

# Land Prices, House Prices and New Dwelling Costs

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**ABSTRACT:** During the 2000's the 'real' price of existing dwellings grew at a much faster pace than the increase in the stock of dwellings, in stark contrast to the 1990's when real prices and new residential dwelling stock grew at the same rate. It was the price of the land component of existing housing that rose significantly through much of the 2000's, not the building component.

It is true that the demand for dwellings increased strongly from the late 1990's due to increases in real household incomes and reductions in home mortgage rates. Furthermore, much of that increase in demand was channelled into the purchase of established dwellings, increasing the implicit value of residential land. However, demand-side factors cannot fully explain the persistence of increases in 'real' house prices. Constraints on the supply of land for housing also had a considerable role to play.



## Introduction

During the 2000's the price of established dwellings increased in 'real' terms by nearly 6 per cent a year, much faster than the rate of increase in the stock of dwellings. It was not the value of the building component of existing housing that increased at double the rate of general price inflation. Rather, it was the 'price' of the land component that rose markedly, reflecting the increased scarcity value of residential land in the face of strong demand conditions and constraints on the supply of land for housing.

### **Increases in Established House Prices and the Housing Stock**

(average annual rate of growth)

	<b>1990s</b>	<b>2000s</b>
'real' house prices	1.80%	5.80%
no of dwellings	1.80%	1.50%

Consideration of the impediments affecting the supply of new land and housing has intensified in public policy debate in recent years. The spotlight is being shone on planning systems that regulate the supply of land for development. There has been next to no work undertaken in Australia that examines in a systematic way the impact of planning interventions and building regulation on the housing market, including its effects on the price of new and existing housing and the supply of new dwellings.

The impact of land use controls on house prices is implied by the growing gap between the price of existing housing and the direct build cost of a new dwelling that has occurred since the late 1990s. The adoption in the early 2000's of metropolitan planning strategies directed at the curtailment of green-field development coincided with marked increases in the price of urban land. Most of the increase in residential land prices reflected increased competition for 'scarce' land. Some of the increase arose from the shifting of the cost of urban infrastructure from public sector budgets onto new residential development, most notably in Sydney.

### **Setting the scene - existing house prices**

House prices are the outcome of both demand and supply factors. Increases in 'real' house prices stem in part from a high propensity to consume and invest in housing. Because the purchase of a house involves acquiring an asset, the demand for housing is affected by expectations about future changes in house prices. Disentangling the impact of demand and supply factors on house prices is complicated by shortages of market-relevant information and also by the nature and extent of government interventions in the housing market.

There are various house price series, including from the ABS<sup>1</sup>. The ABS price index of established houses is compiled from sale transactions recorded with relevant state department agencies. This fact prompts an important digression from the main points of this paper. Since the house price series relies on property transactions, some caution should be applied when interpreting price movements. The annual number of house sales accounts for only about 5-6 per cent of the stock of dwellings and transacted prices may not reflect the realisable price of dwellings in the housing stock, especially in the shorter term<sup>2</sup>. Loss aversion by sellers can see sales volumes adjust more quickly than house prices to a reduction in housing demand, which can lead to sample selection bias in the prices of transacted dwellings. Downward 'stickiness' in house prices, at least in nominal terms, can lead to 'mispricing' in the sense that transacted prices fail to 'clear' the housing market.

<sup>1</sup> In addition to the ABS house price series, information on house prices is available from Residex, REIA, APM and RP Data.

<sup>2</sup> The ABS series on established house prices has a break in 2003-04, when the selected date for the recording of house price changed from the date of settlement to the date of exchange.

Also, while on this digression, there are substantial expenditures made to renovate and extend the existing housing stock, which can be difficult to isolate when attempting to measure the prices of houses of a 'constant' quality. It is likely that owners of existing dwellings will undertake expenditures on improvements to 'match' the trends and innovations in new houses, particularly in areas such as kitchens and bathrooms. Because renovation activity is often linked to the timing of sale and purchase, augmentation of the dwelling stock can impart an upward bias to observed sale prices<sup>3</sup>.

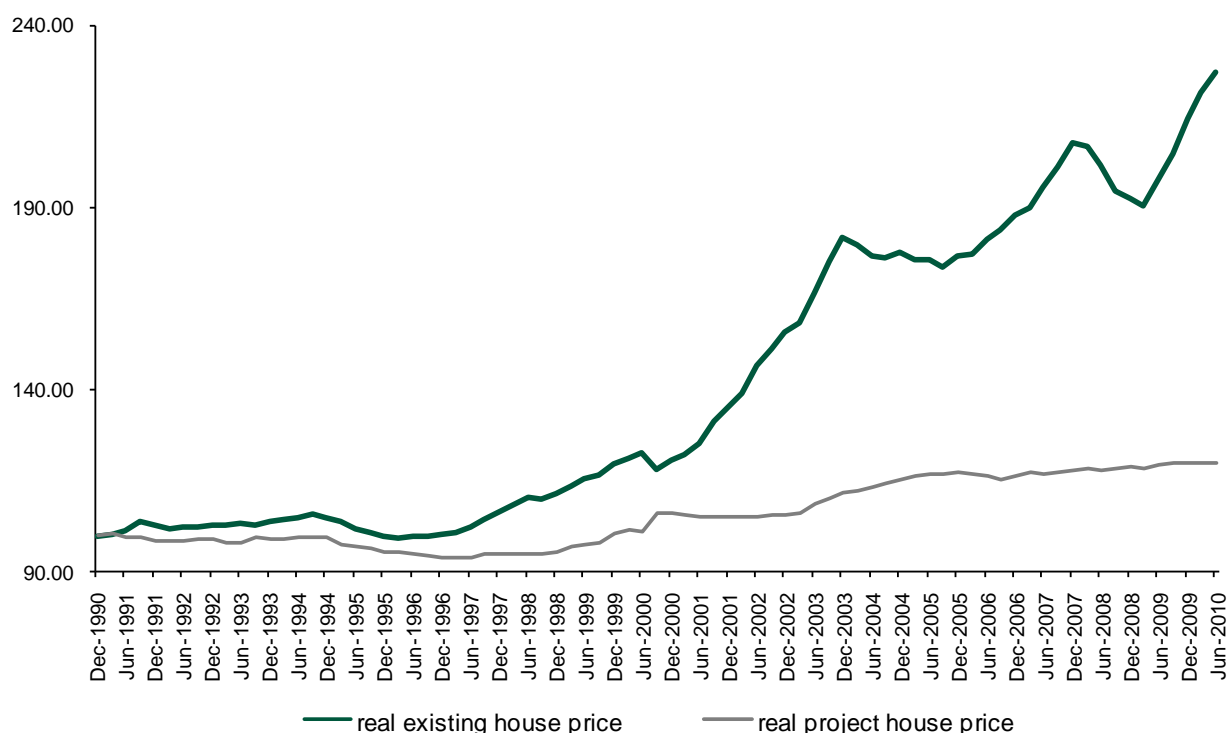
### A recent history of existing house prices

Existing house prices have tended to increase much faster than the general price level in the past 15 years. In broad terms, houses have become more expensive relative to other 'household goods', such as appliances.

Figure 1 shows the ABS 'weighted' price index of established houses for eight capital cities after removing the effects of general inflation. The chart also shows the 'real' price of a new constant-quality (project) house. The price index of (new) project houses excludes the land component. A comparison of the established house and new house-build price series should provide some indication of the importance of changes in the 'value' of residential land.

#### Real House Prices - Australia, December Quarter =100

Source: ABS, , House Price Indexes, Catalogue 6416.0



In the 2000's, the price of established houses in 'real' terms increased by nearly 90 per cent, more than four-times the increase that occurred in the 1990s. However, there were peaks and valleys over the twenty-year period.

In the three years to December 2003, the price of established houses rose in 'real' terms by 50 per cent, suggesting that the growth of housing demand out-stripped the 'supply' of dwellings, which may have

<sup>3</sup> Abelson has estimated that expenditures on home improvements accounted for about 1 percentage point growth a year in the 'real' price of established houses.

fuelled expectations of further house price increases. That was followed by a period of 'reversion' with 'real' house prices softening during 2004 and into 2005. However, from late 2005, the 'real' price of existing housing resumed a strong upward trend, broken only briefly by the uncertainty generated by the global financial crisis in 2008. The increase in existing house prices in the period 2009/10 was as sharp as occurred in the early years of the decade.

### **New home construction costs**

Similar to the series on established house prices, the estimates of the prices of new project houses are meant to be 'quality' adjusted. However, the 'standard' new house has increased in size significantly over time (up until 2003/04). In addition, there is the possibility that a range of features and improvements made to new dwellings cannot be completely controlled for and may affect the price series of new houses.

The new house price series increased more or less in line with general inflation throughout the 1990's. In the 2000's, however, the project house price series rose in 'real' terms by nearly 20 per cent. A significant factor behind the increase was the introduction of the GST, which saw the new house price series jump by 5.4 per cent in 'real' terms (9 per cent in nominal prices) in the September 2000 quarter. However, the GST was not the only factor exerting an impact on new-build costs. After the initial impact of the GST, the non-land component of a new house increased by 12 per cent in 'real' terms for the rest of the 2000's. Changes in building codes and standards also played a part in lifting the cost to build, particularly in relation to energy efficiency requirements<sup>4</sup>.

The factors that affect the cost side of home building include direct costs, such as building products and materials, labour services and equipment hire, as well as indirect costs, or overheads, such as financing, advertising, and administration. The availability and cost of labour and finance to the residential building industry are affected to a greater or lesser extent by demand and supply factors in wider markets. In addition, the cost of inputs into residential building, such as labour costs and building materials will be influenced by fluctuations in the level of residential building activity<sup>5</sup>. By contrast, the supply of residential land is relatively fixed, particularly in the shorter term.

### **The impact of land supply on housing prices**

One way to assess the impact of land supply on housing prices is to consider the relationship between existing house prices and the non-land component of new house prices, the two prices that have been outlined above. Figure 1 above reveals that during the first half of the 1990s, the price of established houses moved in line with the price of a new project house (excluding land). From the late 1990's, however, the price of established houses raced ahead of project home prices and the gap accelerated during the early part of the 2000's, providing an indication of the importance of changes in the 'scarcity' value of residential land.

The widening gap between the price of established houses and 'direct' construction costs revealed in the national time series above suggests the emergence of a persistent shortage of residential land. Obviously, land is fixed in location and there is not a single, national market for housing. However, urban containment

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<sup>4</sup> Minimum 4-star energy efficiency requirements were included in the Building Code of Australia in 2003 and were increased to 5-star in 2006 and to 6-star in 2010. Residential building was also affected by higher compliance responsibilities for on-site occupational health and safety.

<sup>5</sup> The ABS index of average hourly earnings in the construction industry may under-state the variation in labour prices in the residential building industry because of the dominance of contractors in house-building, such as carpenters, concreters, plumbers and electricians.

policies have been a feature of metropolitan planning strategies in all states from the second half of the 1990's and intensified in the early part of the 2000's<sup>6</sup>.

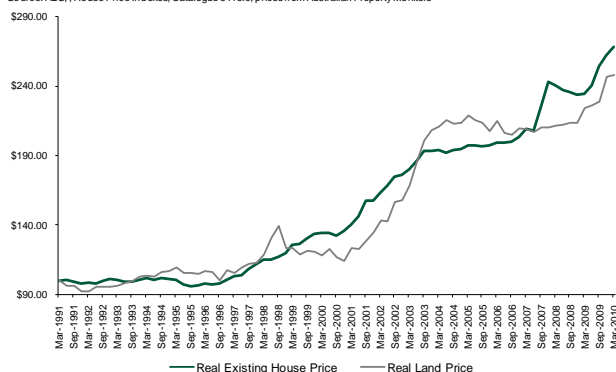
Urban consolidation and containment planning strategies were intended on the one hand to curtail 'suburban sprawl' and on the other to reduce public sector outlays on urban infrastructure. The planning goal of 'densification' by and large was not accompanied by a compensating increase in the availability of sites in established suburbs, reflecting community opposition to higher-density development. A combination of strong demand conditions for housing in the face of constraints on the supply of land for green-field and in-fill development created a 'pressure cooker' effect which saw marked increases in the price of existing housing and residential land prices, particularly in the early years of the 2000's. In the next section we look at existing house prices at a capital city level utilising some information available on the transacted prices for vacant land.

## Land Prices

New dwellings cannot be provided without land. In other words land supply is an essential factor for housing. In the charts below, we show the 'real' price of existing houses together with a series on the 'real' sales price of a vacant block of residential land for Sydney, Melbourne, Brisbane and Perth. Despite the limitations inherent in land and house price data, a comparison of existing house prices with vacant land prices indicates substantial increases in the 'real' price of existing houses in major capital cities that by and large were followed by similar movements in the 'real' price of blocks of vacant residential land.

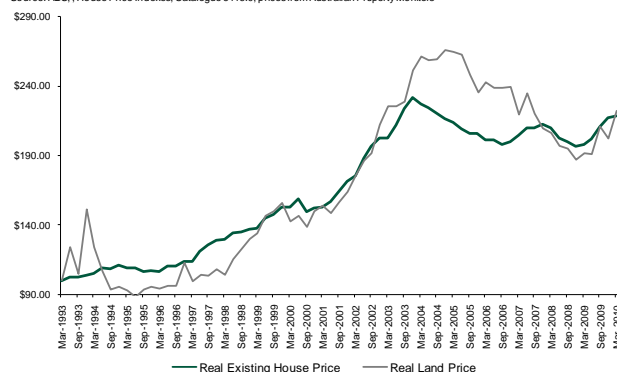
**Real Land and Real Existing House Prices - Melbourne, March Quarter 1991=100**

Source: ABS., House Price Indexes, Catalogue 6416.0, prices from Australian Property Monitors



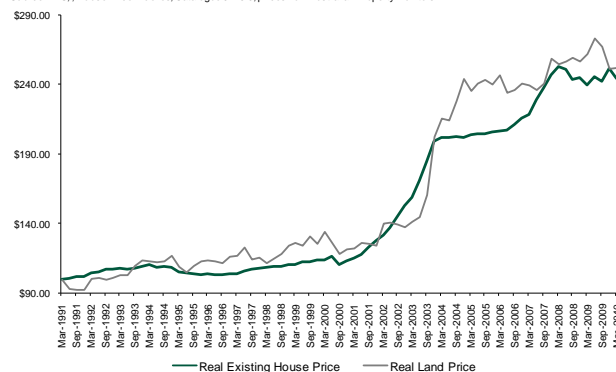
**Real Land and Real Existing House Prices - Sydney, March Quarter 1991=100**

Source: ABS., House Price Indexes, Catalogue 6416.0, prices from Australian Property Monitors



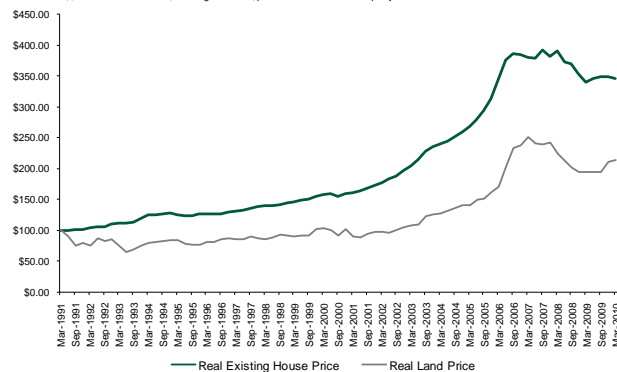
**Real Land and Real Existing House Prices - Brisbane, March Quarter 1991=100**

Source: ABS., House Price Indexes, Catalogue 6416.0, prices from Australian Property Monitors



**Real Land and Real Existing House Prices - Perth, March Quarter 1991=100**

Source: ABS., House Price Indexes, Catalogue 6416.0, prices from Australian Property Monitors



<sup>6</sup> For a review of planning systems see Robin Goodman, Michael Buxton, Prem Chhetri, Jan Schuerer, Elizabeth Taylor and Gavan Wood, Planning reform, land release and the supply of housing, Positioning Paper No. 126 for the Australian Housing and Urban Research Institute, February 2010.

There is some evidence to suggest that the growth in residential land prices ‘over-shot’ increases in prices being paid for existing houses and this situation led to a correction in ‘real’ land prices after 2003. In Sydney, the period of adjustment in both existing house prices and land prices was much longer than occurred in the other capital cities, characterised by four years of declining ‘real’ land prices and greatly diminished sales of residential land. More recently, land and house prices in Sydney have exhibited considerable increases.

The demand for dwellings increased strongly during the late 1990's and early 2000's, due to increases in real household incomes and reductions in home mortgage rates. Most of the increase in housing demand was channelled into the purchase of established dwellings, increasing the implicit value of residential land. However, demand-side factors cannot fully explain the persistence of increases in ‘real’ house prices.

A sluggish or weak response of new land supply to more buoyant demand conditions meant that existing house prices increased unabated for some considerable time. Reports of land supply shortages, by raising expectations of further price increases, may have led to bouts of speculative activity and altered purchasing and investment behaviour, not just for existing housing but for vacant residential land. The slowing in existing house prices after 2003 had more to do with a market correction than with a marked expansion of new housing supply.

If the story of the increases in the ‘real’ price of established houses is one of explaining changes in the ‘scarcity’ value of residential land, then much greater effort should be devoted to a consideration of the factors that constrain the availability of residential land. Since the supply of land for residential development depends on planning controls and regulation, such as zoning and the imposition of urban growth boundaries, it is appropriate that there is a focus on the effects of planning systems.

To date, research work on planning regulation in Australia has been qualitative in nature, due in large part to the lack of available data on planning regulation. A concerted effort to develop time series on zoned land, developed land stocks, in-fill sites, land prices, development pipelines, and planning approval times would permit a robust assessment of the impact of land-use planning.

This development would in turn substantially bolster the prospects of Australia experiencing a sustained level of building activity which was closer to that necessary to meet the underlying requirement for dwellings. Australia has failed in this endeavour over the last decade.