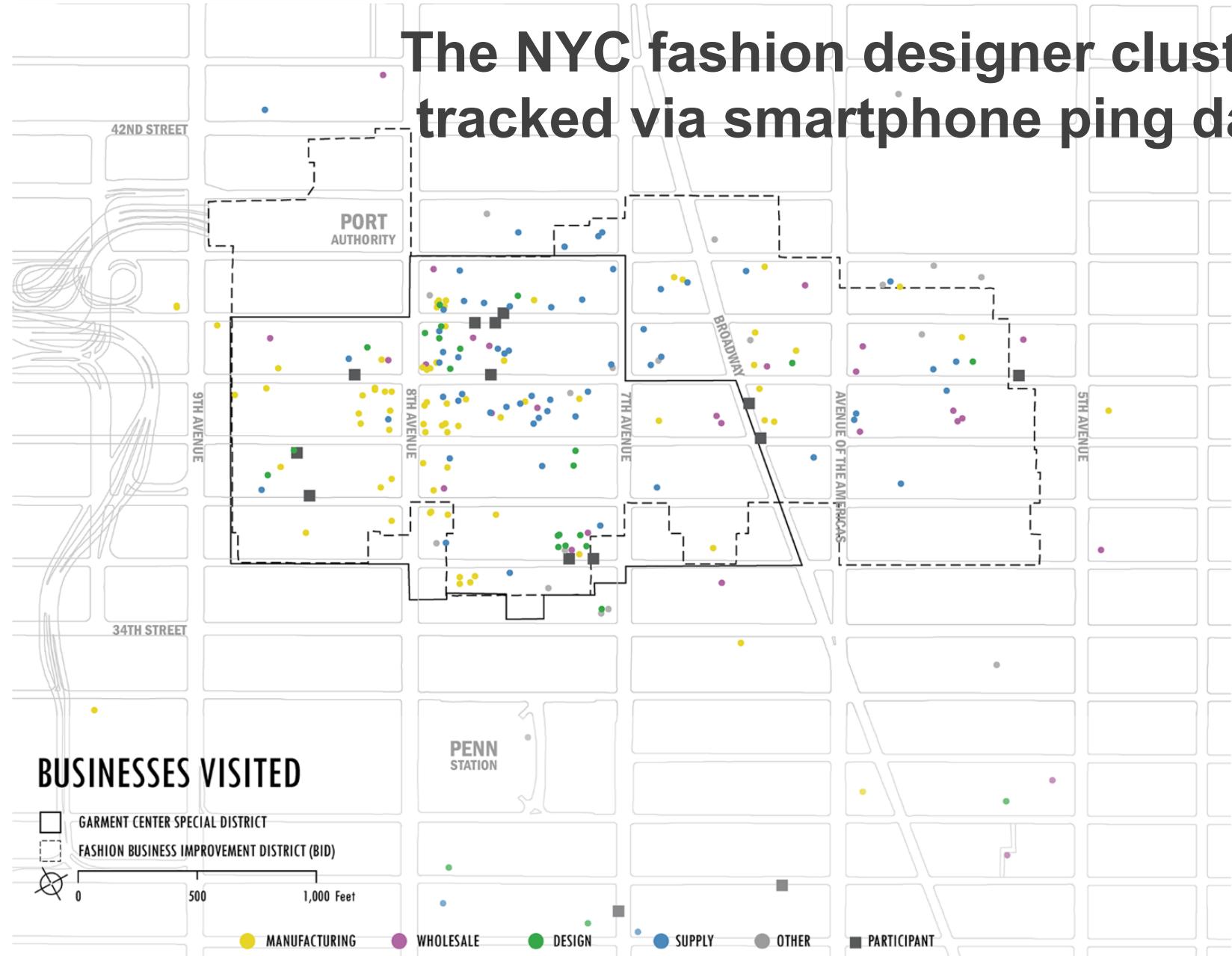
Urban economics

- **Key idea = cities help firms and workers become more productive.** ‘Agglomeration economies’ make this happen
- Duranton and Puga (2004) divide these into three types
 - **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 connect people; help them observe, learn from each other
- **Consumption side:** urban scale supports a rich set of products, services, experiences

Example: clusters

- Key idea: **colocation, interaction and collaboration by firms in cities** fosters innovation, growth (Marshall 1918)
- In the jargon, ‘industrial production districts’ in cities
- **Clusters may involve firms in the same industry** (Marshall) or **involve knowledge spillovers across industry** (Jacobs)
- **Some well-known examples**
 - Silicon Valley and Route 128 corridor (USA)
 - Motorsport Valley and London Tech City (UK)

The NYC fashion designer cluster, tracked via smartphone ping data

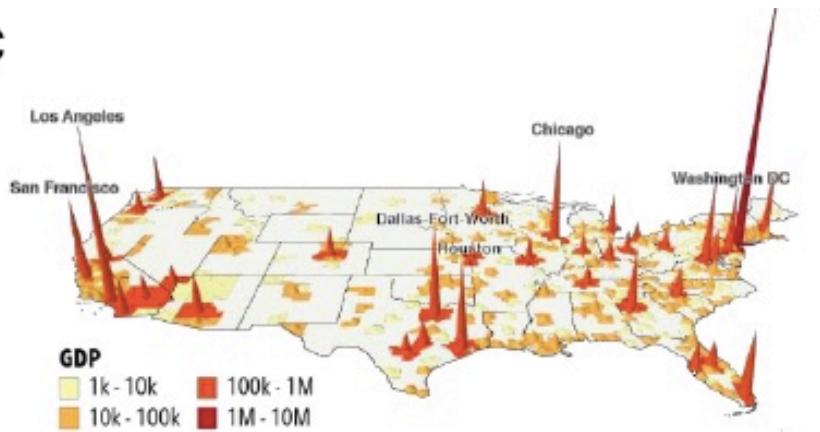


Urban systems

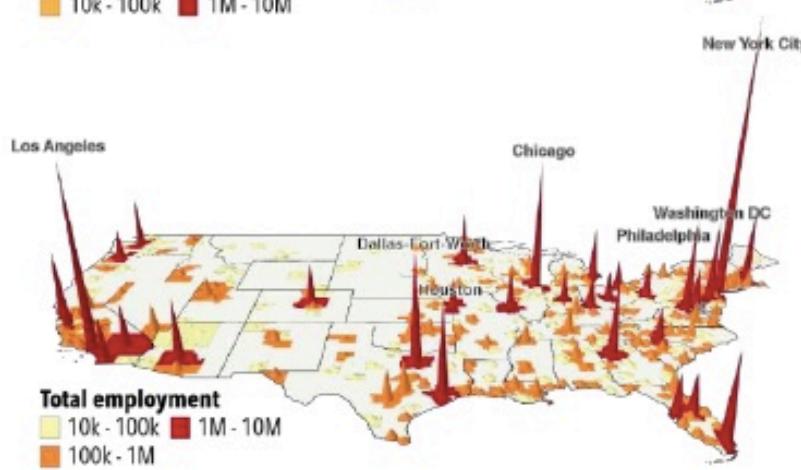
- **What are the links between urban economics and the urban systems / networks approach?**
- **Key idea: urban economics gives a ‘microfoundations’ for scaling laws such as Zipf’s Law**
- Matching / sharing / learning = forms of ‘increasing returns to scale’ in cities, and these can be non-linear (so, superlinear)
- Let’s look at an example ...

Urban systems

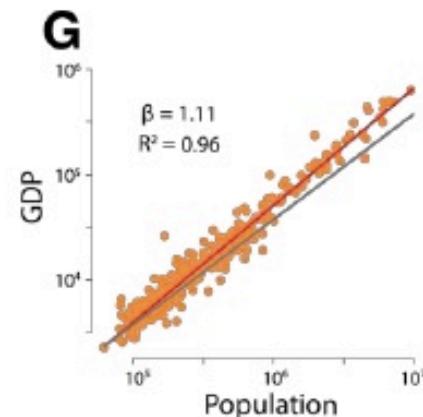
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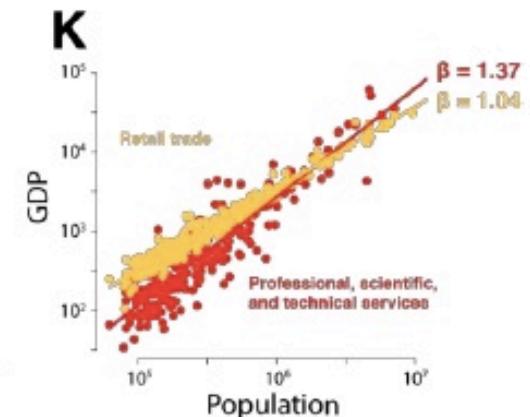
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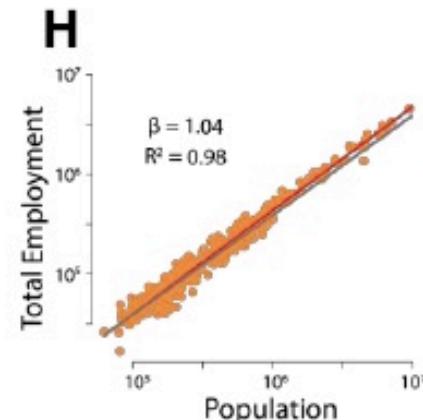
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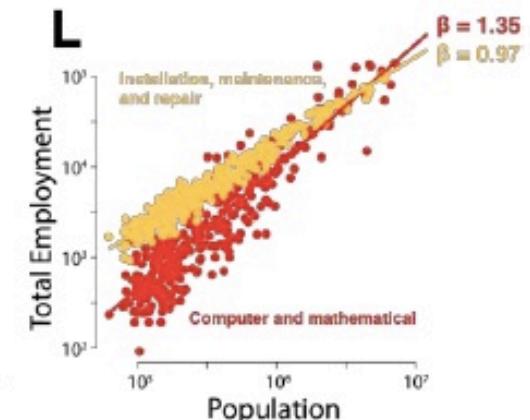
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In the US, GDP and jobs exhibit superlinear scaling
More complex activities cluster into bigger cities

The urban wage premium

- **Doubling city size ~ 5-10% increase in ave productivity**
- **Key idea: this gives an ‘urban wage premium’ for workers in cities, compared to similar people outside cities**
 - Why? Higher productivity ~> higher wages for urban workers
 - Bigger city ~> bigger wage premium
 - 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
- This helps explain spatial inequality *between cities* (bigger vs. smaller places) and *within cities* (how qualified you are)

Urban economics: dynamics

- **Key idea = industrial diversity in cities** matters: cities do better with a range of industries (Glaeser 2011, Jacobs 1969)
- **Why? it amplifies agglomeration, especially learning**
- Example = learning *across* industries and clusters, not just within them => innovation, hybridisation (Jacobs 1969)
- **Why? It helps insulate cities against shocks**
- Example = a major employer closes down, or ‘jumps’ production to another country => lots of other types of activity and work available

Urban economics: dynamics

- Key idea = push-pull dynamic in urban systems
- Agglomeration can be self-reinforcing, pulling people in
- This means that some cities will grow faster than others – and also helps explain economic inequality between places
- But at the same time, these growing cities also have ‘diseconomies’, which push people out
- For example: more congestion, more pollution, a higher cost of living (also, vulnerability to pandemics ...)

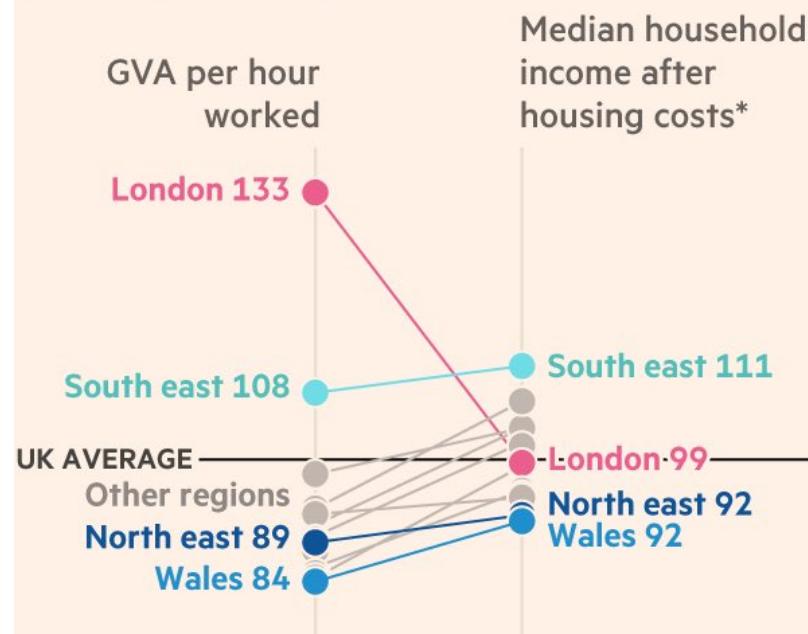
Spatial equilibrium

- So urban systems and cities have a push-pull dynamic
- Attraction/repulsion forces between and within cities
- Urban economists argue that these forces can organise into ‘**spatial equilibrium**’ (Cheshire et al 2014, Glaeser 2011)
 - 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 should cancel out, so that ‘real incomes’ are ~ equal across locations

An example: ‘real wages’ in London are lower than money wages

After taking account of housing costs, the UK appears much more equal

Regional inequality in output per hour worked, and incomes after adjusting for housing costs (UK average =100)



*Equivalised

Source: ONS

Graphic by John Burn-Murdoch / @jburnmurdoch

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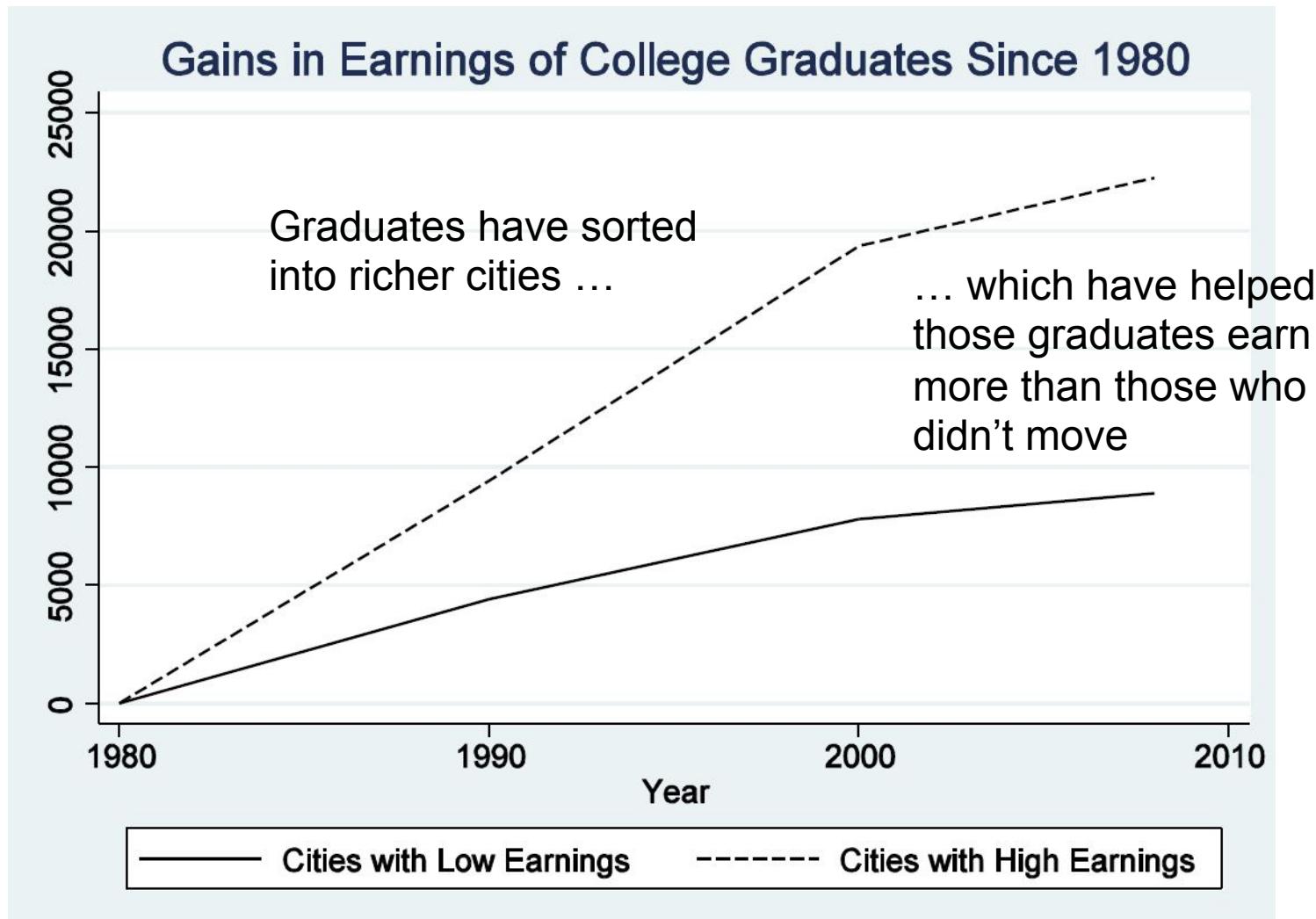
Have a break for 10 mins

Part 3: urban inequality and urban policy

Recap

- **What we've covered so far**
 - The world is urbanising
 - Economic activity is urbanised, but uneven
 - How economists think about a) urban economies, b) systems of cities and c) urban evolution and change
- Economic frameworks help explain patterns of urban growth – but also urban inequality, and why this is hard to shift
- **How much should we worry about this?**
- **Part 3: urban inequality, housing, mobility**

Is this a problem?



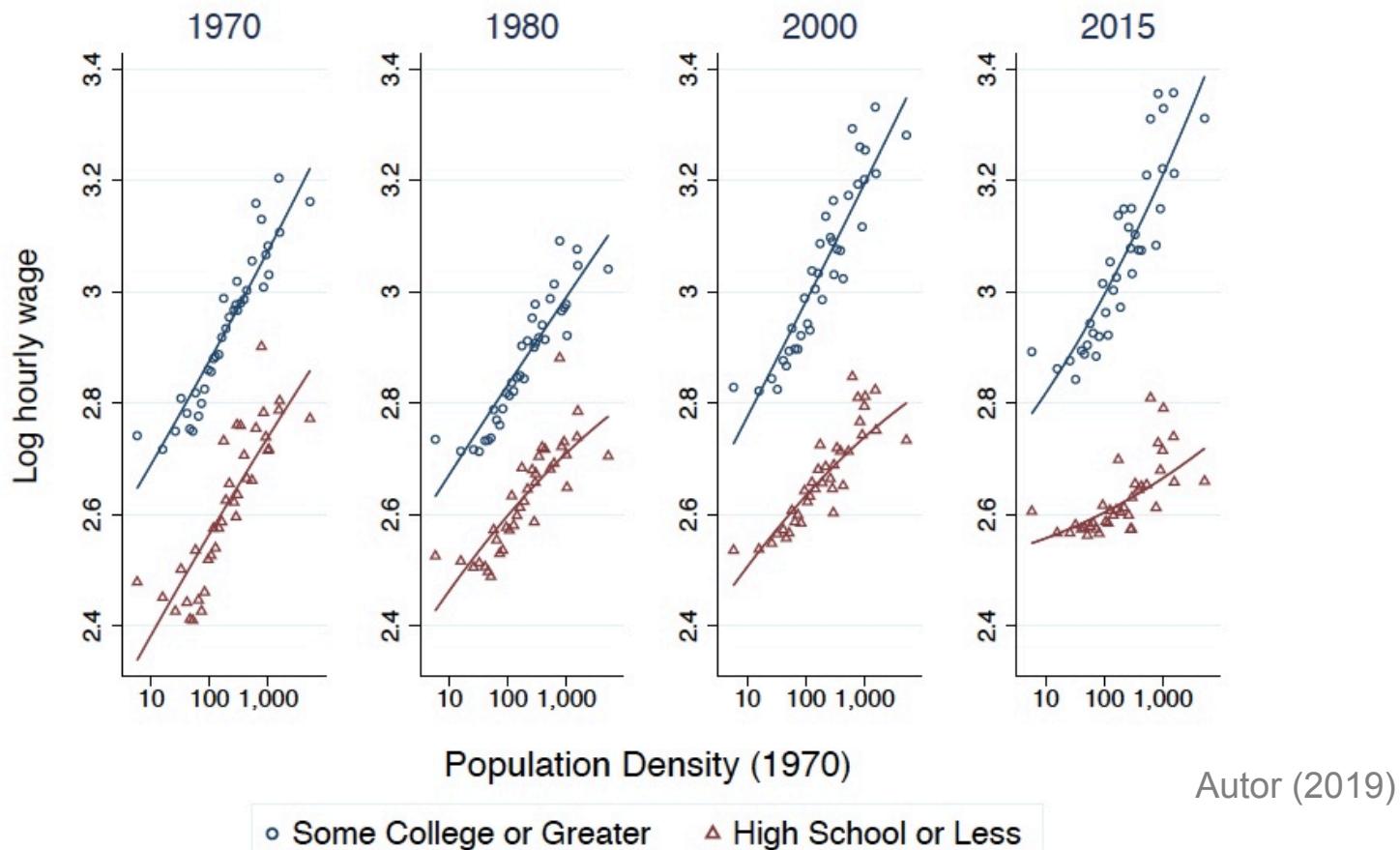
Recap: spatial equilibrium

- Economists argue that spatial equilibrium arises from:
 - Workers earn higher wages in cities. ‘Skilled’ workers earn more than less skilled workers
 - Agglomeration effects are stronger in bigger cities – and can be self-reinforcing over time
 - These forces raise income inequality – within and between cities
 - But, bigger cities are more expensive / crowded / congested to live in, so in ‘real terms’ differences tend to equalise
 - So workers need to ‘sort’ into the optimal places for them
- **How well do these forces work?**
- **What kind of policy response – if any – do we need?**

Challenge 1: unequal cities

- This may work for highly qualified workers. But what about lower-paid people in expensive places?
- In theory, everyone earns more in bigger cities – your urban wage premium should cushion against higher costs
- Is this still true in practice?
- Autor (2019) looks at real wages by skill group in US cities, between 1970 and 2015
 - Rising urban wage premium for graduates
 - Flattening urban wage premium for non-graduates
 - Especially for those aged under 40, i.e. Millennials and Gen Z

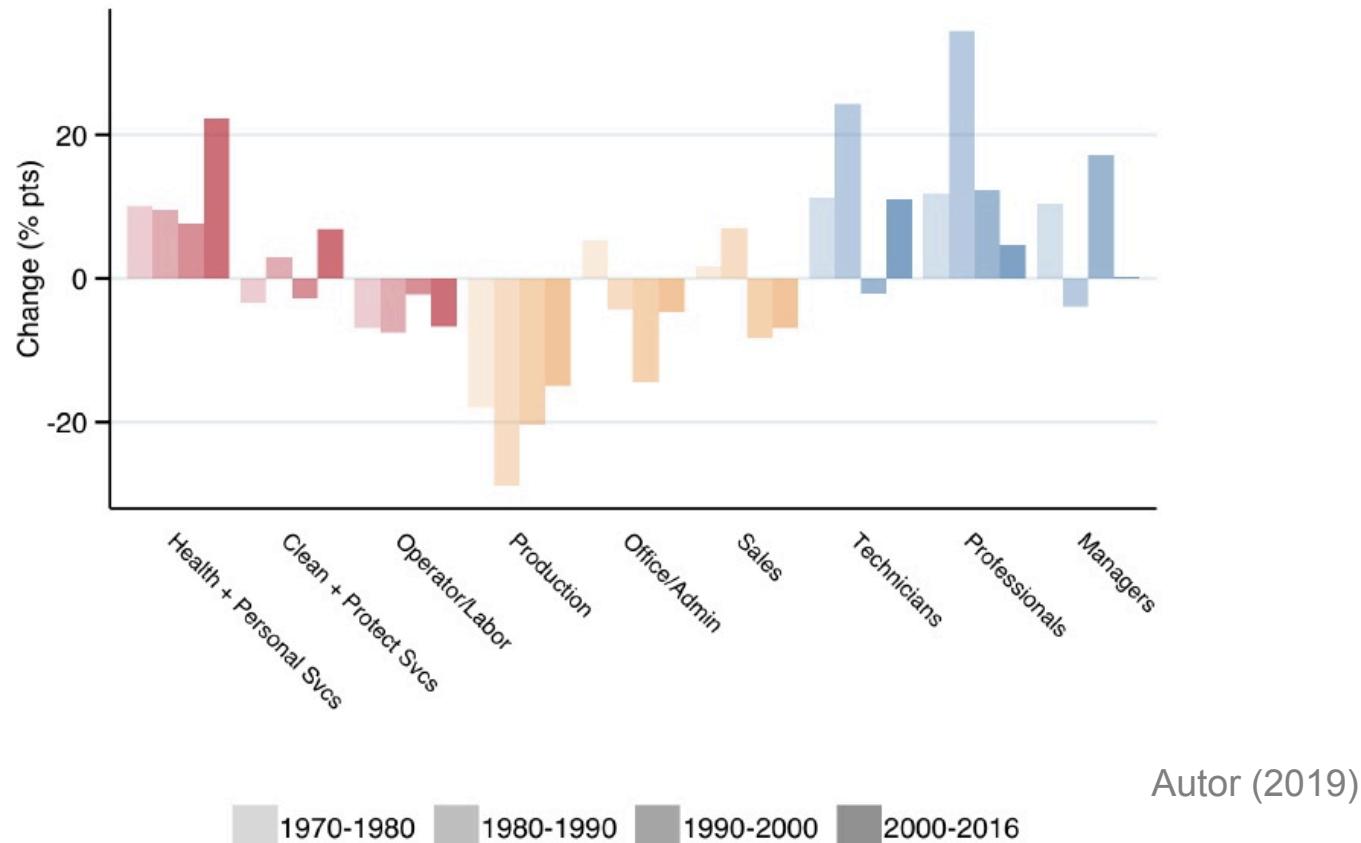
Unequal cities



Rising wage premium for college graduates (blue)

Flattening wages for non-graduates (red)

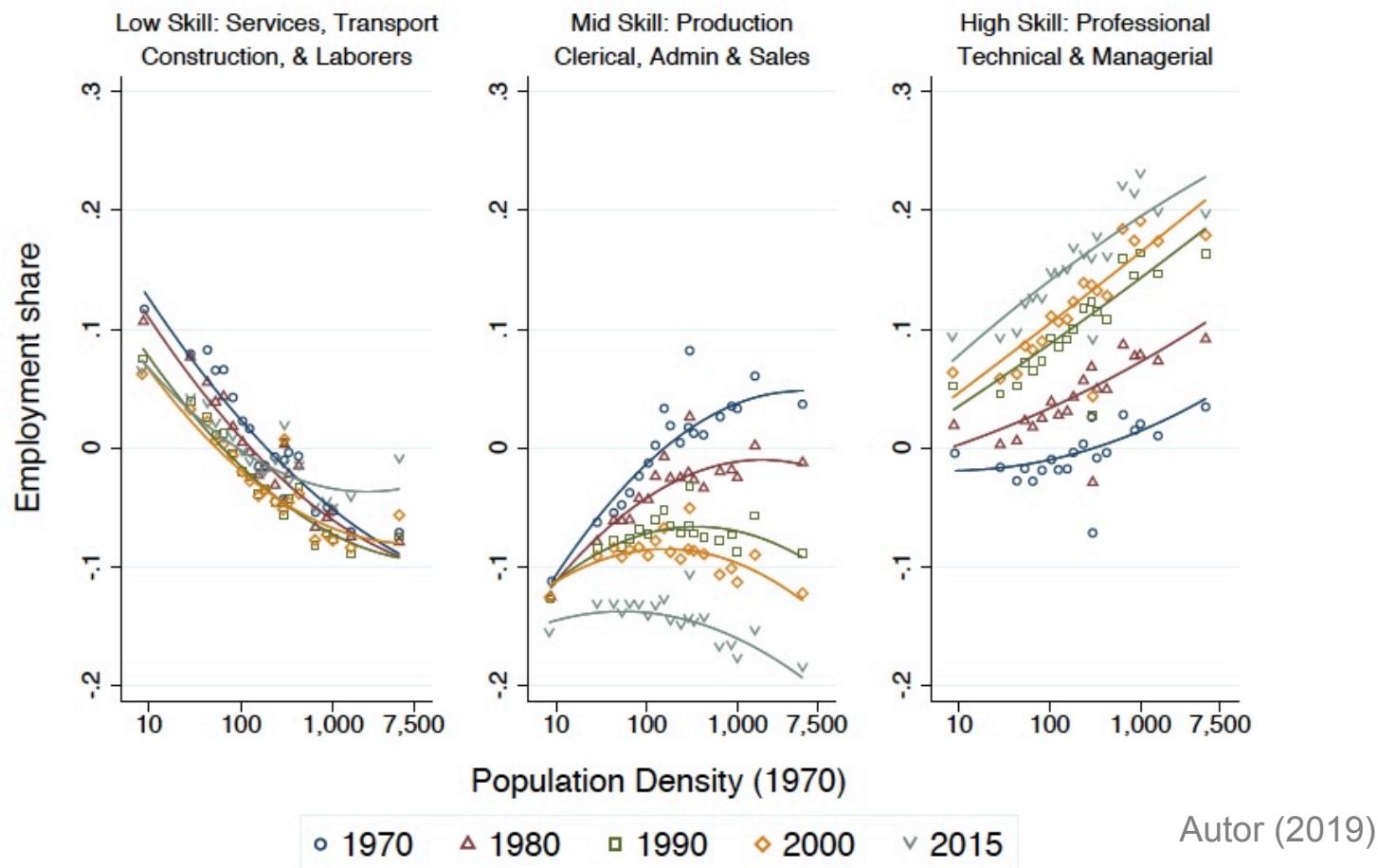
Why? Job polarisation is one reason



Big growth in highest-paid and lowest-paid jobs since 1970

Workers without degrees shifted into lower-paid work

Geography of job polarisation



US cities have seen growth in lowest-paid and highest-paid jobs
Biggest changes in the biggest cities

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

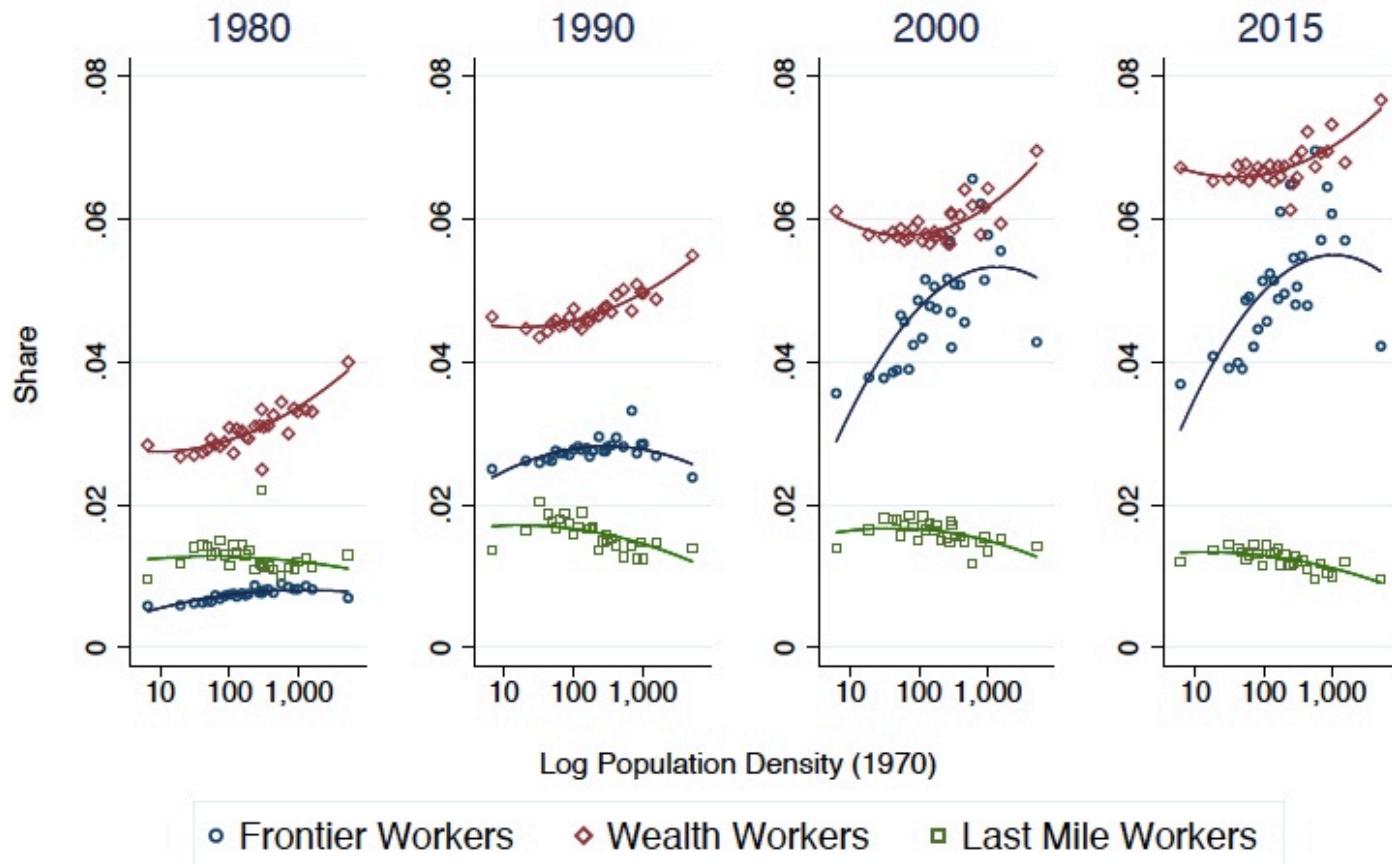
Table reports examples of new job titles added to the 1977 and 1991 Dictionary of Occupational Titles, and the 2000 and 2010 Census Classified Indices of Occupations.

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

'New work' in cities



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

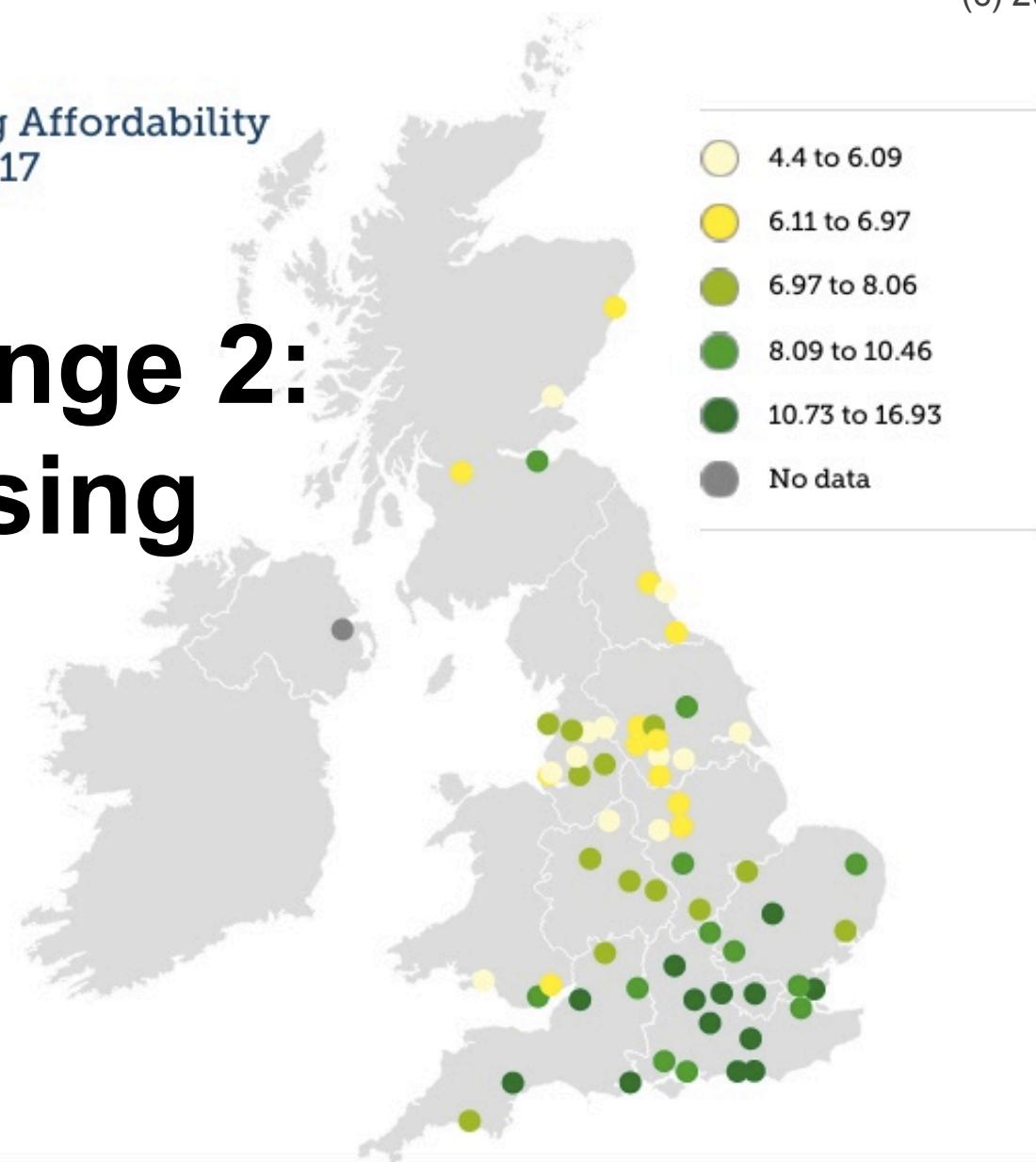
Clustering has got stronger over time

Policy responses

- **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!

Housing Affordability
Ratio 2017

Challenge 2: housing



<https://www.centreforcities.org/housing>

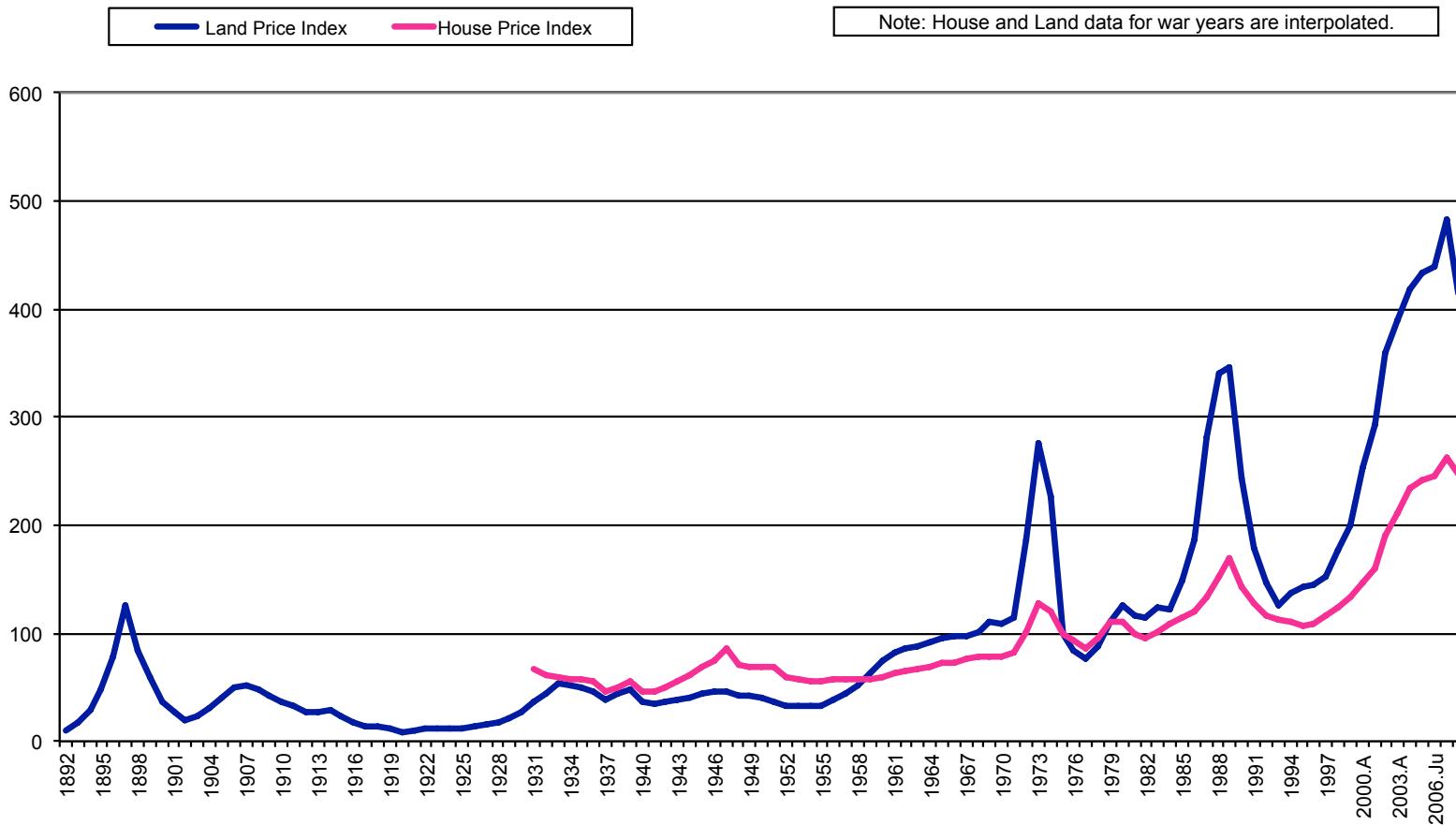
Affordability = ratio of mean house price / mean annual earnings

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, especially affordable housing. The planning system is too restrictive, especially in the most popular places. Build more and prices will come down
- **Demand side** – no, the problem is who's buying. Housing has become financialised. We're building for investors and speculators, especially outside the UK. This is why cities are full of luxury flats. Restrict that, and prices will fall.

The supply side

Figure 1: Real Land & House Price Indices (1975 = 100)

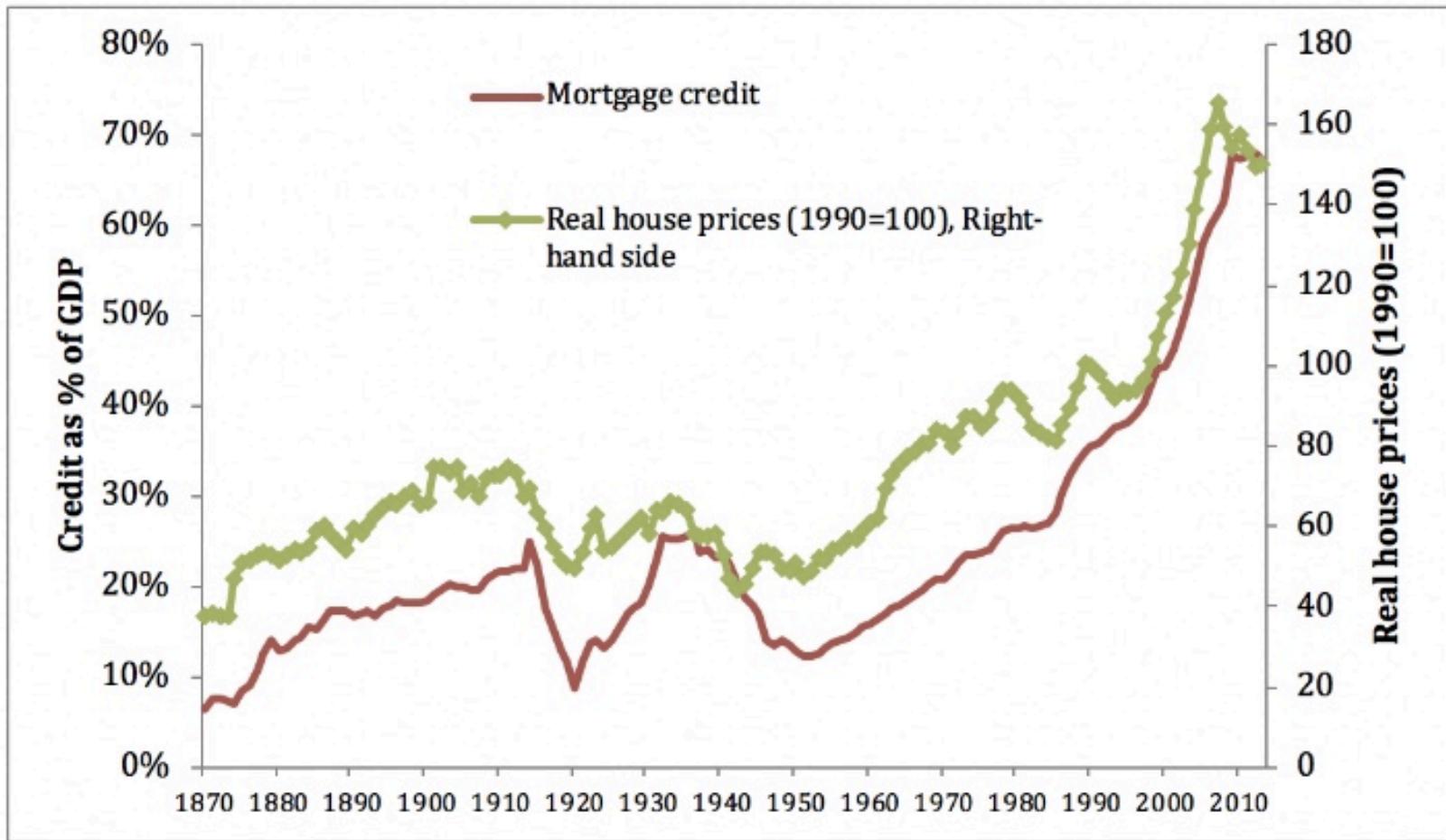


Price of UK houses and land have been rising since the 1950s
And especially since the 1980s

The supply side

- Key idea = UK planning system is based on development control. This restricts supply in popular places
- NIMBYism makes this worse
- Existing homeowners want to restrict supply, so their homes get more valuable (Cheshire et al 2014)
- Hilber and Vermeulen (2016) estimate that house prices in England would be 35% lower – if all planning restrictions were ended

The demand side



Big expansion of mortgage finance <~> higher house prices
17 countries, 1870-2010

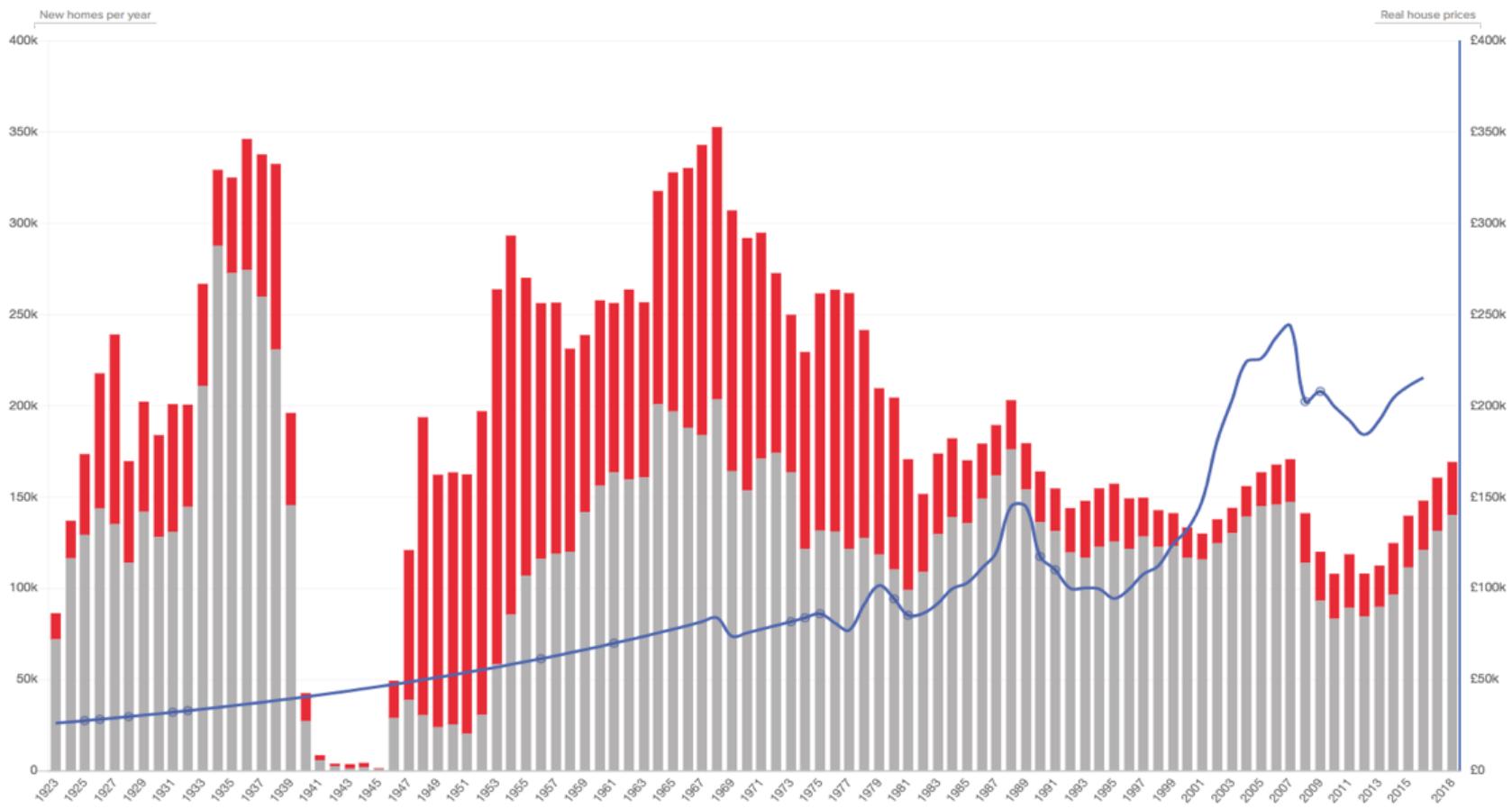
The demand side

- **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 ...**

Policy responses

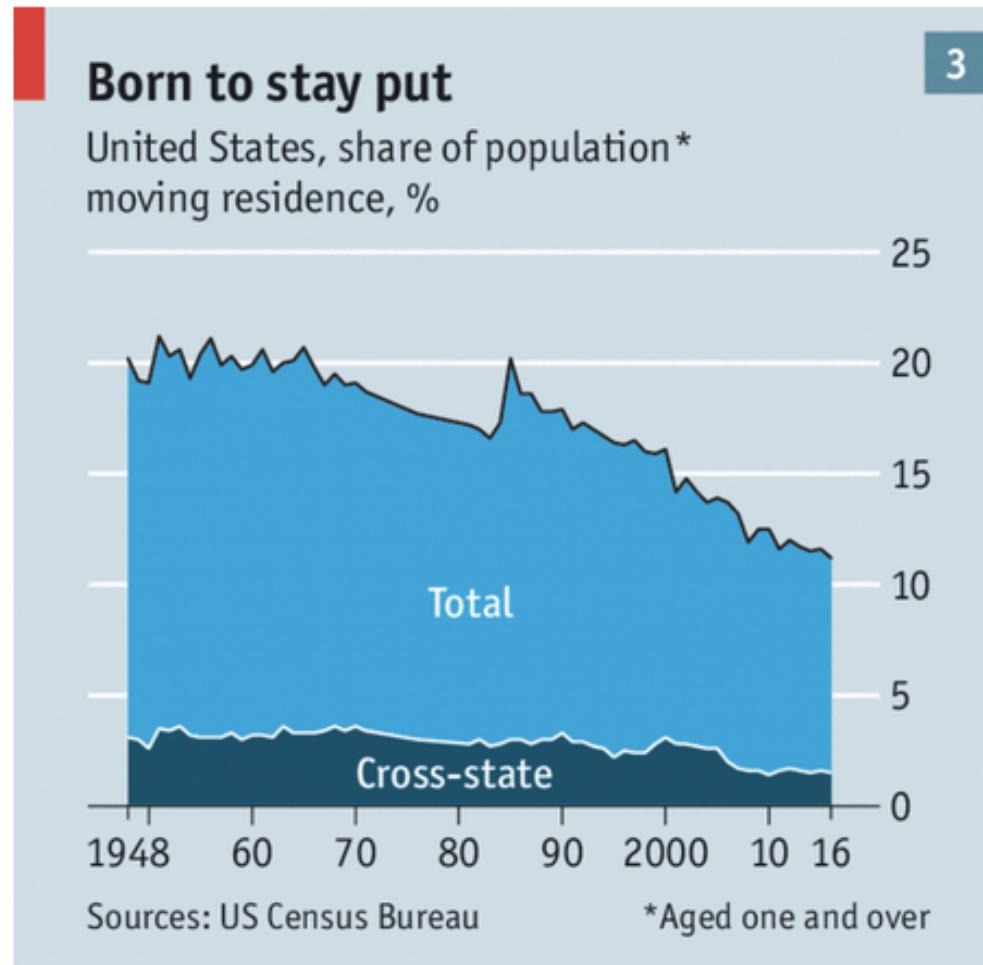
- **Change the planning system** – move UK to masterplanning systems as in Netherlands, Germany
- **Build up and out in cities** – higher density, more tall buildings, more building on the Green Belt
- **Tighter mortgage finance regs** – make it harder to own
- **Restrictions on investors** – dampen financialisation, penalise Buy To Let
- **The State should build more affordable homes!**

█ Social housing Private housing — Real house prices
● Recession years



Huge drop in *total* housebuilding after 1983, driven by drop in social housing
 Lower supply ~ higher prices

Challenge 3: mobility is falling



Economist.com

Avent (2017)

46

Immobility is high

- Bosquet and Overman (2019) look at UK mobility patterns. They find that:
 - 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. But others **may not want to move**
- UE generally doesn't talk about **attachments to places and communities; 'bonding social capital'**

Policy responses

- **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 may not be that realistic (social capital should be part of UE frameworks)
- In 'left behind' places, rather than encouraging mobility, it may be smarter to **improve public services and quality of life**

Summary

- Today's world is an urban world – urban areas are the world's economic building blocks
- 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)

- Economists argue that urban systems should move towards ‘spatial equilibrium’, with people sorting to the right places
- This smooths out many of the inequalities we worry about
- In practice there are at least three **four** challenges here
- Challenge 1: the urban wage premium is disappearing for entry-level jobs
- Challenge 2: housing in many cities is unaffordable, and building rates are very low
- Challenge 3: many people can’t or won’t move
- **Challenge 4: what if face to face becomes harder or riskier?**

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