

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

### Housing Policy and Housing Affordability: The Role of Supply Constraints Christian Hilber (LSE & CEP)



VATT Day 2022, VATT Institute for Economic Research Friday, 13 October 2022, 1-2 pm, Venue: Botta (Museokatu 10, 00100 Helsinki)

#### Stylized fact: Unaffordable housing is a major policy concern

- Especially in 'superstar cities' such as Hong Kong, London, Vancouver or San Francisco
- And in tourist areas such as English seaside towns, places in the Mediterranean coast or the Swiss mountains
- Affordability crisis 'spreads' spatially—Also to Finland (Helsinki)



#### Focus on England and its 'superstar city'—London (the worst affected city in Europe)



**Stylized facts** 

Causes Theory

Policy evaluations: 1) Help to Buy 2) Central gov. grants

Conclusions **Possible Solutions**  3

#### Stylized fact: Housing has become extremely unaffordable



**Stylized facts** 

Causes Theory

Policy evaluations: 1) Help to Buy 2) Central gov. grants

Conclusions Po:

#### Stylized fact: Severity of crisis varies over space

House price to earnings ratio for selected regions (1983q1 – 2022q3)



Source: Nationwide (ONS, ASHE, NES) Note: Using all properties & mean gross earnings in each region.

Stylized facts

Causes Theory

Policy evaluations: 1) Help to Buy 2) Central gov. grants

#### What about Finland and Helsinki?



Stylized facts Causes Theory Policy evaluations: 1) Help to Buy 2) Central gov. grants Conclusions Possible Solutions

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#### What about Finland and Helsinki?

Price of 65 m<sup>2</sup> home / disposable household income (1995-2020)



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#### What about the role of (falling) interest rates...?



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Conclusions **Possible Solutions** 

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#### Stylized fact: Crisis worsens even considering financing costs

• First-time buyer mortgage payment as % of take-home pay (1995q1 – 2022q3)



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#### What about renters?



**Stylized facts** 

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#### **Stylized fact:** And private renters...



#### **Stylized fact:** Housing is most important issue facing London



**Stylized facts** 

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#### Why has housing in England become so unaffordable?

 Evidence strongly suggests the crisis has been largely driven by growing demand for desirable locations (chiefly London & SE) in conjunction with extraordinarily tight <u>and increasingly binding</u> long-term supply constraints



- If supply were responsive:
  Demand growth should
  lead to construction boom
  and very slowly rising
  prices
- ⇒ But if supply is severely constrained (like in England & especially in London) house prices rise

dramatically



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#### What makes the LT-supply curve unresponsive ('inelastic')?

**1.** Physical supply constraints: Constraints imposed by geography, topography, geology/soil conditions, & existing developments



- **Regulatory constraints:** Constraints imposed by the planning system 2.
  - Tight regulations and/or restrictive approval processes can make adding new supply very difficult...

Stylized facts

Theory

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#### Horizontal constraints



+ Where you can build in principle: **Restrictive approval process** (induced by 'development control' planning system catering to NIMBYs) + **lack of fiscal incentives** to permit development (C >> B)

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#### The protected view from King Henry VIII's Mound onto St. Paul's cathedral (implemented in 1710, 16km away)



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#### The consequences: Impact on construction and housing costs



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#### **Construction and real house prices in UK** (1970-2020)



# How much of increase in house prices can be explained by long-term supply constraints? (Hilber & Vermeulen 2016, EJ)

- Rigorous causal evidence suggests that if the Southeast of England had regulatory restrictiveness of the Northeast, house prices would be 25% lower (likely underestimate)
- Physical constraints (scarcity of developable land) also matter, but impact on house prices is mainly confined to largely developed places (e.g., Westminster in London)





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#### Why is the planning system not being reformed?

- Vested interests (i.e., owners of developed land: homeowners & landlords) have strong incentives to protect their asset values ⇒
   Vote & lobby against reform (Fischel, 2005, Hilber & Robert-Nicoud 2013, JUE)
- As locations become more developed over time, owners of developed land become relatively more powerful (Hilber & Robert-Nicoud 2013, JUE)
- More and more locations become tightly regulated at the cost of lower income renters and young would-be-buyers



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# What about housing policies that aim to improve affordability or policies that aim to reduce regional inequality?



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#### Starting point: The Spatial Equilibrium Model (SEM) See Glaeser and Gottlieb (2009, *JEL*)

- Idea: If households are mobile, then wages and housing costs adjust to create 'spatial equilibrium' – i.e., workers & firms are indifferent across space
- Simplified: For identical households, wages + amenities housing costs must be constant (otherwise they move)
  - ⇒ Put differently: Lower housing costs compensate for lower wages
  - ⇒ Cross-city differences in earnings create false impression of within-country inequality (i.e., it's a misleading statistic)

#### But standard SEM ignores three important points...

- 1. Households are not identical
- 2. Households, especially in deprived areas, are often immobile
- 3. Model does not distinguish b/w owners & renters
- These points are crucial for inequality considerations: If government interventions (or other demand shocks) raise demand for housing and thus prices and rents in deprived areas, this makes owners better off but not renters!
   (The role of downpayment & liquidity constraints)

#### Implications for tackling inequality problem?

- The true issue is the glaring income and wealth **inequality across individuals**, not across regions
  - Especially young (w/o wealth) & low-skilled lower incomes struggle
  - Not just in 'deprived areas' or 'declining cities' but also and perhaps especially in places like London or San Francisco!
- ⇒ This calls for intervention... **but do existing policies work**...?
- ⇒ Look at two policies to illustrate problems that arise when policy makers ignore long-term supply constraints...

#### An example: UK's Help to Buy (HtB) Equity Loan Scheme

Provides equity loan for up to 20% of house value (40% inside of Greater London Authority) to buyers of new build properties + Area with lax no interest for first 5 years
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#### Aims of scheme:

 Make owner-occupied housing more accessible & affordable

Conclusions

- Stimulate construction activity

#### What is the evidence? See Carozzi et al. (2022)

- In Greater London Authority (unresponsive supply)
  - HtB significantly increased house prices of newly built units & had no discernible effect on construction
  - HPs increased by about twice as much (!!) as the implied interest rate subsidy
- At English/Welsh border (responsive supply)
  - HtB did increase construction w/o affecting prices
- Another finding: HtB improved financial performance of participating developers!





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#### Policy evaluation (or the law of unintended consequences)

- Main **beneficiaries**: Developers and landowners in supply constrained areas (at cost of taxpayer)
- Young and lower income would-be-buyers in desirable locations such as London **did not benefit**: May now get a mortgage, but financial burden over lifetime of mortgage is even higher!
- ⇒ Policy has worsened affordability crisis in already unaffordable areas & has added housing in locations where there are few jobs!
- Why introduced in first place? Market-wide price adjustments not well understood by general population & beneficiaries are well organized & politically influential

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# What about central government grants into deprived areas? (See Hilber, Lyytikäinen & Vermeulen 2011, RSUE)

- Evidence suggests central government grants in England are nearly fully capitalized into higher house prices (~90%)
- Consequence: Redistribution runs from taxpayer
  - to existing homeowners & typically well-off landlords in deprived places
  - Low-income renters are no better off!
- Consistent with this, evidence for US suggests poverty rates are higher when redistribution is higher (Glaeser & Gottlieb 2009)

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#### Conclusions

- Policy makers may have good intentions, but in supply constrained locations, policies that aim to improve access to housing or reduce 'regional inequality' may have severe unintended consequences & may even be counterproductive (i.e., increase inequality)
- This applies particularly to demand focused housing policies
  & fiscal aid to deprived places

#### $\Rightarrow$ What might be a better way forward?

#### Possible solutions – Some guiding principles (1/2)

- Housing policies ought to **focus** more **on supply side** 
  - <u>In England</u>: An increase supply could be achieved via reforming planning & tax system
  - Planning system should be redesigned to give less power to
    NIMBYs & focus more on correcting "market failures"
  - Property taxes ought to be **local** to provide more fiscal incentives to local authorities to permit development
  - Tax system should move away from transfer taxes towards annual property taxes (would increase mobility & reduce mismatch in housing and labor markets!) Cheshire & Hilber (2021, *BB*), Hilber & Lyytikäinen (2017, JUE), Eerola *et al.* (2021)

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#### Possible solutions – Some guiding principles (2/2)

- On the demand-side: 'Help people (directly) rather than
  places' (Hilber & Schöni forthcoming, OxREEF)
  - E.g. via housing vouchers
  - Caveat: Does not work if HHs in deprived areas are immobile!
    - Second best: Provide subsidized (social/public) housing to those most 'in need'
  - Lastly: Could consider imposing annual tax on value of 2<sup>nd</sup>
    homes this would discourage housing purchases for pure investment/capital gains reasons & should help make housing more affordable for local residents



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### Q & A

### Thank you!

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#### Additional slides (with links to main presentation)

#### Tight regulation does not just drive-up housing costs...

- Stringent land use restrictions in high productivity cities such as NY or SF also cause severe spatial misallocation of labor (Hsieh and Moretti 2019, AEJ-Ma)
  - Estimates suggest restrictions lowered aggregate US growth by 36% b/w 1964-2009
- And they drive up cost of commercial space (Cheshire and Hilber 2008, EJ), increase commuting distances & vacancy rates (Cheshire *et al.* 2018, JPUBE), lower productivity of retailers (Cheshire *et al.* 2015, JOEG), and raise energy consumption & carbon footprint (Hilber *et al.* 2019, JUE)

Stylized facts **Causes** Theory Policy evaluations: 1)

Policy evaluations: 1) Help to Buy 2) Central gov. grants



#### The link between growing demand & supply price elasticity

C.A.L. Hilber, C. Mayer / Journal of Urban Economics 65 (2009) 74–90



Fig. 1. Exogenous demand shocks in a community with plenty and little available land.



#### The role of downpayment and liquidity constraints

- Could argue own vs. rent is choice, but not true as many young & lower incomes cannot afford to own + owning not for everybody
- Put differently: Pre-existing inequality largely determines who owns & who rents... a self-reinforcing mechanism!



#### Why these policies in the first instance?

- Policies tend to be popular because...
  - Redistribution (in wrong direction) via housing market adjustment
    is **not transparent**
  - Median voter tends to be owner-occupier who indirectly benefits from capitalization effects
- Intended beneficiaries do not realise policies don't help them
  - Supposed benefits (grant payments or equity loan) are 'real' and 'direct'
  - Offsetting capitalization effects are **indirect** & not typically associated with policy



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#### **Place-based policies**

 Place based policies ought to focus on structural reforms that further skill-set of deprived (mainly via education) & incentivize innovation with aim being to reduce unemployment & increase labour productivity



#### **Backup slides**

• Additional slides to explain why increase in price-to-rent ratio is perfectly consistent with 'supply shortage hypothesis'

#### **Stylized fact:** Price to rent-ratio Four countries & corresponding superstar city, 1997-2018



Stylized facts:

- P/R-ratio increased substantially in most countries
- 2. In a cyclical fashion
- 3. Much more so in 'superstar cities'

\* Despite falling real interest rates b/w 2000-18

# Some stylized facts about the price-to-rent ratio



Stylized facts:

- . P/R-ratio increased substantially in most countries
- 2. In a cyclical fashion
- Much more so in 'superstar cities'

\* Despite falling real interest rates b/w 2000-18

# An alternative explanation: Consider positive demand shock...



Starting point: Long-run equilibrium (no demand shock):  $E[R_1] = R_0$  $P_0 = R_0 + r E[R_1]$  $\frac{P_0}{R_0} = \left(1 + r\frac{E[R_1]}{R_0}\right) = (1+r)$ Positive demand shock: Elastic case A:  $P_1^A = R_1^A + r E[R_2^A]$ 

 $P_1^{A} = R_1^{A} + r E[R_2^{A}]$   $\frac{P_1^{A}}{R_1^{A}} = \left(1 + r \frac{E[R_2^{A}]}{R_1^{A}}\right) < (1+r)$   $\leq 1$ 

Inelastic case B:

 $\frac{P_1^B}{R_1^B} = \left(1 + r \underbrace{E[R_2^B]}_{R_1^B}\right) > (1+r)$ 

Prediction 3 illustrated...



### Now consider negative shock...



#### Quantitative effects for London: Decomposition

