How to understand the links between the housing system and productivity growth

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Productivity or Progress
Research or Practice?
Defining terms

- Productivity is: a measure of the effectiveness of the use of resources in the production of defined outputs.
- Can be estimated: at the level of the firm (of farm), city, region or sector (construction) but more commonly estimated at macro-regional level.
- Usually derived: by estimating production functions essentially a physical relationship between measured inputs and measured outputs:

\[ Q = Q(K, L, X) + e \]

(given values by applying factor and product prices)
Australia, recognising the issues

Agreed in Academic Policy Literature that Australia has

- High growth in GDP per capita over last three decades:
- This reflects strong terms of trade (until now)
- A favourable demographic, rising share of population working
- A reliance on capital deepening to raise output per worker over last decade (Q/L, by raising K/L)
- Multi-Factor productivity, the residual reflecting innovation, has been relatively static

Less likely to see future favourable trade and demographics effects, productivity has to grow.
Productivity or progress

Productivity a key economic/policy idea

- Informs relative competitiveness of nations, sectors and places (places do compete)
- Growth Indicates capacity to increase rewards to factors of production (wages, profits)
Productivity or progress

Important caveat
- Recent Sarkozy-Stiglitz progress measures
- Increasingly used in urban, regional and national progress estimates (though ‘happiness’ still a laugh)
- Need to relate ‘housing’ to both: wider measures not an excuse for continuing failure to logic chain and ignoring empirical linkages

But start here with productivity
Urban concerns

Concerns about cities have shifted from ‘Decay-Decline-Disadvantage’ to ‘Growth Hubs, productivity’

- Henry (2011) and future growth will be metropolitan: constraints of infrastructure and housing
- Cities: ‘big’ share of the economy, ‘change’
- Marshall (1862), Glaeser (2010), cities as key sources of agglomeration ecs for labour markets and for innovation and locus of spillover effects

Geographies of growth, housing matters
Importance noted, housing ignored

Major Cities Unit usefully recognises argument, but:

- Applied them to urban infrastructure, transport: reiterated by Lowe (2013)
- Most other major nations also make same case re ‘infrastructure’, but ‘housing’ excluded from definitions, housing policy about social
- Housing sector lobbies weak on this idea

Lobbies, and governments not even clear where to start on the issue. So where?
Conventional approaches

Productivity estimates in Infrastructure derived from production functions

- At national scale, Aschauer (1988, 1990)
  - Suggest strong impact
  - Now questioned, new methods, new data

- Very recent (post 2005) more convincing regional estimates; recognition that estimates are location, sector and context specific and not universal

- Some major projects reduce growth (Haughwot 2005)

- Estimates do not include housing!

Reductionist, top-down perspective unhelpful
Housing approach

Approach essential given housing sector weight in economy: investment, debt, assets spending:

- Adopt a bottom-up perspective
- But ensure reaches from local to global
- Essential to adopt a MOG view
- Critical to recognise metro economic policy roles
- Start with a priori logic chains

Housing is difficult, don’t be too reductionist, don’t throw out baby with bathwater
Outcomes, scales

GLOBAL, NATIONAL

REGIONAL METRO 1

N1, N2, Nn

RM2, RM3

PRICES

AVAILABILITY

SPILOVERS
Housing as economic system infrastructure: logic chains

1. Recognise that ‘housing’ applies to ‘process’ as well as ‘characteristics’ outcomes. Both can have growth effects.

2. Breakdown housing ‘characteristics’ into
   → Housing: size, comfort, style
   → Location: jobs, play, schools, shops (see transport)
   → Metropolitan supply: quality, availability
   → Prices, rents, price changes

3. Connect detailed attributes to productivity factors … human capital, innovation…(and repeat for processes)
Housing, outcomes, growth.
What the latest evidence tells us

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Productivity, macro-production functions

- Aschauer estimates strong but now 30 years old professionally critiqued, still used in policy rhetoric (US Treasury 2013): no such estimates for housing
- Regional estimates in Canada (MacDonald 2008: Conference board of Canada 2012) show significant effects: not yet done for housing
- Metropolitan (Glaeser), no overall evidence but shows how housing costs can displace productive
- Cost Benefit Analysis (ex post) of Major Housing Projects: Yes in transport, not done in housing policy
RBE spillovers
Homes and neighbourhoods

1. Size, comfort, amenity
   → Impacts on health, learning ability (Human K)
   → Impacts on energy use, costs and carbon production (Natural K, or K)
   → Effects on Home business formation and growth (BK)
2. Neighbourhood and location (separating selection and neighbourhood effects important)

- Social capital formation, trust (K)
- Teenage school and work performance (HK)
- Employer address discrimination (HK)
- Time spent travelling to fulfill household activity pattern (gain claimed by transport!), (HK)
- Quality and variety in n’hood: Florida ‘boho’ effects
RBE price and output effects

Wide range of effects (net advantages)

- High housing and land costs can deter agglomeration of required skills
- Differential regional price changes complicate labour mobility
- Higher housing costs reduce spending on tradeable goods with higher returns to scale
- Higher housing output rates can generate labour skills
RBE price and output effects

- Meta review needed of housing based effects on different factors of production: don’t claim housing as the source of urban productivity but don’t continue to ignore how housing impacts economies in different ways, in different contexts
Other forms of evidence

Two other important sources of evidence

- What households think about how housing shapes work and investment

Even more important

What those who make plans and policies for metropolitan housing and local economic development think: the mutual failure of economic and housing policymakers to understand and recognise housing-economy connections (too difficult!) At all scales undoubtedly impedes growth.