Misunderstandings about Planning Restrictions

Peter Tulip[1]
Centre for Independent Studies
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Summary

Many researchers have found that planning regulations restrict the supply of housing and hence increase its price. This paper discusses some objections to this finding.
I argue that most of these objections reflect simple misunderstandings. They are either empirically unrealistic or are not relevant to the view that planning raises prices.
Specifically:

- 'High prices have causes other than planning, such as low interest rates or immigration'.
    - These other explanations are important, but they are complements, not alternatives. High prices reflect the interaction of unresponsive supply (due to planning) and rising demand. If supply was more responsive, then high demand would lead to more dwellings instead of higher prices. (Section 4).

- 'High prices accompany high density'
    - Simple correlations confuse the direction of causation. When the relationship is examined closely, as in leading journals, researchers find that restrictive planning substantially boosts prices. The consensus among experts is strong. (Sections 3, 4c).

- 'Construction has recently outpaced population.'
    - The criterion for assessing whether the stock of housing is adequate should be whether price equals the marginal social cost of supply. It is not comparing the flow of new construction with population fluctuations or past experience. (Section 5).

- 'Tall apartment buildings would reduce local amenity'
    - Studies find that externalities from high density are small or positive. Nearby house prices often increase in value following large construction projects. As judged by willingness to pay, increased density does not significantly harm local amenity. (Section 7).

[1] Chief Economist, Centre for Independent studies. ptulip@cis.org.au. Thanks to Tom Carr, Simon Cowan, Keaton Jenner, Hal Pawson and Vivienne Milligan for comments. All opinions are mine.

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1. Introduction

A large body of international research finds that planning regulations restrict the supply of housing and hence increase its price. For example, Jenner and Tulip (2020) estimate that planning restrictions increase the cost of the average Sydney apartment by $355,000 or 68%. In Melbourne, the effect is $97,000 or 20%. As discussed in the Section 3 below, these estimates are in line with many other studies. Tulip (2020) provides a summary of this and related research.

However, this research is not well understood or accepted among the public nor among policy makers. Moreover, the agreement among researchers is strong but not universal. Vocal dissenters include Cameron Murray (2020a, 2020b), Hal Pawson, Vivienne Milligan and Judith Yates (2020) and Peter Phibbs and Nicole Gurran (2021). Many submissions to the current Parliamentary Inquiry into housing affordability cite these papers.

This paper addresses these doubts and reservations. I argue that most of them are simple misunderstandings.

Several of these myths have been refuted before, for example by Kirchner (2014), Bowman (2020), Tulip (2018, 2020) and Jenner and Tulip (2020, Section 2.1) all of which I copy from. However, the debate continues to evolve and zombies keep rising from the dead. Moreover, these counterarguments are not addressed, or even mentioned, in the dissents noted above. So an update and rephrasing are useful.

Of necessity, this topic is specialised and assumes a knowledge of previous debates. Despite that narrowness, these issues are pivotal in housing policy.

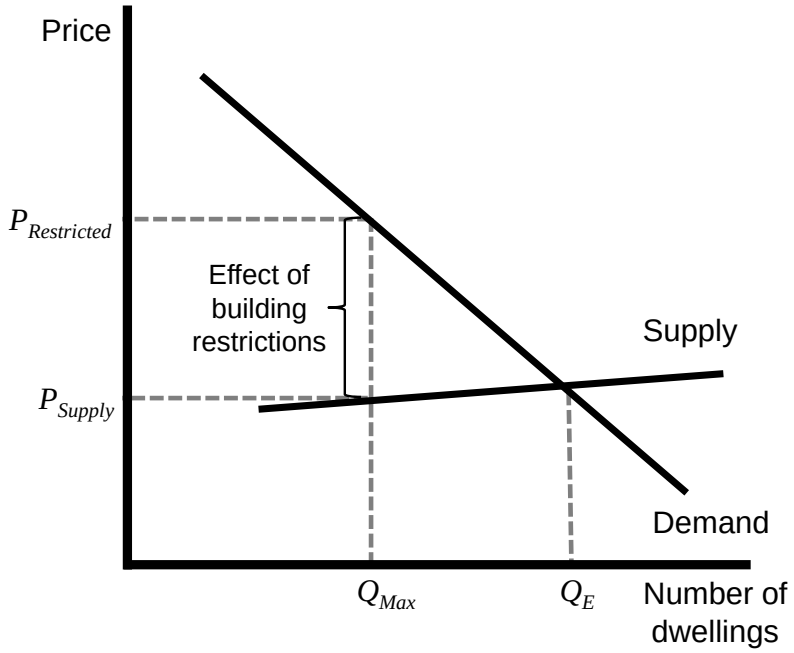
For brevity, I ignore the sillier and more obscure arguments. I focus on apartments, the main policy issue in Sydney and Melbourne. Issues relating to detached houses are more complicated and less relevant to policy debates; they are discussed by Gyourko and Krimmel (2021, online Appendices).

2. Background: planning boosts housing prices

A large effect of planning restrictions on housing prices has been established in several different ways. With a direct relationship being difficult to measure and interpret, the leading approach to quantifying the effect is indirect, focussing on the wedge between prices and costs.

Figure 1 is a supply-demand diagram from introductory economics. Planning restrictions can be thought of as a restriction of supply from the free-market quantity, $Q_{E,}$ to $Q_{max.}$ This pushes the price up to $P_{Restricted}$. The difference between $P_{Restricted}$ and the cost of supply, P_{Supply}, often referred to as the 'zoning tax,' provides a measure of the severity of these restrictions and the shortage they cause. This is the standard way in which economists measure the severity of quantitative restrictions such as taxi licenses, import quotas, patents and so on.

Figure 1: Stylised Apartment Market with Binding Quantitative Constraint



The estimates of Jenner and Tulip mentioned above are based on the cost of supplying the average Sydney apartment in 2018 being $519,000 (corresponding to P_{Supply}) while the average sale price was $873,000 ($P_{Restricted}$). The difference between these implies an effect of planning restrictions, or 'zoning tax,' of $355,000.

This wedge could arise for many reasons – for example, a cut in interest rates might increase the demand curve. However, for the wedge to be sustained requires a barrier to extra supply. Otherwise, in a competitive market, producers would expand sales and prices would return to equal marginal cost. It is for this reason that low interest rates do not boost the prices of assets like cars or fridges. But they do boost housing prices, because planning restrictions limit supply.

Many objections in the popular media (for example, Stokes, 2021 or Gurran, 2021) are to extreme claims that no-one makes. So it is necessary to clarify what is not being argued.

It is not being argued that planning is the only significant cause of high prices. Planning just makes supply inelastic. That interacts with increases in demand (due to immigration, income, low interest rates, taxes, etc) to raise prices. So evidence that other factors drive prices is consistent with (indeed, required by) the view that planning is important.

Nor is it being argued that planning stops all, or even most, building. The argument is that planning does not permit enough building.

For fuller explanations and further evidence see Kendall and Tulip (2018), Jenner and Tulip (2020) or the references in the following section.

3. The expert consensus

The argument of the previous section is widely cited and widely agreed among researchers. It is useful to understand this context before considering specific disagreements.

Some quotes from published surveys illustrate. Given that some 'summaries' of the research put self-citations of blog posts on the same level as articles in major journals, an appeal to authority seems relevant, so I include affiliations and publication details.

'Most studies have found substantial effects on the housing market. In particular, regulation appears to raise house prices, reduce construction, reduce the elasticity of housing supply, and alter urban form. … The available research suggests [the zoning] tax is quite large for many markets.'

> Joseph Gyourko (University of Pennsylvania) and Raven Molloy (Federal Reserve Board), Handbook of Regional and Urban Economics, (2015 pp 1289, 1296)

'there is a strong consensus among economists that … land use regulations are standing in the way of new housing construction and are causing high and rising prices'

> Emily Hamilton, George Mason University, (2021 p195)

'Dozens of empirical studies have shown that more restrictive land use regulations are associated with higher housing prices'

> Vicky Been, New York University, Journal of Land Use & Environmental Law (2018 p227)

Similar conclusions are found in surveys by Jason Furman, then Chairman of the US Council of Economic Advisers (2015); Edward Glaeser of Harvard and Joseph Gyourko (2018) in the *Journal of Economic Perspectives*; and, for a UK focus, Christian Hilber of LSE and Wouter Vermeulen of the CPB Netherlands Bureau for Economic Policy Analysis (2015, Section 2) in *The Economic Journal*. The Economist magazine (2021) uses stronger language: 'no one needs any more papers showing that stringent zoning regulations raise housing costs. It is time for solutions.'

The individual papers cited in these surveys typically contain literature reviews that reach similar conclusions. Unsurprisingly then, these conclusions are repeated in official reports. That includes recent surveys of the Australian economy by the OECD (2021a, p52) and the IMF(2021), the NSW Productivity Commission (2021), the US Council of Economic Advisers (2019, 2021) under both Republican and Democratic Administrations and the Barker Report in the UK (Barker, 2006). Tulip (2020) lists many other reports with similar findings.

In contrast, Rob Stokes, the NSW Minister for Planning (2020) describes a large effect of planning restrictions on apartment prices as 'contested'. Murray (2021, footnote 1) says the research has been 'repeatedly discredited'. The language on social media ('crazy', 'incomprehensible nonsense') is stronger. These claims seem to be inconsistent with published summaries of the literature.

It would be fairer to say that the objections discussed in following sections are not taken seriously by researchers. We also see this in academic citations, such as Google Scholar. Studies finding large effects of planning restrictions have thousands of citations and are replicated on other data sets. In contrast, dissents are very rarely considered to deserve mention. Murray (2020a) discusses.

This is not to say that the research is settled or that critics should not try to engage and contribute. But nor should they mis-characterise where the weight of expert opinion lies. Moreover, the academic consensus is relevant to the onus of proof. It invites scepticism about simple objections that will have been considered and dismissed by many experts. But let's consider these objections directly.

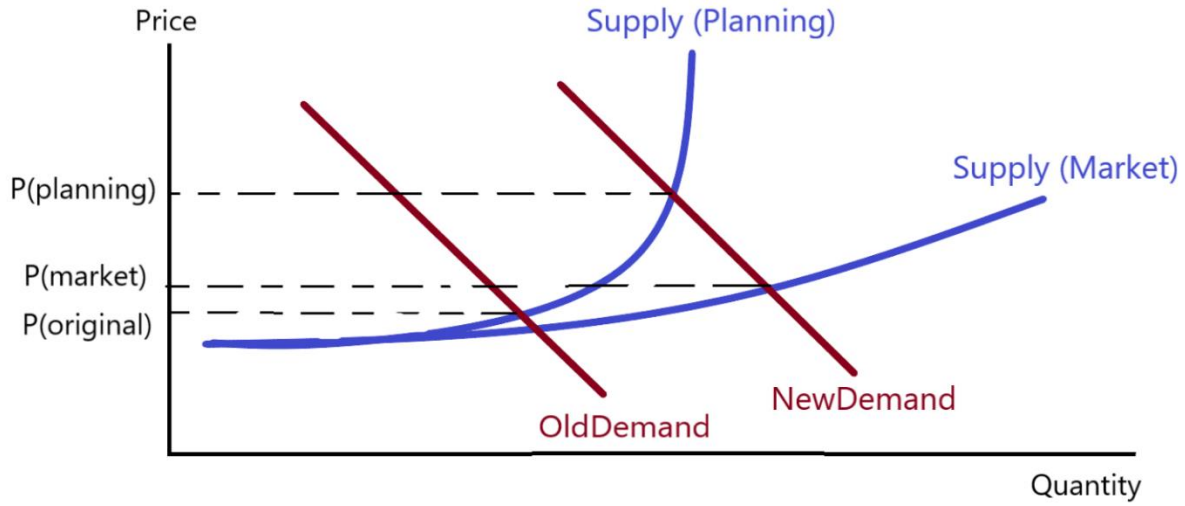
4. ‘High prices have other causes’

The most common objection to the idea that planning is an important cause of high housing prices is that some other factor is the real driving force, with leading candidates including low interest rates, taxes, immigration and financialisation (Gurran, 2021; Stokes 2021; Mulheirn 2019; Pawson, Milligan and Yates 2019, Sections 3.4.1 and 9.6; Murray 2020b, Section 4.2).

Factors boosting demand are important. For example, Saunders and Tulip (2019) estimate large effects of low interest rates and high immigration. However, these effects are not an alternative explanation of high prices. Rather, they are complementary – they *require* a large role for planning. High and rising demand *only* raise prices if supply is limited. In the absence of a barrier to construction, builders would respond to rising demand by building more dwellings, not by raising prices.

In terms of Figure 2, planning restrictions make the supply curve steep, denoted *Supply (Planning).* Factors like low interest rates or immigration raise the demand curve from *OldDemand* to *NewDemand*, which raises the price from *P(original)* to *P(planning).* In contrast, with looser planning, the supply curve would be relatively flat, denoted *Supply (Market).* Then the stronger demand would result in more dwellings, with the price only rising to *P(market).*

Figure 2: Demand versus Supply



It is simple to attribute the increase in price to the shift in demand. But more fundamentally, it is the *interaction* of inelastic supply with rising demand that explains higher prices. Many other goods face raising demand (due to higher population and incomes, for example) without substantial changes in relative prices. Housing is unusual because planning makes supply highly inelastic.

Given this interaction, it does not make sense to ask whether supply or demand is ‘more important’. As Alfred Marshall argued, this is like asking which blade of the scissors does the cutting.

That said, there is a conceptual difference. Shifts in demand in response to increased population or lower interest rates reflect a properly functioning market and do not necessarily require a policy response. The failure of supply to fully respond represents a policy-induced distortion that should be removed.

Phibbs and Gurran (2021 p472-473) and Murray (2020b p7) argue that the effect of planning restrictions cannot have increased much over time because planning has not tightened much. This

shows a clear misunderstanding of the argument. Prices rise BECAUSE planning does not change! New building is difficult, if not prohibited, in large parts of our cities; so rising demand means ever-increasing prices.

This objection reflects a confusion about the relevant question. The research in Sections 2 and 3 interprets 'the cause of high house prices' as meaning 'what is the market failure?' or 'why does housing not act like many other markets' – to which the answer is zoning. In contrast, the dissenters above assume 'the cause of high house prices' means 'what changed to make prices rise quickly?' That second question is interesting, but it is not the question that is most relevant to policy.

4.a) 'High prices reflect location premiums'

Phibbs and Gurran (2021 pp 458, 467-470) and Murray (2020a, Section 2.1.2) argue that relatively high prices for some properties do not reflect planning but 'locational preferences'. For example, in inner suburbs of Sydney, buyers pay more than a million dollars on average for an apartment, reflecting the desirability of proximity to employment, entertainment and so on. This is often twice the cost of supply.

This is just another example of the argument that high prices reflect demand, as discussed above. The response is the same: yes, demand is important, but a high 'location premium' can only be sustained by restricting supply. If increased density is profitable – as it is when prices substantially exceed costs – there needs to be some barrier that prevents builders exploiting this opportunity.

Sydney's location premium, noted above, is sustained because a relatively small share of Sydney's new apartments have been built in inner suburbs (Jenner and Tulip, Figure 5). In contrast, central Melbourne and Brisbane have comparable commuting distances and amenities to inner Sydney but their prices remain around half the cost of inner suburbs of Sydney. There is little 'location premium' in central Melbourne or Brisbane because apartments have been built where buyers want them — in inner suburbs — whereas Sydney has not.

Phibbs and Gurran (p468) note that the gap between price and construction cost increases as one approaches the city centre. Their mistake is in thinking this locational effect is an alternative – rather than a complementary – explanation to restricted supply. Height limits may be the same in different locations, but they bind more tightly as demand for high density increases.

The argument that relative prices reflect location preferences, not supply, hinges on the assumption that more households cannot share a location – as Murray (2020a, Section 2.1.2) puts it, 'locations … are inherently scarce'. A fixed amount of housing at each location is a sensible assumption for detached houses or if planning restricts supply. However, it is a bad assumption for a counterfactual in which increased density is permitted. Then taller buildings at desirable locations would drive prices down to costs.

This relationship can be quantified. In an unrestricted housing market increased demand would primarily be reflected in increased density and rising building heights. More attractive locations, such as the city centre, would have denser housing. Because marginal costs increase with height, prices would be slightly higher. Estimates of construction costs by the ABS, or industry consultants like Rider-Levett-Bucknall, suggest that increasing building height by 10 storeys would only add about $23,000 (about 4%) to the cost of building the average apartment (Jenner and Tulip, 2020, p8). So in-demand locations would be more expensive, but not by much. The differences would be small relative to the current variation in prices. As a corollary, the supply curve for apartments in a free market would be relatively flat.

4.b) 'High prices reflect tax concessions'

Negative gearing and the discount for capital gains increase the return to investing in housing and hence bid up its price. They are often cited as an alternative explanation for high housing prices. However, as argued above, that is a mistake. They should not be seen as an alternative explanation but as complementary. Tax concessions will only boost housing prices if there is some restriction on supply.

Whether the taxation treatment of housing is appropriate is beyond the scope of this paper. However, it is worth noting that negative gearing and the discount for capital gains have very small effects on prices.

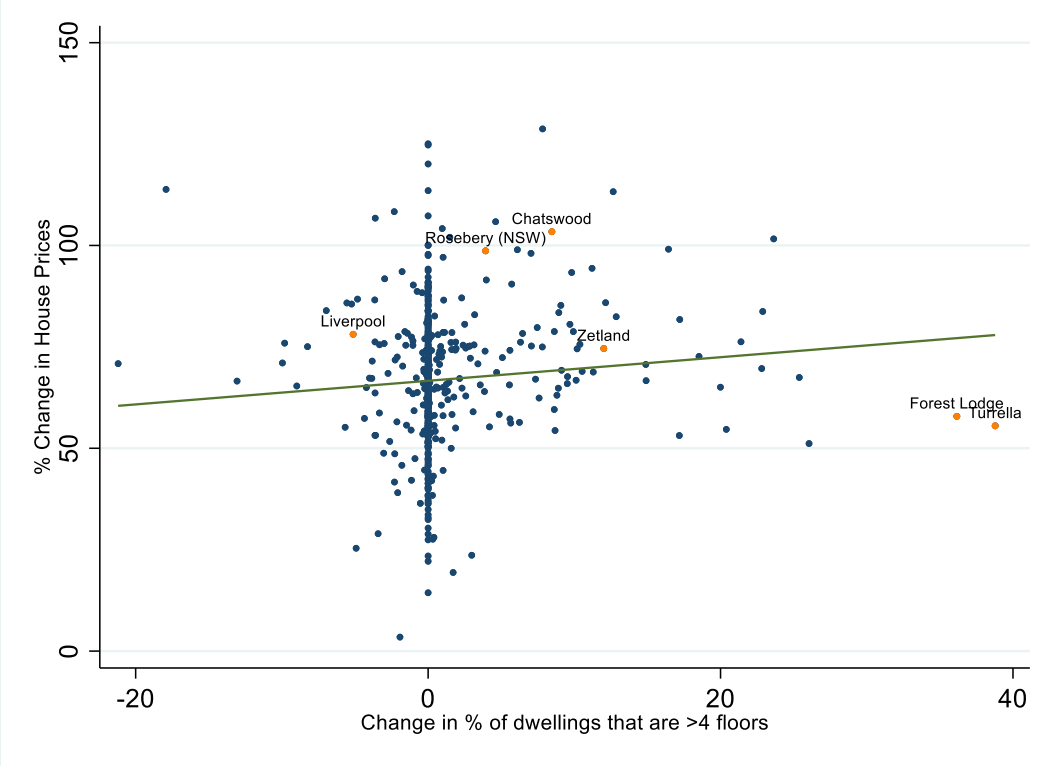
- Daley and Wood (2016, Box 6) compare the revenue cost of the concessional treatment of capital gains tax and negative gearing to the value of the housing stock and on that basis estimate that the tax concessions may boost the level of housing prices by 1 to 2.2%.
- Tunny (2018), using a similar methodology and assumptions to Daley and Wood, found larger impacts of up to 4% on house prices on average.
- BIS Shrapnel estimated restricting negative gearing would increase rents by up to 10%, decrease new home building by around 4% per annum; and reduce GDP by 1% (Duke 2016).
  These estimates have been strongly criticised by Gene Tunny and John Daley.
- The most detailed study is by Cho, Li, and Uren (2021). In a micro-founded model, they find that removing negative gearing would reduce house prices by 1.5%, raise rents 3.6%, raise home ownership by 4.3 percentage points and raise welfare by 1.7%. The welfare gain largely reflects redistributional effects.
- Deloitte Access Economics (2019) incorporate the tax concessions into the user cost of housing and estimate the effect that has on house prices using aggregate time series regression. They estimate the ALP's 2019 policy of restricting negative gearing to new housing and reducing the capital gains discount would reduce established dwelling prices by 4.6% and new dwelling prices by 3.6%. Effects of only eliminating negative gearing would be smaller.

In summary, negative gearing and the capital gains discount are estimated to boost house prices between 1 and 4%, while having a smaller negative effect on rents. These estimates are small relative to the variation in the data or to other factors that affect housing prices, such as interest rates or zoning. So for most practical purposes, the effect of tax concessions on housing affordability can probably be ignored.

4.c) 'Prices are unrelated to supply'

Figure 3 compares changes in density with changes in price across Sydney suburbs between the Censuses of 2011 and 2016. Some observers look at data like this and think it means the two variables are not causally related.

3: House Prices and High-Rise Development
(2011 – 2016)



Source: APM and Census; reproduced from Tulip and Lanigan (2021), chart 10.

Other data show a stronger *positive* correlation. Michael Buxton (quoted in Ross, 2019) argues that estimates of the zoning effect

> 'show the highest prices from zoning occur from the inner city and suburbs, yet the [central business district] and inner-ring suburbs, particularly the CBD, have the least restrictive zoning controls'.

Similarly, prices have increased over time despite increasing density.

It is tempting to think that bivariate correlations like these provide 'direct evidence' about the relationship between planning (or supply) and prices. However, this correlation is a jumble of movements of and along supply and demand curves, externalities and other interdependencies. It does not refute the idea that demand curves slope down, other things equal.

Interpreting bivariate correlations as the effect of supply on price ignores reverse causation. It is like observing a correlation between hospital stays and deaths and concluding that hospitals are unhealthy. Zoning restrictions admittedly have a large random element, but they also respond to underlying pressures over longer time periods. When density is the highest value use it is sometimes permitted. So the 'supply curve' for housing permits is not exactly vertical but has an upward slope.

As an example of this confusion, Mark Limb and Cameron Murray (2021) regress dwelling prices in Brisbane on measures of zoning restrictions. Their regressions include contemporaneous prices and quantities on both sides of their regressions. They conclude that zoning restrictions have no effect. This is making a structural interpretation from a line of best fit like that in Figure 3.

In contrast, the literature surveys cited in Section 3 emphasise issues of causality. Research discussed in those surveys goes to considerable lengths to avoid these kinds of mistakes.

A fundamental problem with arguments that supply does not affect price is that they imply that the demand curve for housing does not slope down. That is inconsistent with basic economics. It is also inconsistent with available empirical estimates. Saunders and Tulip (2019 Section 5.3) discuss a range of estimates at a national level and suggest that a central estimate is that a one percent increase in the housing stock lowers the cost of housing by 2.5%. At subnational levels demand is more elastic due to inward migration so effects on prices are smaller. These estimates strike many observers as small, which means that a large increase in supply is needed in order to have a significant effect on prices and rents.

Another difficulty with interpreting 'direct evidence', like that shown in Figure 3, is that to obtain meaningful variations in regulations or density requires detailed disaggregation. But then price observations are not independent. In fact the opposite: prices in adjoining suburbs typically move in lock-step, even in the face of substantial variation in supply or demand (Tulip and Lanigan, 2021). The reason is that nearby houses are very close substitutes. This, of course, is a standard assumption in urban economics (for example, the Alonso-Muth-Mills or Rosen-Roback models).

So restrictions at one site increase demand and prices at nearby sites even when there are no restrictions at these other sites. Planning restrictions may have no effect on relative prices while still increasing the *average* price by restricting *total* supply.

As an analogy, were a farmer in a competitive industry required to halve his crop, it would not affect the price he receives, nor the price his neighbour receives. A 'with and without' comparison would show zero effect of the requirement. However, if all farmers halved their production, the price would soar.

Mistakes arising from overlooking these spillovers include Limb and Murray (2021) and Phibbs and Gurran (2021 p471). The latter paper argues that the appropriate way to measure the effect of regulations is to compare dwellings 'with and without' the regulations.

'With and without' comparisons are valid when restrictions on one location do not affect demand for dwellings in other locations (and other influences can be assumed to be equal). For example, comparing distant cities. Hence it is useful to compare lightly regulated and inexpensive Tokyo with heavily regulated and expensive Sydney, or lightly regulated and inexpensive Atlanta and Houston versus heavily regulated and expensive San Francisco and New York. For examples see OECD (2021b, Figure 1.4) or Glaeser and Gyourko (2018), both of which show regulations having a very large effect on prices. Kendall, Croy and Zollner (2020, Figure 5) show the same relationship also holds for New Zealand territorial authorities.

However, 'with and without' comparisons are invalid when there are spillovers, as within a metropolitan area. A restriction on housing at one location will increase demand and hence prices for housing at other locations. So variations in relative prices will understate the total effect of variations in restrictions.

5. 'There is no shortage'

The research summarised in Sections 2 and 3 finds that planning restrictions raise the price of housing above marginal cost. That is, demand exceeds supply. In economics, this is called a shortage or excess demand.

However, other commentators define terms differently. For example, Phillips and Joseph (2017) estimate that new housing completions exceeded underlying household formation by 164,000 between 2001 and 2017, which they describe as an 'oversupply'. Murray (2020b, Section 3.2) makes

a similar argument. During the recent pandemic, many local councils pointed to low immigration levels which they also interpreted as giving rise to 'oversupply' (Taylor, 2020).

Rowley, Gurran and Phibbs (2017) compare construction rates to past experience and other countries. They conclude that 'Australia is almost a world leader in rates of new housing production' and that 'supply seems pretty healthy'. The Planning Institute of Australia (2021) and Pawson, Milligan and Yates (2020, Section 9.6) emphasise findings like these in explaining their scepticism of the importance of planning restrictions.

One can argue over the numbers. For example, the NSW Productivity Commission (2021, Figure 7.2) estimates that, unless there is a change in our planning system, the undersupply of housing in NSW will exceed 100,000 dwellings in 2038. Estimates like this differ for many reasons, including the arbitrary choice of a base year and, more importantly, differing projections for household size.

A more fundamental problem is that arguments like these apply to *changes* in the housing shortage when the problem is the *level*. Rapid growth in supply, relative to changes in population or the number of households or construction in other countries, implies that conditions are improving and the housing shortage is decreasing – it does not imply that the stock of housing is adequate. That should be judged by whether price is close to marginal social cost. Essentially, in response to arguments that the stock of housing is inadequate, these objections amount to "but the flow is fine". Perhaps, but beside the point.

A similar objection is that a housing 'shortage' should be defined by whether or not rents are rising. Rents are the price of housing services (as opposed to housing assets) and hence a gauge of whether the demand for housing services exceeds the supply. So the 1.2% decline in the nominal value of CPI rent (and larger decline in real rents) between 2020Q1 and 2021Q3 is taken as evidence of an oversupply of housing services.

Again, this is not an argument; it is just a choice to define key words in a way that does not capture the essential issue. Whether prices and rents are rising or falling does not indicate whether they are excessive. Stable prices and rents can be too high.

To assess adequacy (and hence the textbook definition of shortage) we need to consider whether prices exceed marginal cost. That is exactly the comparison performed in Section 2. The relevant efficiency condition is determined in the market for housing assets, because, in the long run, it is an asset that is supplied and demanded. The key point is that the demand for housing exceeds the cost of supplying it.

There is little value in arguing which definition is better. Words can have multiple meanings; 'equilibrium' for example. Instead, we should be clear and precise, especially with regard to policy implications. Specifically, the wedge between price and marginal cost means that welfare would be raised if we build more housing.

6. Supply is limited for other reasons

6.a) 'The problem is speculators'

Cameron Murray (2020c) and Prosper (2021) argue that it is not planning that holds new housing back, but speculators, who withhold housing from the market in anticipation of higher prices in the future, a process called landbanking. The large amounts of land that developers hold in inventory is seen as evidence of withholding supply. Murray and Prosper argue that some developers control their level of sales, so it is in their interests to reduce sales and increase prices.

There are many technical and empirical problems with Murray and Prosper's analysis. However, it may suffice to point out some simple limitations, most of which Murray and Prosper do not mention:

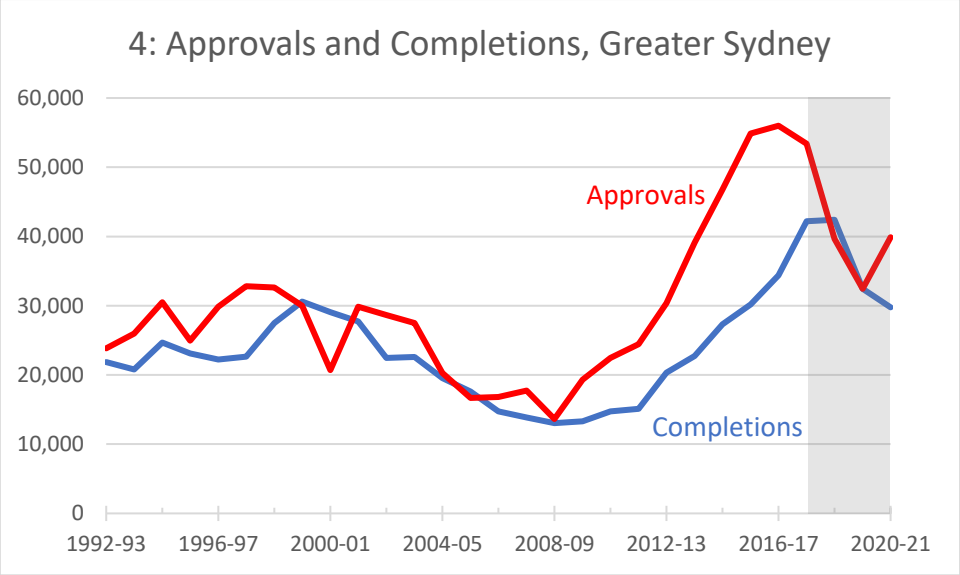
- Many developers deny that landbanking is important. The Productivity Commission (2004, 2011) examined land release in detail and did not find evidence that landbanking was 'a material limitation on the supply of land' (2011, p163). It attributed large inventories and long lead times to planning delays and lack of infrastructure. Similar conclusions were reached by the HSAR Working Party (2014, Section 7b) and Hsieh, Norman and Orsmond (2014).
- Developers may control the timing of sales but that does not mean they control the average level. Postponing sales does not mean foregoing them forever. That would mean inventories grow without limit, which we do not see. So, even if landbanking were widespread, that does not mean it affects average prices.
- Significant restrictions on supply are difficult to reconcile with the competitive nature of building supply. According to ABS Cat No 8165.0, 24,641 firms were primarily engaged in other residential building construction in 2018/19.
- Even if one assumed that landbanking restricted the supply of detached houses, it would not apply to apartments, where land release does not prevent conversion of low density housing into high density. Height limits and other zoning restrictions do.
- Murray and Prosper's examples are drawn from locations where one would not expect substantial excess demand, like semi-rural outskirts. That of course does not imply that supply is adequate in the inner suburbs where people most want to live.
- Curiously, they omit the strongest evidence of monopolistic land restrictions: government land authorities. One of the worst is the Suburban Land Agency of the Australian Capital Territory which limited sales sufficiently to raise the median price of its vacant blocks to $406,000 in 2020, many multiples the cost of supply. As a result, Canberra has the second most expensive housing of any major city despite abundant vacant land.

6.b) 'Approvals far exceed construction'

Cameron Murray (2020b p2, Section 4.1) argues that:

> planning approvals typically far exceed dwelling construction, implying that more approvals or changes to planning controls on the density and location of development cannot accelerate the rate of new housing supply.

This argument is based on the unshaded portion of Figure 4 which uses data up to 2017-18. The widening gap between approvals and completions leads Murray to infer that planners want much more building than developers, but developers are deciding not to proceed because of financial and other reasons. (As an aside, Murray calls these 'planning approvals' which suggests he mistakes them for development approvals. In fact, they are building approvals). Phibbs and Gurran (p472) make a similar argument, citing unpublished data.



Source: NSW Department of Planning; Metroplitan Housing Monitor 2021

The data in Figure 4 are inconsistent. Approvals are measured in gross terms whereas completions are net of demolitions. That substantially overstates the difference.

Moreover, the argument overlooks the long lags from approval to completion. For apartments, this averages over two years, with longer delays in booms. Accordingly, in a rising market the gap between approvals and completions widens. Then, in a contracting market – shown in the shaded area of Figure 4, the gap narrows. Had the critics updated with extra data (available by the time of publication), the basis of their criticism would have also disappeared.

More importantly, this is another objection that exaggerates the argument so as to knock down a straw man. The case against zoning is not that *no* building is permitted; it is that *not enough* building is permitted. Allowing a block of flats on the suburban outskirts does not mean that buildings are permitted where buyers want them. Some developments are approved and some are rejected – neither of these observations tells us whether enough are approved.

7. 'Preserving neighbourhood character is worth high prices'

Nearby residents often argue for planning restrictions on the grounds that new apartment towers are ugly, they bring traffic and crowds, they block out the sun and so on. These arguments are echoed by policy-makers. The NSW Minister for Planning, Rob Stokes (2020) regards it as 'obvious' that allowing taller buildings would reduce prices. However, he argues this cost is worth incurring to preserve neighbourhood amenity.

These are legitimate arguments and the residents are entitled to their preferences. However, their views are not the only ones to be taken into account. Policy-makers will also need to weigh the preferences of those who like high-density living. Many other potential residents like proximity to shops, transport and entertainment.

How do we balance these conflicting views? One way is to look at nearby house prices. If apartment towers did harm neighbourhood amenity, as the opponents of density argue, then nearby house prices should fall.

Tulip and Lanigan (2021) find that this does not happen. We look at five prominent examples of high-density construction in Sydney: Chatswood, Forest Lodge, Green Square, Liverpool and Turrella and

three in Melbourne: Box Hill, South Yarra and Footscray. We find that nearby house prices are essentially unaffected by new development. It seems that for every recalcitrant neighbour that dislikes the new apartments, there are other home buyers who want a walkable, lively community.

A broader set of spillover effects, or externalities, has been studied in overseas research. This includes the effects of high-density on productivity, wages, traffic, pollution, infrastructure funding and so on. For discussions see Ahlfeldt and Pietrostefani (2019) and Glaeser, Gyourko and Saks (2005). In general, external effects are found to be small or positive.

Restrictions on higher density would be appropriate if high-rises generated negative externalities. However, the research discussed above suggests these spillovers, on net, are not important. That means many restrictions on higher density lack justification – they appear to increase housing costs unnecessarily.

It is also worth noting that freezing architectural structures in place does not 'preserve neighbourhood character.' In the presence of growing demand, it will make the neighbourhood increasingly wealthy and exclusionary. In the 1970s high-profile campaigns 'saved' the inner-Sydney suburbs of Glebe and Woolloomooloo from development. The low-density buildings were saved but not the community. The working class residents were driven out by soaring prices, being replaced by affluent professionals.

7.a) 'It is democratic to respect resident opposition'

Local opposition to new development is often unrepresentative and exaggerated. So it should not be the only determinant of planning decisions.

Many of the beneficiaries of the new development – for example, the families who would move in – are not identifiable beforehand. So they do not participate in community discussions. These potential residents often live outside local government areas.

New housing supply attracts inward migration, lowering demand and hence housing costs elsewhere. The interests of renters, first home buyers and other beneficiaries of lower housing costs will be represented by central governments, not local councils.

Cities are engines of economic growth. It is inconsistent to want the jobs and high wages that high density creates while simultaneously having low-density residential neighbourhoods. Each neighbourhood will try to push the extra residents elsewhere ("not in my backyard"), but they need to go somewhere. Moreover, many of the problems created by planning restrictions, such as inequality, lower income and excessive carbon emissions, are national responsibilities.

Local residents may be happy excluding outsiders. However, that is as useful a guide to the broader public interest as asking cartel members whether they are happy restricting output. For both efficiency and equity reasons, governments should place more weight on the interests of those being priced out of the market.

As Tulip and Lanigan note, proposed developments often encounter false predictions that local amenity will be ruined. These exaggerated claims partly reflect fear of the unknown or 'status quo bias'. Consistent with this, developers often hear 'actually, this is quite nice' after projects are completed. See, for example, Williams (2019) or NSW Productivity Commission (2021, Box 7.3).

8. Conclusion

The argument that planning restrictions have large effects on housing prices hinges on a very simple idea: the law of supply and demand. However, in discussing the details, related ideas are resisted by non-economists. For example, that resources should be allocated according to marginal rather than average cost; that it is opportunity cost, not historic or financial cost (specifically, for land) that is relevant; or that the shops and entertainment that make high-density living enjoyable are only feasible with high-density housing. Accordingly, there is a public education task ahead before we can expect good policy.

While it is understandable that members of the public are unconvinced, the resistance from some academics is harder to explain. As noted in the introduction, many of the arguments in this paper have been made before. However, they are not addressed in most of the dissenting literature. This raises the possibility that the critics' confusion simply reflects a failure to engage with the research. More dialogue is needed. This paper is written in the hope that the conversation will advance if both sides clarify where and why they disagree.

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