

Inquiry into Housing Affordability and Supply in Australia

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Introduction

I am a qualified actuary and as such approach problems from a mathematical perspective. My relevant experience is that I have worked in the property industry for a number of years, and regularly use economic and financial models to predict items such as house prices and mortgage arrears rates.

Issues such as the one in question are nuanced, and multivariate in nature, that is, there is not one clear reason as to why housing is so expensive in Australia, and therefore there is not one solution.

Having said this however, representing problems using equations allows us to understand which input variables have significant impact on the outcome, and as such, which policy makers should focus on. It also allows us to make recommendations free from political bias or self interest.

Throughout this document, I will make reference to the excellent paper produced by the Reserve Bank of Australia, "A Model of the Australian Housing Market" written by Trent Saunders and Peter Tulip, which can be located here: <https://www.rba.gov.au/publications/rdp/2019/pdf/rdp2019-01.pdf>.

Context

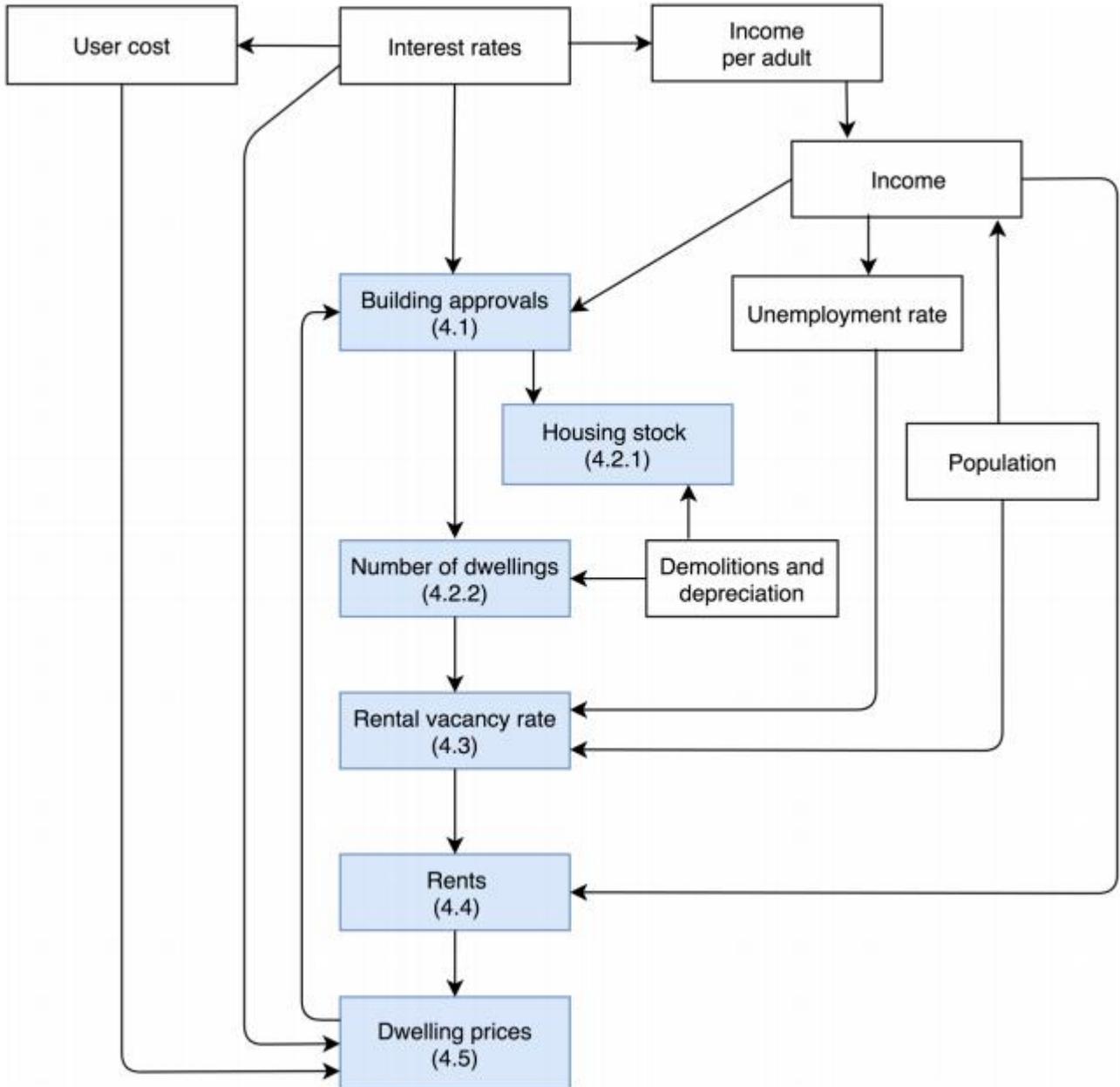
Before we begin, it is important to define the problem, namely, is the issue of housing affordability one where the face value of the house in question is unaffordable (for example, in Sydney, the median house price is \$1.4m), or rather the monthly repayment associated with the house unaffordable (i.e., for this same house, monthly repayments on a \$1.4m loan at 2% interest per annum, would be approximately \$5,200 a month). Whilst the two are linked, given interest rates are at record lows, the general sentiment is that the face value of housing in Australia is unaffordable, with a main obstacle of home ownership being saving the initial ~20% deposit for a home. This is an important question to consider, as circa 25 years ago, at face value housing may have been affordable (with average house prices being ~120k), but mortgage rates exceeded 20% meaning monthly payments were the main barrier to the housing ladder.

For the purposes of this paper, I will continue to assume that the issue at question is the face value of housing, rather than the monthly repayment amounts.

Modelling Costs of Housing

As outlined in the RBA paper, "A Model of the Australian Housing Market", there are a number of inputs into the cost of housing. This is outlined in the diagram below.

Figure 1: Key Model Relationships



From the diagram, we can see as real incomes per adult (or per family) increase, each family has additional capacity to spend on housing and as such, given supply constraints, prices will rise. As such, as an example, a (drastic) step to reduce the cost of housing would be to artificially reduce the purchasing power of each Australian by significantly, and uniformly raising taxes. Whilst I do not recommend such a policy, I highlight it as an example of how one variable will impact house prices.

Other variables which impact house prices include:

- Supply/Stock (Of which the process in building approvals forms part of)
 - For example, local Governments could ease the regulatory cost and process of obtaining approvals
- Unemployment Rates
 - The lower the unemployment rate, the higher household income is and hence increases the demand for housing and hence the price of housing. However, policy

steps to increase the unemployment rate (and hence reduce the price of housing) is undesirable and hence not recommended

- Population Growth
 - The RBA model suggests population growth will reduce rental vacancies, boost rents and housing prices, and increase construction. Therefore limiting population growth via immigration curbs will lower house prices
- Interest Rates
 - Of the above variables, this is the easiest lever to pull and the most logical. I will outline my case as to why in the following section

Other factors not considered in the RBA model include the relative desirability of locations due to factors such as proximity to work / jobs. Australia as a whole does not have a limited supply of land given its population, and as such, what makes particular locations desirable (and hence costly), are features such as quality of schools, natural landscape (e.g. water views), and proximity to other items such as jobs. Governments can partially mitigate this by lowering the relative attraction of one suburb over another by continuing to invest in quality infrastructure such as high speed rail, tunnels etc. I can expand further on this area however in the interest of keeping my analysis and recommendations based on mathematics/the RBA paper, I will refrain.

Recommendation

Of the variables considered in the previous section, the most obvious one that has had a negative impact on housing affordability is interest rates. The fact that property is highly levered, means that it is not a coincidence that property prices worldwide are steeply rising as central banks have reduced rates to zero. I draw attention to the findings in the RBA paper, which state that given the current economic parameters we have in Australia:

“A percentage point drop in the expected real mortgage rate would boost housing prices by 28 per cent in the long run”

The opposite is also true. A percentage increase in mortgage rates, would reduce housing prices by 28%.

Low (zero) interest rates have numerous unintended, negative consequences for society, with housing costs just being one. Whilst I understand that the Government does not directly control monetary policy, with the RBA being “independent” (although as an aside, that independence is somewhat questionable given the RBA is monetising Government debt via its quantitative easing programme), amendments could be made to the RBA’s mandate.

At the moment, house price increases (or house price inflation) does not form part of the RBA’s inflation target of 2% - 3%. In New Zealand, the Government recently instructed their central bank to consider housing prices as part of their monetary policy decisions. A similar directive could be given by the Australian Government to the RBA, or alternatively, include house prices as part of the CPI. This is the neatest, and most effective method for addressing housing affordability in Australia and is backed by robust mathematical modelling.