

**Submission to the
Senate Economics References Committee
Inquiry into affordable housing
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**De-risking development of medium density housing to improve housing
affordability and boost supply**

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1. INTRODUCTION

This submission addresses the problem of housing price inflation, the chronic under-supply of new housing stock, and the resultant decline in housing affordability for low and middle income households. It specifically focusses on the supply of medium density housing (multi-unit development) in Melbourne, although we believe that the observations made about housing in supply in Melbourne are relevant in other urban centres and to other types of housing supply.

In terms of medium density housing (MDH) our concern also extends to the poor quality and design. Why the market tends to deliver generic apartments of poor quality and design which are uncompetitive with lower density housing and amenity despite planning objectives, and how this apparently intractable problem can be overcome is the topic of this submission.

There is surprising little research that has investigated housing production in Australia (Dowling, 2005; Dalton et al., 2013), with Rowley and Phibbs (2012) the only attempt to date to systematically review the production of medium density housing. Daly's (1982) in depth examination of the 1960s property boom in Sydney provides a rich source of material on the institutions and actors involved with apartment building at that time and this work remains relevant today. Again reflecting that period and its ongoing impact, Clark's (2002) biography of Lend Lease founder Dick Dusseldorp provides valuable historical detail on the introduction of strata title, which enabled the expansion of medium density housing through sub-division of airspace.

There is a small body of critical literature on developers. Dowling (2005) and Coiacetto (2006, 2009) have examined concentration of firms within the development industry; Ruming (2010) the relationships between developers and local government planners and the impact on planning decisions in Sydney; and Coiacetto developer behaviour in relation to place (Coiacetto, 2000); urban space (Coiacetto, 2007b); and sub-markets (Coiacetto, 2007a).

There is an absence of critical literature for residential development finance, a gap only recently started to be filled by Bryant (2012) and Rowley et al., (2014). There is however a property development and project finance literature produced for teaching purposes (eg. Weerasooria, 1998; Weaver and Kingsley, 2001; Wilkinson, 2008, Cadman and Topping, 1995, Coiacetto, 2012), or as practice guides (eg. Millington, 2000, Forlee, 2012, Peiser and Hamilton, 2012). These cover numerous forms of development with limited attention to the specifics of medium density housing with Thomas (2010), Coiacetto (2012) and Forlee (2012) addressing the Australian context, although there is also a grey literature produced with the industry in mind (Burke and Associates 2010; Kent, 2011).

Planning as a key input into housing production has attracted considerable attention regarding its role in inflating housing costs. On one side, industry (UDIA, 2011; PCA 2012) argues planning regulations impose unreasonable costs on developers, and on the other, planners and/or housing

researchers such as Gurran et al., (2009) suggest planning makes little difference to costs. Bryant and Eves (2014) argue in relation to developer levies, that there is simply no empirical evidence yet. In addition to planning, taxation (especially negative gearing and capital gains tax), government subsidies (eg rental assistance and first home owner grants), and construction costs have come under scrutiny (UDIA, 2011; Worthington, 2011; Wing, Norman and Orsmond, 2012; Rowley and Phibbs, 2012; PCA 2012; Urbis, 2012; Burke, 2012; HSAR, 2012; Williams and Macken, 2013) although much of this work does not specifically consider medium density infill.

A key assumption is that housing production cost savings should translate into lower housing prices. Rowley and Phibbs (2012) and Rowley et al. (2014) argue for reducing risk and costs for developers as a means of lowering prices and thereby improving affordability. Rowley et al., (2014) found (reflecting the teaching and practice literature) that housing production cost is relevant to project viability but they were unable to articulate why developers would sell their product below the prevailing market price. Production costs are an issue but housing asset inflation is driven by the availability of investment finance, increased consumer capacity to borrow, and competition between consumers for well-located housing (Burke 2012) and by property speculation (Woodcock et al., 2011). Viewed through the prism of Burke's housing sub-systems approach (*production, consumption, management and exchange*) much housing research focuses on *production* (albeit not much on medium density), *consumption*, and *management* (particularly social housing systems), but little attention is given to *exchange*. Exchange involves

the practices and institutions which facilitate the sale, purchase and renting of housing, with the principal actors here being finance institutions in their many forms, and real estate practitioners. Both are important as facilitative agents in making the development, sales and purchases process possible (Burke 2012:46).

The literature reveals a very substantial gap in regard to exchange. This submission addresses that gap by examining *exchange* from a classical economic perspective in relation to MDH and in particular to strata title of cubic airspace, revealing *exchange* as a key development risk; one that institutions struggle to address. We argue a basic economic understanding of the market fundamentals has been missing from the debate: the problems of supply and affordability of medium density infill housing relate to the current inability of the market to efficiently match supply and demand in order to progress an orderly and de-risked development process.

The remainder of this submission begins by outlining the current structures of housing provision for medium density infill housing in Melbourne. This is followed, in Section 3 with a discussion of how the most critical issue for the market, the problem of uncertain consumer demand is addressed. In Section 4 we look at planning policy and its role in bridging the problem. What can be done to reduce demand risk and hence improve affordability is addressed in Section 5. Section 6 addresses how the design of the market can be revisited to produce efficiencies and conclusions are drawn in Section 7.

2. STRUCTURES OF HOUSING PROVISION FOR MEDIUM DENSITY HOUSING DEVELOPMENT

Ball (2003: 914) argues 'differences in institutional structures affect supply responses', and that it is essential to locate the supply system in time and place and understand both actors and institutions (Ball et al., 1988).

A structure of housing provision specifies the nature of the social agents involved in the provision of a particular form of housing and their interlinkages. Producer, consumers and financiers in different guises all have their place within structures of provision (Ball et. al., 1988: 29 – 30).

For MDH in Melbourne the key agents and institutions are: developers (producers), apartments buyers, being owner-occupiers or investors (consumers), development and mortgage financiers (finance), strategic and statutory planning, building codes, taxation, consumer law (regulation), land form, spatial relationships (geography), construction types and costs (technology), Victorian and Commonwealth government policies and actions, lobby groups, resident action groups (political). A significant and often overlooked input into production is land supply and landowners are hence also influential agents (land owners).

In examining medium density infill developments (ranging from a few attached single story dwellings to high-rise towers) commonalities and differences can be observed. The most significant divergence to be noted is that developments generally either involve sub-division of land or sub-division of airspace. As can be expected there is a spatial element that reflects zoning and allowable densities but we argue it also reflects the structures of housing provision.

Medium density developments based on land sub-division generally involve small to medium scale 'infill' sites mostly on large residential blocks that are sub-divided into smaller lots on which single dwellings of between one and three storeys are built (Phan *et al.*, 2008). These new homes may be attached or detached dwellings. The producers of these smaller developments are frequently novices and/or 'Mums and Dads' (Ruming, 2010) or 'part-time developers' (Forlee, 2012: 61). In contrast, larger projects of up to 30 dwellings (Ruming, 2010) involve 'full-time professionals' (Forlee, 2012). This small scale infill form of development is notable for being highly competitive with low margins (Chandler, 2009) making use of the same construction technologies and business structures as detached house builders, and relying heavily on non-unionised subcontracted trades and labour. While this form of development has made a not inconsiderable contribution to new supply (Szafranec and Hollaway, 2012), it is criticised for poor quality and design (Newton and Glackin, 2014), without providing more affordable housing. Alternatively, such sites in high demand locations are developed with premium stand-alone small lot housing product, providing only marginal density gains and pricing out all but the wealthy.

The relative small scale of such project's proponents impacts on their ability to access development finance. In the land-subdivision medium density development model, the land is used as security against borrowings and the quantum and characteristics of the loan reflects the underlying un-subdivided value of the site rather than the total anticipated cost or value of the project. This means that the requisite construction loans are often secured against other assets of the borrower such as the family home (Weaver and Kingsley, 2001). The asset backing of the borrower therefore limits how much can be borrowed and thus the scale of the project able to be undertaken. Smaller scale projects are often seen as lower risk by financiers by virtue of needing fewer buyers to generate the income to repay the loan, the relatively short project time frames and the intrinsic (and realisable) value in the underlying land should the financier need to sell assets to recoup its loan. These are uncomplicated loan structures, generally negotiated at a local bank branch level. This mainstream bank finance has replaced solicitor's funds used during the 1960s and 1970s for the building of flats (Burke 2012).

On the other hand, projects that sub-divide airspace are by definition multi-storey complexes, generally with apartments on each level. Developers of such projects tend to have corporate business structures, professional staff and many operate on a regional level, and some on a national level (Dowling, 2005). Much of the product is aimed either at the luxury end of the market (where greater margins are available) or investors seeking rental yields in the short term and capital gain in the longer term. Both these market segments are strongly influenced by geography and amenity, with landlords requiring a ready supply of tenants with capacity to pay, inclining them towards the city centre. Tenants of investor stock seek ready access to employment or study nodes as well as entertainment locations so as to minimise transport and other living costs. Upmarket owner-occupiers seek water views, high neighbourhood amenity and so-called 'lifestyle' attractions.

Reflecting diversification out of the non-residential construction sector (Dowling, 2005) these developers use building technologies similar to those employed in commercial developments, often using unionised workforces and operating with higher overheads and margins, reflecting economies of scale. As with the smaller scale development, the development site itself is used as security for the loan that is required to complete the project, however the quantum and conditions of the development finance reflects the anticipated overall cost or value of the project, thus allowing for a substantially larger loan and hence larger project to be constructed. The developer usually provides little personal security for the loans, with loans secured only against the project in many instances, or against other company assets (Weaver and Kingsley, 2001). The financier is concerned with the considerable financial gap between the raw value of the land and the total cost of developing the airspace as the long and often uncertain time period between project inception and completion makes this form of development a relatively high-risk financing venture. As Ball (1998: 1505) notes, it is the lender who bears most of the costs of failure whereas the developer

'reaps virtually all the gain' if 'the gamble comes off'. Although public policy supports this form of development its contribution to supply is mainly through larger towers, with investment low or non-existent in many suburban activity centres. Much of what has been built is criticised for poor design and quality, is notably uncompetitive when compared to local house prices, and is often ferociously attacked by residents' groups (Woodcock et al., 2011).

We have noted above that the smaller developments are relatively lower risk and hence are financed somewhat differently from the larger developments. This risk relates primarily to the gap between the realisable value of the land and the size of the loan. Development of airspace carries greater risk reflecting greater complexity and the longer time periods for construction. Many of these risks can be mitigated, but not all (such as interest rates affecting buyer's decisions to purchase). The most serious risk in all property development is the difficulty in finding and locking in demand at a single critical juncture. From a broader economic perspective this is the one risk that is least efficiently mitigated, and is explored further in the following section.

3. EXCHANGE: SETTLEMENT RISK AND MITIGATION MEASURES

Larger strata titled developments typically take a number of years from inception to completion, with many critical hurdles along the way (Rowley and Phibbs, 2012, Millington, 2013). Such projects generally receive no revenue at all until completion, at which time the new strata title¹ is created and the transfer of real property (settlement) occurs. Between completion and settlement, virtually all project funds have been expended leaving both developer and financiers highly exposed. Unlike greenfield development, apartment buildings generally cannot be staged to deliver incremental revenue.

Developers rely on research to determine the strength of demand, and 'pre-sales' are used to confirm market acceptance of the product type and price point on offer. Pre-sales are also sought by financiers to ensure there are sufficient sales at completion to cover repayment of the loan. Funds borrowed for construction are generally not released by the financiers until a minimum number of pre-sales are achieved. Due to strict lender requirements, developers are accordingly very conservative in regard to the type of product they will offer and localities they target as a means of ensuring sales (Kent, 2011).

The importance of pre-sales in the medium density housing development process cannot be overstated. In most cases construction cannot commence until sufficient pre-sales are achieved. The pre-sale period can stretch into many months or years, making it more time consuming than statutory approval processes. Pre-sale campaigns include: constructing and operating display units; printing of marketing materials; engagement of real estate agents to handle sales; newspaper, magazine, internet, television and radio advertising; home shows and trade delegations. As investors represent the bulk of purchasers, the 6% commission paid to financial planners is a significant cost component adding to the purchase price. Pre-sale campaigns cost up to 10% of project costs, making it more expensive than the finance.

Although a pre-sale contract is theoretically binding on the purchaser, the maximum 10% of the deposit (Burke and Associates, 2010) is sometime insufficient incentive to proceed to settlement as agreed and in practice developers sometimes find default at settlement difficult to remedy. Considerable time can elapse between a pre-sale and settlement, which may correspond to a shift in market conditions and demand. Should market conditions deteriorate, or the buyer's financial position change, buyers who have signed a pre-sale contract may default on their purchase. Purchasers for example are inclined to 'walk away' if the apartment value falls significantly between pre-sale contract and completion, particularly if mortgage lenders withdraw their offer of finance. This 'settlement risk' is addressed by developers and financiers through a number of means and has had greater focus since the global financial crisis (Bryant, 2012). Financiers vet purchasers to establish whether there is risk of default at settlement, restrict the purchase of multiple dwellings, often to as little as two apartments, and in some cases limit the level of foreign investment (Burke and Associates, 2010). Still, settlement risk is a significant risk factor that cannot be fully mitigated as evidenced in the aftermath of the global financial crisis (Bryant, 2012).

Most important in terms of affordability, projects using debt finance will only proceed if the

¹ In Victoria 'strata title' is simply called a 'lot' under the Sub-division Act 1988

anticipated return on the investment is assessed by the financier as commensurate with the risks, with a minimum rate of return of 20 per cent on costs currently demanded by the major Australian banks, as senior lenders, in most cases (Kent, 2011). On an annualised basis this return is modest (e.g. a four year project means five per cent per annum). Financiers take a margin on the loan and fees rather than share in the profits and are first in line when earnings are disbursed (Burke and Associates, 2010, Bryant 2012). Pre-sales lock in the price early in the project, and if a project is 100 per cent pre-sold (which is often currently required by financiers), the developer does not capture any of the uplift in property values that may have occurred in the intervening period (the buyer does). The developer can only capture lift in value that occurs between purchase of the land and pre-sale. This can be compared with social housing projects which are de-risked because demand is locked in at the outset and progress payments underpin the process.

Pre-sales therefore represent a sub-optimal solution to the problem of locking in the demand to ensure a project can proceed in the knowledge that settlements will occur at the completion of the project. Policy analysis almost invariably follows the assumption however that if input prices for housing can be lowered, housing would be more affordable; hence the ongoing debate on the role of taxation and planning on housing affordability. This view assumes that housing supply comes onto the market on a cost plus margin basis, whereas new housing stock in fact comes onto the market reflecting prevailing prices (Berry, 2010). Cost savings, such as those achieved through construction innovation or planning deregulation accrue to the developer in the absence of robust competition (see Coiacetto, 2009 for a discussion of the oligopoly structure of the industry). Where cost savings are important is in terms of project viability (that is, in ensuring projects are able to attract financing and can thus proceed (Rowley et al., 2014). That nevertheless leaves us with the problem of how housing prices relate to costs, and in the next section we discuss the role of planning in this.

4. THE ROLE OF PLANNING IN EXACERBATING THE AFFORDABILITY ISSUE

Victoria has a *laissez-faire* planning regime, especially in the central city area, which is designed to promote capital investment. Floor space or plot ratios have not existed as a development control tool since 1999, and while building height limits apply in many areas, in practice these are treated in the application process as a negotiable factor. As the market has increasingly sought to invest in residential products, one argument mounted by those with an interest in keeping restrictions on site yield to a minimum is that additional yield will help keep apartments affordable. However, permitting greater yields on redevelopment sites pushes up the price of land in the vicinity, because landholders' expectation of future yield is raised, thus negating any cost saving for future projects. At the same time, existing redevelopment sites tend to go back onto the market as vendors seek to capture the uplift in site value and exit the project in a risk free manner (Woodcock et al., 2011).

Assuming these development sites are purchased by developers genuinely intending to build upon them, the new project proponents often find themselves with sites literally too risky and/or expensive to develop (Rowley and Phibbs, 2012). With the increased yield potential capitalised into the land price, only an additional increase in apartment prices (that is, an increase in the capacity and willingness of consumers to buy) or decrease in construction or other costs will permit the project to be viable and gain finance. A further risk is created by the larger scale of the development, as this limits who will buy into them. Apartments in large towers for example are mostly purchased by investors, responding to demand from specific tenant cohorts, such as students. The alternative is for the new owners to land bank their site until demand at the right price point exists.

As we have outlined smaller medium density development is constrained by the limitations on their access to capital. Larger firms have the ability to undertake larger and riskier redevelopments but these not only have higher costs, but the margins sought are also higher. Designated suburban development zones such as Activity Centres should attract larger developments but the price point at which apartments can be supplied does not have a market in many nominated localities (Newton and Glackin, 2014). Those undertaking larger developments do not compete with small developers for suburban residential sites as these projects are considered too small and margins too slender. Only where yields can be increased significantly (eg through lifting height restrictions substantially) are they likely to be interested. The result of the current structure of housing provision is that planning alone will not deliver desired built forms and uses. But it does have an important role.

While it may appear counter-intuitive, density restrictions in the form of planning controls that limit the yield available from re-development sites, such as height limits, floor space ratios or bedroom quotas, may be effective in dampening speculation and creating a positive environment for more affordable housing development. In essence, planning controls can do the opposite of deregulation by creating certainty: certainty about what the site is capable of yielding. With greater certainty, risk is reduced and the project has an increased likelihood of obtaining finance and proceeding as proposed. Importantly landowners will moderate their expectations of capturing any future uplift in value once the development capability of the site is known and fixed. The need for increased housing supply as well as affordability requires certainty in the planning process to remove speculation from the development process.

Restrictions on yield to prevent over-development on larger infill sites can be offset in 'greyfield' suburbs by reconfiguring existing housing lots through aggregation to enable precinct regeneration (Newton and Glackin, 2014). Moderate height increases and the better use of airspace can maximise design outcomes and optimise land use while retaining amenity. Mixed use developments that incorporate residential over retail or small scale commercial uses can provide important amenity and housing choice. Yet even if the incentives to speculate on land value were removed from the planning scheme, the current development models would still be problematic as the problem of finding buyers and locking them in remains and in part because there is a lack of competition on the supply side.

5. How can the development process be de-risked?

Housing supply innovation requires economic actors who are able to commit to the supply of affordable housing and the most obvious candidates are consumers themselves. The means by which consumers can be involved in innovation is both technical and conceptual. Conceptually, aggregation of consumers is a method of reducing the search costs that currently undermine the efficiency of the market. Aggregation occurs in many markets and is the basis of cooperatives, and traditionally draws on communities of interest, such as with the German *Baugruppen* (building groups) or *baugemeinschaften* (building cooperatives).

Baugruppen and *baugemeinschaften* are essentially 'DIY' syndicates that produce medium density housing for owner-occupiers at around 75% of the market cost, as they effectively remove the need for the developer, and hence the developer's margin (Alves and London, 2012). Since the 1990s, *Baugruppen* have come to play a significant role in the provision of medium density housing and the urban regeneration in a number of major city regions across Germany (Krämer and Kuhn, 2009; Fuchs and Orth, 2000). The sector also has a presence in France and the Netherlands. Unlike typical medium density housing developments, dwellings are tailored to suit the diversity of households involved and often embody other collective ambitions, such as higher environmental performance. Once the development is complete, the syndicate disbands and member households become owner-occupiers of their individual dwellings with common aspects of the property managed in the usual way by the equivalent of an owners' corporation (de Maddalena and Schuster, 2005: 44), or the syndicate can remain as an ongoing cooperative to manage the property. *Baugruppen* effectively aggregate demand prior or close to project conception so are less risky. *Baugruppen* financially backed by a large community housing organisation as proposed by Common Equity Housing Ltd in Victoria (BCCM & CEHL 2014) could be a means of delivering larger medium density affordable housing projects. To date there has only been one cooperative medium density development project aimed at owner-occupiers in Australia that has been publicly evaluated, and it found a saving of 28% (Dolin 1992). Overseas experience and the Australian example suggests pursuit of 'deliberative' forms of development is warranted.

6. Redesigning the market

Housing inflation and chronic undersupply reflect a substantial market failure. Yet typically planning, taxation, government subsidies, and construction costs are examined for their contribution to these failures which are implicitly assumed to be regulatory failures (Worthington 2011, Rowley and Phibbs 2012; Burke, 2012; Wing, et al., 2012; HSAR 2012; Williams and Macken 2013). As noted earlier there has been almost no analysis of the housing supply system, and with little empirical evidence available there has been no consideration as to how the market actually operates. Our analysis suggests that: demand for apartment products is gauged through economic proxies rather than actually expressed; a pre-sale contract is weak legal mechanism for

such an important exchange; transaction and search costs are high and time consuming for both supplier and purchaser.

In relation to consumer demand, orthodox apartment development takes economic data as a substitute for actual consumer demand in an environment in which consumers are severely contained in the choices they can make. As noted the apartment market largely produces a generic product within 'safe' localities. Consumers can purchase an existing apartment or buy at pre-sale stage but this does not represent the sum total of, or variation in actual consumer demand. In contrast deliberative development builds for real clients rather than a proxy and this removes risk and hence costs. Both orthodox and deliberative development would benefit from a mechanism that could realise actual demand.

Turning to the fundamentals of the market, Australian housing supply, with the exception of social housing, is characterised by bi-lateral trades. That is, sales are largely between a single seller and a single buyer, and therein lays the search and transaction costs. We suggest that aggregation, the pooling of potential buyers on one side, and a pool of development opportunities on the other offers the scope to reduce risk and costs in the supply process, and that a mechanism is available to enable this innovation.

This proposal is informed by 'market design' a new economic field that has emerged from game theory which highlights the value of cooperation in markets and the market efficiencies that arise from shifting from bi-lateral trades to aggregation via the creation of a pool of consumers and pool of suppliers (Roth, 2007, 2008). *Market design* asks how can markets operate more efficiently and better serve consumer needs, or how can a market be brought into existence where there is none to enable a more efficient allocation of resources. *Market design* has been described as an 'engineering discipline linked to mechanism design' (Milgrom 2011: 319). The practical application of market design through *smart markets* and *matching markets* has been enabled by the internet as a communication tool and computing to manage transactions.

The most common market design application has been to auction systems, and its most celebrated achievement is a matching market for human kidney exchange. What market design has enabled is renewed attention to critical issues, which Milgrom (2011: pp 311-319) outlines as 1) product definition – what is the commodity and how should it be defined?; 2) messages – how do participants communicate in markets?; 3) incentives – the tradeoffs between the incentives provided for truthful reporting; 4) linkages among markets – how trade in different goods are linked.

In terms of supply of apartments this means circumscribing the market and its agents and appointing a manager. Less a case of the invisible hand of the market than the visible hand of the market. In short, agents must formally participate within a structured entity. There is little novelty in this; stock exchanges are an example. The first step is the creation of a new market (we will call this the Smart Housing Market (SHM)) and the establishment of a independent third party operator as market manager (a Smart Housing Market Manager (SHMM)).

The SHMM actively recruits potential buyers, obtains their preferences and capacity to pay and matches them to possible opportunities. Developers are similarly recruited and have the opportunity to shape their offerings to respond to the expressed consumer preferences, allowing the potential for greater differentiation of apartment typologies and sizes. Both buyers and sellers manage their own profiles, browse, and learn (there is a substantial opportunity for on-line education tools relating to all aspects of purchasing, selling, renting and maintaining housing, as well as how to achieve better quality and more sustainable apartment design). Both sides of the market provide their information, and that information can be analysed and put back to the market in real time.

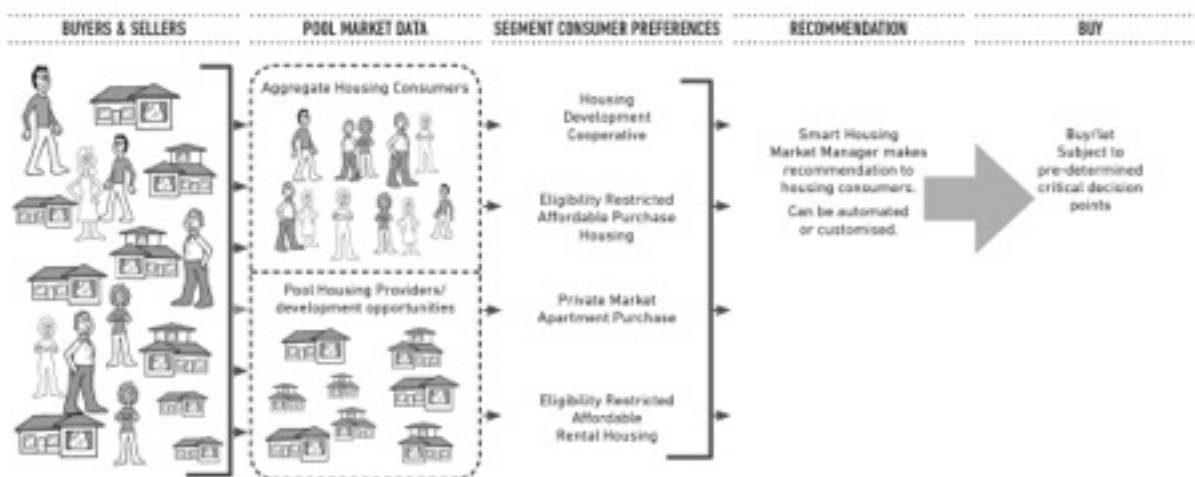
A recent survey by Matusik (2012) highlights the mismatch of information generally available on property websites versus what buyers want to see. Matusik claims that developers sell lifestyle whereas apartment buyers (which they acknowledge are currently mostly investors) want to see the property fundamentals: location, price, and development type. Many details are often not available at all. These insights go to the issues of transparency in the market, ease of transaction and trust, which are concerns that can be addressed through a SHM and of better alignment of the interests of buyers and developers. Importantly consumers can initiate the process themselves

using the SHM to bring together other potential buyers, and procuring a builder and finance.

Both the speculative and deliberative development rely on the timely engagement and commitment of the individual owner/ investor to attract development finance to allow construction. This is where innovation in market design can be of immense value. Figure 1 conceptualises the aggregation and decision-making process.

Figure 1.

Smart Housing Market Pathways



One of a SHM's desirable features is its capacity to service a range of markets concurrently as shown in Figure 1. Aggregation permits robust segmentation into specific housing tenures or options. For example the SHM can also aggregate eligible private rental tenants and investors for National Rental Affordability Scheme (NRAS) developments or for long-term private rental as proposed by Landcom (2010). Community housing organisations could source tenants for their affordable and key worker housing.

Aggregation via a SHM enables potential purchasers to be identified early and their preferences assessed, and allows for communication with developers prior to major investment decisions being made. It not only telescopes the campaign for pre-sales but also opens the way for a far more responsive approach to development. A SHM has already been launched (see Citiniche.com.au). Buyers are invited to select an existing 'niche' (market segment) or create a new niche. Buyers are then able to add ideas, select a project, and attend workshops. Once they commit they can watch their apartment building being built. Initiated by architect, Ivan Rijavec, the partners in Citiniche are architects and developers. There is debate whether this model of 'crowdsourcing' of residential design and development will provide savings to buyers (Edgar 2012) but Rijavec believes it can arguing pre-sales are 'more of a case of crowd control than crowd enabling' (Rijavec 2013). Citiniche however needs to establish that developers will pass through savings. In our view this will only occur with the entrance of new deliberative developers to provide competition to orthodox market developers.

The issue of aggregation goes to the economic issues encountered in the development process. As important, are the legal issues pertaining to the pre-sale and settlement of apartments. While there have been some changes to the National Consumer Law to provide greater protection to purchasers of apartments there has been no fundamental re-thinking of the legal mechanism. Research is required to understand whether it is possible to achieve law reform that can de-risk the development process for both consumer and developer.

But perhaps pre-sales will be overtaken by 'group apartment auctions', where newly constructed apartments are simultaneously put to auction after the titles are created. Melbourne's first group auction in April 2014 was highly successful despite the lack of stamp duty exemption (Pallisco,

2014). According to game theory and as established in practice in the US this type of auction provides greater choice to the buyer whilst delivering higher margins to the developer. This type of innovation in the market should draw policy attention to the housing sub-system involving exchange because it indicates the current structure of housing provision has critical flaws.

Finally, landowner speculation can be eased through planning reform but property speculation per se cannot. Property investment for capital gain is currently underwritten by taxpayers in the form of reduced capital gains tax and negative gearing and is justified in policy terms as encouraging supply. The inflationary impacts of these measures have been widely discussed (eg Eslake, 2013). From our perspective investors may be a source of funds for new development but this demand segment is also highly associated with settlement risk. Investors are a source of market volatility which heightens the development risk and hence affects the variability of projects and the margins sought by developers and financiers.

7. CONCLUSION

The failure of public policy to deliver affordable medium density infill housing has variously been laid at the door of the planning system, at taxation policy, and at construction costs. We have shown that planning on its own cannot deliver affordable housing as an outcome; there needs to be a structure of housing provision capable of responding to the housing objectives of the planning scheme. Public policy however exacerbates housing price inflation by facilitating rather than restraining property speculation, thereby affecting project viability which in turn affects supply and prices.

Examined through an economics lens, the housing exchange sub-system reveals demand as the key risk faced by developers, and this drives institutional responses. Pre-sale contracts have evolved to legally bind consumers to their purchase decision but they are a sub-optimal mechanism. The risks associated with uncertain demand create a barrier to project viability, and lift the threshold profit margins expected by financiers. If this risk was reduced, expectations of the margins required would moderate permitting more projects to proceed. But greater competition is also required to pass on these savings to consumers. Aggregation of buyers offers a more orderly and de-risked development process, and deliberative forms of development provide a much needed source of competition, together they would enable more supply of better quality and design at more reasonable prices.

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