

URBAN PLANNING AND ITS IMPACT ON HOUSING MARKETS – THE SYDNEY EXAMPLE IN THEORETICAL PERSPECTIVE

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ABSTRACT

Land and housing markets in developed economies should lead to the intersection of demand and supply. Sydney is unusual in that it has very considerable demand but, for at least half a decade, has also been unable to produce adequate, or even near adequate, supply. There are many possible reasons for this situation. What is clear is that producing supply in some of the sub-markets of metropolitan Sydney is not financially viable. Urban planning is often named as a leading cause of the difficulty with supply. This paper is divided into three sections. The first looks at the particular housing supply problem that Sydney faces, the second tries to disarticulate the various reasons for the supply issue, and the third analyses, from a theoretical perspective, the likely impact of urban planning on the housing supply

housing markets / market failure / Sydney / planning system

INTRODUCTION

Measured some ways, Australia has the most expensive housing in the world. For instance, currently Australia has the worst price-to-rent ratio in the world and about 56% above its long-run average (The Economist 1 March 2011). In part, Sydney's housing costs merely reflect a wider national problem. Nevertheless, within the major Australian metropolitan areas, Sydney has the most expensive housing (Demographia 2011). Although there is long-term evidence that the Sydney housing market produces internal migrants to other parts of Australia, demand for housing in Sydney remains strong, although according to RS-Data Rismark, over the 2005-2011 period, growth in Sydney dwelling prices has been somewhat lower than the other Australian capital cities (admittedly Sydney started from a much higher base).

The demand for new housing is due mostly to Australian household formation rates and international migration. Although the historical trend of ever-decreasing Australian household size has ended, at least since the middle 2000s, underlying demographic trends - more older households, more one-person and two-person families - ensures that demand for housing units remains strong. Likewise although annual immigration rates have varied, immigrants remain an important source of housing demand, particularly for Sydney, the most popular entry point for new-comers. Supply in Sydney has however been weak - at least since the beginning of the Global Financial Crisis - with a shortfall of possibly as many as 20-35,000 units a year. The Urban Taskforce, a lobbying group estimates the shortfall to be as high as 80,000 by 2014. According to the National Housing Supply Council the total undersupply is currently more than 175,000 home and this number is forecast to nearly double over the next five years (National Housing Supply Council 2010).

The reasons for the shortfall are much debated. Land prices are high, and possible land-banking on the greenfield edge may exacerbate this problem. The development market in Sydney may not as competitive as it could be as a consequence of some developers exiting the regional market. Financial institutions may be reducing their exposure to risk by requiring developers to use a greater share of their own equity in new projects. And it may be difficult to develop new housing on the periphery at a price for which there is a market. As will become clear below, this is far from being a complete list of potential causes of the under-supply of new housing.

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The problems with the supply of housing are well-known and, in some respects, quite well understood. Newspapers, private lobbying groups, professional groups, and university research centres have all been doing work on this issue, as have a number of well-known private consultants (for instance, Urbis and Cox Associates) and many other groups. The Federal government has also done considerable work on the problem, most importantly through the National Housing Supply Council and their various *State of Supply* reports. It is an issue that is seen as deeply problematic by state government, as can be seen from the *Sydney Towards 2036* discussion paper that underpinned the 2010 review of the Sydney metropolitan strategy, and from the consultation process that accompanied the roll-out of that paper. It appears from this work that, in the Australian context, what is unusual about Sydney is not necessarily the cost of housing, which is indeed very high, but the failure of supply to expand given the demand. In other words, it is Sydney's housing market failure.

In other contexts the causes of market failure are often laid at the door of government. Excessive and onerous regulation or poorly thought-through policy tools that have unintended market consequences may indeed lead to markets failing. It is not surprising then that another potential cause of Sydney's housing supply problem appears to have gained considerable political traction: the planning system. The planning system was one of top issues in the 2010 state elections, and the reform of the planning system is one of the main priorities of the new government. There is no doubt that the supply of new housing and thus the affordability of housing is one of Sydney's most important planning problems. And it is a problem that is itself the cause of a range of broader social concerns. These include growing wealth inequality between owners and renters, affordability problems experienced by 20 and 30 year olds and immigrants in the ownership market, and the difficulty of housing lower-paid workers close to their employment.

Moreover, there is good theoretical reason for the concern that the excessive costs of housing will finally become a drain on the economy, and that excessive investment in housing drains investment from other productive sectors.

Most of this paper looks at what we know about the impact of planning on housing prices. The evidence from Australia is fairly limited and methodologically quite narrow. Thus this paper focuses on very largely on the American experience where most of the econometric work has been done. The main concern of the paper is understanding how the various parts of the planning system interact with housing prices, this as a prelude to constructing a more formal model of the impact of planning on home prices in Sydney.

THE POSSIBLE CAUSES OF SYDNEY'S HOUSING PROBLEM

The purpose of this paper is not to analyse each of the potential causes of the housing market disequilibrium in Sydney, but to focus, from a theoretical point of view, on the particular role of the planning system. However, the brief discussion above points to the complexity of the problem, and hints at the interrelatedness of the various causes. Moreover, it should be clear that if planning does share some of the blame for Sydney's housing supply problem, focussing on fixing planning alone with not itself resolve the metropolitan area's housing problem.

At one of the rollout events to the new 2010 Sydney metropolitan strategy discussion paper, the head of one of Australia's largest residential development companies said that his company would be vacating the local multi-family market because there was little chance in the current environment of building multi-family housing profitably. The head of another of Australia's largest residential developers said that it was impossible to build new multi-family housing in the Sydney region anywhere west of Strathfield. And others have argued elsewhere that even developing single family detached units in the west is not profitable. There is at least some empirical evidence to suggest that supplying housing on the greenfield fringe is expensive. A greenfield dwelling in Sydney costs about \$200,000 more to produce than a similar dwelling in the other four main competitor capital cities - Melbourne, Brisbane, Perth and Adelaide (Urbis 2010). According to Urbis, this is due to much higher land costs, as well as taxes and charges (including contributions). But they find that greenfield development is profitable (unlike infill which, on the whole, is not) (Urbis 2010).

However, given the strength of demand for housing, how is it possible that the market has not produced enough supply? And why would a supply problem persist for many years? Supply and demand have such a difficult time intersecting because, as the 2008 State of Supply Report pointed out, there is an increasing gap between the cost of producing appropriate housing and the ability of households first entering the home ownership market to pay for that housing (National Housing Supply Council 2008). Housing is expensive because of the cost of land, taxes and other charges, the costs directly associated with the compliance requirements of the planning system, the financing costs of delays associated with planning permission, and so on.

In the Urbis study, for an infill dwelling, Sydney land costs are a higher proportion of total cost than in the four competitor cities. Likewise taxes and changes are both proportionately and absolutely higher in Sydney, as are professional fees (in effect, made up, in part, by the cost of compliance with the planning system) and development costs and interest (in part a result of the slowness of the planning system in New South Wales). In the same study, for a greenfield dwelling Sydney land costs represent 24% of total costs (close to \$152,000). In the other capital cities they represent between 10% and 13% percent of total costs. Taxes and changes are also vastly greater in Sydney (\$130,000) compared to between \$65,000 and \$75,000 in the other cities. Professional fees and development cost and interest are also high in Sydney.

The results of the Urbis study appear to have reinforced the perception that land costs and the planning system are the main causes of the supply problem in Sydney. Given that land costs are in part determined by land release policy, it is possible to argue that planning is also directly implicated in the high cost of land. This would however, only be true if land release policy were restrictive. In fact, new released, zoned and serviced land is at record levels in New South Wales, although developers dispute how much of this new land is viable for immediate new housing production (the state and developers appear to have had quite different views of what appropriate levels of the public servicing of land needs to be).

Beyond the issue of land release, it is also possible that the land demand market has shifted, and cheaper homes on the outer periphery are no longer as desirable to consumers as they once were. Certainly housing value performance in parts of the west has been very poor since the mid-2000 (Peters and Hall 2009). The most likely reason for this is increased total costs associated with transportation. A shift in the demand market might help explain the higher cost of land in Sydney: from a theoretical point of view this would mean that the slope of metro Sydney's residential rent-bid curve should have shifted upwards, further favouring land closer to the metropolitan core. Planning may also be implicated in this shift. If land closer to the core becomes more desirable for development and land-use and zoning controls do not

adequately allow currently developed land to transition to new and higher-density uses, this will tend to shift the rent-bid curve even further upwards, in other words, it will further increase land prices and thus housing prices. The failure to provide adequate transportation from the periphery to the core will do much the same.

However, before pursuing these issues in any detail it is important to note that there are problems with the Urbis methodology and therefore their results are open to some question. (1) They use industry and geographic averages for each cost component. This measures all costs at one point in time but many costs associated with development have an important time factor (especially construction costs and sales prices), as Urbis (2010, 4) readily admit. (2) More worryingly, all infill development is aggregated as is all greenfield development. But the economics of building "McMansions" in desirable greenfield locations are quite different from the economics of building relatively low-cost starter housing on the far-western urban fringe. Likewise, some sorts of infill remain profitable for developers, but high-rise, for instance, in anything but highly desirable locations, is probably not, and much infill in western Sydney is probably not. Read carelessly, their results, while useful and relevant, can oversimplify the causes of the supply problem because they ignore the underlying complexity of the market. (3) Like many such studies they add up all costs of development but do not consider the standard economic view of which of these costs are passed forward to consumers and which are not. Importantly, the standard economic theory of land markets suggests that the costs associated with taxes (and contributions) and the planning regulatory system should be "capitalized" in land prices. What this means is that sellers of land, not buyers of homes, should pay the costs associated with taxes and the planning system. This suggests that more attention needs to be paid to the complex relationships across land, taxes and contributions, and the wider regulatory system. We will return to this issue later.

There have been other important recent attempts to count the cost of some aspects of the planning system. Gurran *et al* (2010) report 2007 contributions to greenfield sites in the Sydney region of just under \$100,000. This represents about 17 percent of the cost of a new house. Developers also reported that consultant studies are a significant planning cost and can amount to between 4 and 12 per cent of the total project cost. The need for additional studies can arise unexpectedly during the planning process (Gurran *et al* 2010, 3). They also found evidence of the time-costs of delays because of the planning system. Although their methodology is quite different (most of their qualitative evidence derives from developers, itself methodologically problematic because developers have a direct material interest in the study), this seem to confirm, in broad outline, the findings of the Urbis study. The fact that two studies using such different methodologies have come up with very similar results suggests that we should be very careful dismissing their results.

Others have taken alternative methodological approaches. For instance, MacDonald (2010) looks at the financial viability of developing various sorts of housing in a range of markets that could loosely be identified as locations warranting new low-cost units. These were locations with cheaper land markets, close to railroad stations and not too distant from the CBD. Without some form of subsidy, development would not be financially feasible at most of the sites analysed. Although this study did not look at housing development on the urban fringe, and makes no claims about the impact of the planning system on prices, it does point to the financial basis of some of the issues identified by Urbis (2010) and Gurran *et al* (2010); in particular, the serious supply impediments in some of the Sydney sub-markets are caused by the inability of developers to make a "normal" economic profit in those sub-markets.

Of course this conclusion begs a series of further questions. For instance, are the returns expectations of developers in Sydney in line with the rest of the nation and in line with similar sorts of economies elsewhere? If they are not, to what extent is this the result of insufficient competition in the development market, or the result of the behaviour of financial institutions moving a greater proportion of the risk associated with development from financial institutions back onto developers? These are important questions that will not, unfortunately, be addressed in this paper. From a policy and planning perspective, our central concern is the extent to which the planning system and land prices are implicated in the housing supply problem faced by Sydney. Both the Urbis (2010) and Gurran *et al* (2010) suggest such implication. However, for reasons indicated earlier, neither study is methodologically fully satisfactory. Econometric studies of the relationship between the planning system and the supply or the affordability of housing, while now fairly common in the US and UK, have not been undertaken in Australia. If done well, these would give a much clearer sense of the impact of the planning system on the housing problem. The rest of this paper presents some of the preparatory work for such a study.

THE ROLE OF URBAN PLANNING IN CREATING THE PROBLEM

In his review for the US Department of Housing and Urban Development, Schill (2004) argues that the planning system intersects with housing supply in a three sorts of ways (Gurran *et al* 2010, have made similar sorts of arguments for Australia). (1) Planners control the amount of land available for development and the intensity of use of that land. Release policy controls the movement of agricultural land into other urban uses. Land-use zoning then specifies available uses of that land and the intensity of land use. Finally, for greenfield sites, the servicing of land with basic infrastructure makes development feasible. In other comparable countries, land-use zoning is used in place of release policy but the outcome is much the same. Release policy, land use, zoning and servicing determine the amount of land available for new residential development. (2) Planners may develop systems to pay for the public infrastructure associated with new development (these are called “contributions” in Australia, impact fees, developer charges or developer exactions in the US). Interestingly, in the US fairly complex financial instruments have been developed as partial alternatives to impact fees; for instance, tax increment financing. (3) The planning system is also a regulatory system. It forces various sorts of administrative compliance costs on development. These may include designing and building to a particular code standard (thus potentially raising costs), employing consultants to undertake various compliance research or certifying that compliance has been achieved. Regulatory compliance may result in time delays that may incur interest charges for developers. Uncertainty about compliance and about time delays, and more generally, uncertainty about regulation, will impact the riskiness of a project, thus presumably requiring higher return from the investment (in other words, greater profit for the developer). However, time delays may work to undermine the profitability of on-going projects.

However, this tripartite distinction is not complete: the planning system intersects with development in other, possibly less visible, ways. Thus we add three additional categories. (4) If public infrastructure (for instance, arterial road capacity and transit) is not appropriately planned and delivered there will likely be some impact on the viability of development. No doubt these “strategic planning” impacts (as opposed to “development control” impacts) will have some consequence for the supply and value of housing. (5) The strategic planning system also works as a “market maker” - for instance, it is meant to provide indications of the longer term development intentions of government and thus should work as a set of signals to the development market indicating where and when new residential (and infrastructural) activity is expected (the NSW sub-regional strategic plans have precisely this function). When these do not work effectively and transparently - and it is possible to argue that the strategic planning signals in NSW have not worked well this past decade - then it is not unreasonable to expect both developers and buyers to incur extra risk. For developers this usually means that they may demand greater returns to compensate for the greater risk or, when they cannot extract greater returns, they may exit the market.

(6) Finally planning is meant to provide a series of goods (for instance, lowered externalities, pleasant neighbourhoods and communities) that should increase the desirability of land and thus serve to increase housing prices. However, these sorts of price impacts work on the demand side not the supply side; therefore they cannot be reasonably viewed as adding costs to the supply of new affordable housing.

Three further points should be noted. First, the planning system is complex. Some aspects of the system may have a negative impact on the price of producing new homes, but other aspects may work in exactly the opposite manner. For instance, a planning system that reduces land supply but provides transparent and effective long-term strategic planning will have contradictory tendencies. Which tendency proves dominant will depend on the extent of land supply reductions, and the quality of strategic planning and its importance to minimizing development risk. Second, some of planning’s desirable outcomes will increase the demand for housing, and thus the price of housing, in an area. For convenience we will call these “demand-side price impacts.” However, some of planning’s less desirable outcomes may increase the cost of producing housing. If these are passed forward to consumers we will call these “supply-side impacts.” From a policy viewpoint, it is the supply-side impacts we want to minimize not the demand-side impacts. Third, not all planning-related increases in the cost of producing new homes will be passed forward to consumers; in other words, some costs may have no impact on the price of new homes. Modelling these relationships empirically is extraordinarily complex.

Land Supply

With regard to land supply, most econometric work has been on the issues surrounding growth management policy (the explicit attempt by some cities and states to limit sprawl by constraining the supply of new land on the urban fringe). However, there has also been work on other sorts of limits to the land supply for new development (minimum lot size rules, septic rules, wetland rules and so on) or, more generally, the tendency for an increase in the number of planning regulations on land to reduce available land (well-known examples include Glaeser and Ward 2009, Ihlanfeldt 2007,

Levine 1999, Pollakowski 1990, Quigley and Raphael 2005). There are technical econometric issues that make some of the results difficult to interpret in the space of an article such as this.

In theory, land restrictions tend to increase the slope of the bid-rent curve. The latter is a theoretical line that describes the price of land at various distances from the CBD. In essence, restricting land supply means that there will be greater bidding on land available for development, necessarily increasing prices. The empirical results cited above generally support the theory. Land restrictions do appear to have a negative cost impact on the supply of new housing. An increase in bid-rent slope is associated with higher prices nearer the city core. The greater the number of planning restrictions the greater the impact on supply, in other words, the greater the increase in slope of the bid rent curve. It is important to say that the literature here is quite large, the econometric methods used in each study quite variable, and thus the impacts found, and particularly the size of the impacts found, have also been variable (for some cover age of the literature see White and Allmendinger 2003). However, there does appear to be near consensus agreement for these negative impacts.

What does this say about planning in New South Wales? In previous governments, particularly under Premier Carr, land release at the fringe was severely limited so as to restrict supply. There may still be a perception that land supply is limited at the fringe. Nevertheless, the policy of the current and previous governments has been to increase significantly the amount of green field land released, zoned and serviced. Indeed land release is at record levels. Estimates are that there is the potential for 56,543 dwellings on land which is both zoned and serviced with trunk infrastructure; this is greater than the amount prescribed for 2010 by the metropolitan plan (Premier of New South Wales 2010, Department of Planning, NSW 2010). Moreover, the newly elected Liberal government appears committed to further increases in land supply. Far from restricting the supply of land, the planning system is doing just the opposite. Why then is there a problem with the supply of housing on the greenfield fringe?

One explanation is that some major landowners are land-banking in western Sydney - that is, not bringing released, zoned and serviced land to market. Why would land-banking exist? It is possible that restrictions on the supply of new land by earlier Labour administrations, well-intentioned as it may have been (as a way of reducing sprawl), have altered long-term perceptions of what land prices should be. Thus the increased supply of released, zoned and serviced land on the greenfield fringe has not done much to encourage land owners to bring their land to market. Presumably, if this were true, land owners have made the calculation that the current liberal release policy will not continue, and that, in the longer run, new land release will again be limited. Another possibility is that the arrangements for government servicing of land still create investment thresholds too large for developers.

However, it is possible that there is little or no land-banking in western Sydney. Another explanation is that, outside of some desirable areas, there is little demand for cheaper new homes on the metropolitan fringe. The much remarked very poor performance of housing prices west of Strathfield compared to the rest of Sydney suggests that the market for new homeowner housing is limited. In the recent past the building approval data suggest a fairly stagnant market with only slight improvements from 2009. In fact, for Australia as a whole, there was a -8.7 percent decline in new building permits for houses between August 2009 and August 2010 (ABS 2010a). Using what is probably the most complete data on residential development, Residex, Peters and Hall (2009) show a dramatic drop in new multi-dwelling sales particularly on the metropolitan periphery. There are exceptions to this, particularly Campbelltown and Ku-ring-gai, the latter being the recipient of major state multi-dwelling intervention. The situation with new single dwelling sales was even worse with decline everywhere, but the worst decline was on the metropolitan periphery. The sale of established dwellings provides a convenient measure of the strength of the residential market at various locations. Again, confirming evidence from appreciation data, the market on the periphery has been poor. For multi-unit dwellings, the only real areas of growth have been in the inner west and eastern suburbs. Taken together this suggests that the demand for existing housing on the western periphery is weak, and as a consequence the demand for new housing at deliverable price points on the western periphery is weak. This being the case the release of land on the western periphery will not, in and of itself, result in greater supply of dwellings. Thus although land restrictions almost certainly do have a negative impact on price, it is entirely unclear the extent to which we see these impacts on Sydney prices.

However, this analysis ignores the redevelopment of land in already developed parts of Sydney. We will turn to this issue when dealing with the regulatory system.

Contributions

Regarding developer contributions, planning regulates the system whereby the infrastructural costs associated with residential and other development are financed (so-called section 94 plans in New South Wales). Does this system have an impact on prices? Important restrictions (a \$20,000 cap) have been put on these charges in the very recent past, though these have been relaxed in some areas. Developers quite naturally denounce contributions for raising the price of

building new homes. The estimates discussed earlier in this paper suggest that they are indeed major obstacles to the affordability of housing.

However, the traditional economic analysis is that contributions (and most taxes and the costs associated with the regulatory part of the planning system) would be “capitalized” in land prices (as traditionally argued by Oates 1969, Orr 1968, Church 1974, Wheaton 1984). In other words, these costs would be borne by land owners, not developers and not potential home buyers. Thus they do not have a direct negative impact on the price of housing. At worst, they may reduce the supply of land at the margin and if so might have a small negative impact on the cost of housing. The reason for this is that the price of urban land both in land economics and in development practice is given by a “residual” - the difference between the market price the highest and best use of the land will generate, and the cost of developing that land for that use. Contributions (and other land taxes) are merely part of the cost of development. There is solid econometric evidence for the existence of this sort of impact (Ihlanfeldt and Shaughnessy 2004, Been 2005, Ihlanfeldt 2006).

A complication, both for practical policy purposes and modelling, is that while the US evidence supports the theory that the cost of the impact fees will be pushed backwards onto landowners, impact fees will nevertheless increase the price of housing either because they involve the expectation of lower future property taxes or increased local amenities; in other words, they have a demand-side effect. In the first case, residents of existing properties benefit when future tax liabilities are transferred from them to new housing (which is what impact fees and contributions do). That benefit is then itself capitalized in higher land (and therefore housing) prices. In the second case, in the US impact fees are often associated with increased neighbourhood amenity. If this is the case then the existence of impact fees may be viewed as an indicator of future amenity, and thus increase neighbourhood housing prices (again a demand-side effect). The upshot of this is that it is very difficult to identify the precise impact of contributions on housing prices. The claimed negative cost impacts of contributions on the delivery of new housing, as claimed by local developers, may be clouded by the positive amenity impact of contributions on the overall price of housing. There have been several US studies looking at the effect of impact fees on housing. Most appear to show that these fees are associated with higher house prices, both for new homes and for already existing homes (see Schill 2004 for a summary of the literature). The reason for price rises on existing homes seems to be that impact fees involve amenity cross-subsidies to existing homeowners (sometimes called spillover effects). To the extent that fees pay for amenities, the higher prices may merely reflect greater demand. There is also empirical evidence from the US that impact fees may be a deterrent to the development of housing (in California) (Been 2004). This being the case, we would expect higher housing prices because of supply constraints.

A further complication is that for a market with demand outstripping supply it may be possible to pass costs “forwards” to new home owners, not “backwards” to be capitalized in land prices. In this situation contributions would increase housing prices. This is not a point of purely academic interest. Almost everything suggests that Sydney housing market is far from equilibrium and thus contributions may indeed be inflating the cost of housing. Thus the standard theoretical analysis may not apply and full capitalization of contributions may not be occurring.

Moreover, state policy experimentation may exacerbate the inability to pass contributions backwards to landowners. The uncertainty about changes to the contribution system (caps proposed and changed) will have altered market expectations in complex ways. Land-owners with expectations that future changes to the contribution system will impose smaller costs will rationally want to bank their land until others come to the same conclusions. Those with the opposite expectations will want to get rid of their land before others come to the same conclusion. In summary, frequent changes and expectations of change will hinder the full capitalization of contributions in land prices. Costs that cannot be capitalized will be passed forward if the market allows. A market with demand far outstripping supply will allow such a pass forward.

Regulatory Compliance

At the broadest level, land-use and zoning controls/regulations (besides those regulations specifically aimed at reducing the supply of developable land) should be passed back to land-owners not forward to housing buyers. So should the cost of complying with building codes. Likewise time delays should be passed back to land-owners and thus also capitalized in land values. However, where rules are complex, as they certainly are in New South Wales, the outcome of the application of those rules (the compliance process) can be uncertain and risky. This uncertainty will most likely result in time delays. Where there is significant risk and uncertainty associated with the regulatory system, it is difficult to know how the costs associated with these could be capitalized in land prices. Thus theoretically, it is unclear what the impact of regulatory compliance is on the supply, and thus the cost, of housing.

The work of May (2004) and Glaeser and Gyourko (2003) suggests important negative impacts on land and housing prices as a result of delays associated with regulatory permissions. Ihlanfeldt (2007) finds that more regulatory restrictiveness increases prices. Mayer and Somerville (2000) have looked at regulations that add costs or uncertainty or delay to construction on the amount of new construction, as opposed to prices. They find, for instance, that regulations that lengthen the development process are particularly harmful to new construction. It seems reasonable to argue that as rules become more complex the risks associated with compliance may become greater; however, we are unaware of any econometric evidence here. The important point is that given the nature of these risks there is reason to believe that there is little or no capitalization in land value - in other words, these costs are passed forward into the price of housing.

Moreover, there are other complications to understanding and modelling the regulatory role of planning. If zoning, land-use and environmental regulations decrease the supply of land for development, then they tend to have a similar impact as growth controls on the supply of land. This is most likely to be a problem where zoning and land use controls limit conversions from non-residential to residential uses, or where controls limit demand for density. But zoning and land use controls, like the building code, are justified largely in terms of their ability to produce public or semi-public goods. If those goods are valued by home buyers, they will tend to increase the cost of housing. In other words, the regulatory compliance aspects of planning have countervailing impacts.

Strategic Planning

Earlier we mentioned that strategic planning also impacts the housing market, and gave the example of the investment in transit effects on prices and demand. In a limited sense the strategic planning system makes the market. It does this in two ways. In the first place it provides forecasts - of people, housing, jobs and so on - of the future, and in the second it provides, or at least should provide, plans of how those forecasted people, houses, jobs and so on, will be serviced with infrastructure and the other requirements of modern metropolitan living. If the application of local development controls fundamentally adds or subtracts property rights (and therefore value) to particular parcels of land, then metropolitan planning adds or subtracts value, not through controls, but by indicating what will happen to the neighbourhood of that parcel at some future point in time.

Although a great deal has been written in the popular press about the failures of metropolitan planning in New South Wales, and while we do know that the claim to build a particular road or rail link (or the failure to do the same) has a real impact on prices (Agostini and Palmucci 2008, Bartholomew and Ewing 2011, Bowes and Ihlanfeldt 2001, Cerveno 2004, Debrezion, Pels and Reitveld 2011), we know surprisingly little about the effect of strategic planning, on a long term market-signalling mechanism, on housing prices. We know a great deal about how forecasts should be undertaken, and how they are actually undertaken, and we know a great deal about the theoretical limits of these forecasts. What we don't know is how the system of forecasts that underlies metropolitan planning affects prices. This is not a problem for New South Wales alone. As far as we are aware there is no international econometric work looking at the market signalling impacts of strategic planning on housing prices (although we do know about the impact of strategic signals to do with transportation, see for instance, Ferguson, Goldberg and Mark 1991). However, theoretically the failure of government to provide adequate long-term signals of its behaviour is likely to increase risk both for developers and home owners. Developers will need to be compensated for that risk by increased returns. Owners may require lower prices. Where the return requirements cannot be tolerated by the market, developers will likely exit the market.

A further problem is that even where signals exist, they may not be trusted by the market. For instance, the Department of Planning is responsible for detailed state and metropolitan population forecasts (Department of Planning, NSW 2008b), and these forecasts are then translated into area- and type-specific housing forecasts (Department of Planning, NSW 2008a). While the forecasts use tried and true methods (cohort-survival), they come with a series of assumptions that are difficult to sustain in a complex globalized world of large-scale migration and significant changes to family structure. Translating population projections into long-term housing needs - and thus housing demand projections - poses parallel sorts of issues. The issue here is to know how household are to be composed and what the demand for space will be from the various sorts of household. We do know that the nature of demand is changing (Flood and Baker 2010, McDonald and Temple 2008). Traditional family households have become smaller as a result of lower levels of fertility. There is a much greater percentage of non-family households, there are more single people living alone, and there are more couples without children. But children are leaving home later, or coming back to the parental home as a result of the cost of housing. Beyond this, Australia has got older, which reinforces the trend of smaller household size, but also raises demand issues to do with (a) the specialized housing needs of the elderly and (b) the large number of family-size houses with many more bedrooms than occupiers. With regard to space, Australian houses have become much bigger. Will this trend continue, will more people be willing to live in high densities, will the demand for a house with a garden decline, and will newer immigrants be prepared to live in very small flats? Moreover, will the time from

initial immigration into Australia to first home purchase continue to decline? There has been research on many of these questions, most recently and notably by Flood and Baker (2010). Nevertheless, the broader impact of many of these trends on the demand for housing is most uncertain.

A final problem is that while much of development control has the force of law, much of strategic planning does not. The consequence is that development happens in a way that is sometimes entirely counter to goals of strategic planning. For instance, Peters (2010) compared actual permitting for the period 2005 to 2010 at the LGA level to the activity projected in the various sub-regional plans. The original metropolitan strategy (and the derivative sub-regional plans) seems to have got it all wrong. Most of the periphery underperformed and much of the centre over-performed. This will come as no surprise to either the NSW Department of Planning or the development industry. The vast majority of new dwellings are being produced in non-greenfield sites. However, this does suggest that the strategic planning process is not providing adequate signals to the development industry. Presumably this creates greater risk for developers and the costs of this risk are pushed forward to buyers or result, at the margin, in less development.

Parallel to the empirical literature looking at the relationship of various aspects of planning to housing prices, there are a series of related (and better developed) literatures looking at the impact of local government service provision on growth, the impact of growth on housing (and other prices) prices, and the impact of local tax and financial policy on growth (see Bartik 1991 for detailed, though now old, literature reviews). The latter is particularly important because since the growth of neo-liberalism much of local planning policy in the United States is run through the state and local tax system (rather than through the traditional regulatory framework) and that some of the literature directly addresses the relationship between the “planning section” of the tax code and growth. Although these literatures do not directly address the signalling aspect of strategic planning, the government services and growth literature does cover the provision of infrastructure. Moreover, taken as a whole this work does give some sense of the likely impact of planning, broadly conceived, on growth, and the impact of that growth on housing prices. Summarizing what is vast literature is impossible here. Nevertheless a few tentative conclusions can be drawn. While providing infrastructure does cause growth, and growth causes increases in house prices, it is unlikely that planning (taken as a series of financial instruments) has much overall impact on growth (and therefore prices). However, some local planning policies may have quite large local impacts.

Beyond this there is also a small and careful econometric literature looking at the detailed impact of specific local policies on local housing prices (see, for instance, Funderburg and MacDonald 2010). Unfortunately, given the conclusions of the previous paragraph, this work hints at quite specific (but not fully captured) impacts of policy (and indeed, actual the implementation and administration of policy) on housing prices, both positive and negative.

CONCLUSIONS

Like most metropolitan housing markets, Sydney's is complex. The specific problem of affordability is not unique to Sydney or large Australian cities, although the extent of Sydney's problem is arguably unique. This paper has focussed on the relationship between the affordability issue and the impact of the planning system on price. Given the international evidence it is unlikely that planning is responsible for all that it is blamed. Planning is unlikely to be a major contributor to the cost of new housing. Most of the local academic and professional work has focussed on fairly immediate problems associated with planning - contributions, time delays and complexity, land prices. However, this paper has argued that there are much more complex sets of influences that need to be modelled if we are to get a fuller sense of the relationship between planning, housing prices and spatial under-supply in Sydney. That modelling is still in its infancy.

Nevertheless, we are able to conclude a number of things. At the broadest level, planning may result in increased home prices in two different ways: (1) by imposing additional costs on the construction of new homes that can be passed on to new home buyers; and (2) by increasing the amenity-value of a home or a neighbourhood. It is important to emphasize that it is only the first of these two that is problematic. Concerning the first it is clear that introducing unnecessary time delays and risks into the planning system will tend to increase house prices and deter new development. The same is true of a strategic planning system that does not provide proper longer-term signals to the market - it will tend to increase prices and deter new development. Developer contributions need not increase supply-side prices, in fact, should not. But they will when policy changes frequently. Similarly development and other planning controls should have little impact on prices, but where the development control process is ambiguous and risky, where it produces uncertainly and delays, it probably will. Tight release policy will impact prices negatively, but in New South Wales there is plenty of released land for development, so there is unlikely to be much impact here. The “land restriction”

issue in New South Wales has got to do (1) with the costs of servicing released land and (2) the time and delays associated with moving already existing land uses into more valuable uses. On the whole, making the planning system more transparent, less uncertain, more consistent, and faster is crucial.

Modelling this situation is complex. Planning intersects with land and housing markets in a number of quite complex ways. Some of these interactions are quite well understood, but others are not. The problem with most of the existing empirical work is that it tends to focus on one aspect of planning and not the entire planning system.

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