Is there such an entity as a housing market?

by

Haydir Alhashimi

and

Wayne Dwyer

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Abstract

As an industry, housing is important both as an indicator of the economy's health and as a flywheel to future growth. As a market, housing is unique. It contains a combination of features that set it apart from other markets. However, despite this, and despite increasing evidence of its imperfections, the housing market is modelled along conventional market theory lines. It is assumed to be an aggregated homogeneous product with heterogenous variations at the margins. Moreover, the value of its "product" is taken as the market price rather than as the perceived value. Such an approach fails to deliver a full understanding of the housing market. To gain a more realistic picture of its mechanics, housing economists must begin to explore the non-economic area of buyer and seller behaviour, especially in regard to perceived value and expectations.

Key words: housing market; competitive markets; demand and supply; equilibrium; price; perceived value; expectations.

Introduction

Research into the way the housing market is modelled is important both from an economic and from a social viewpoint. Housing, in the generic sense, is one of the more obvious economic and social institutions in our society. Not only does housing provide people with the social values of shelter, security, independence, privacy, and amenity, but it also plays a major role in any nation's economy. It is axiomatic that the purchase of a house is the largest single transaction that consumers will make. Moreover, the house purchase is linked to the purchase of other goods, not just through obvious household items such as furniture and so on, but through the purchase of neighbourhood, local government services and workplace accessibility. As well, because of the large bundle of components that come with it, the house purchase is very sensitive to household and market demographics.

Generally, study of the housing market is of interest because:

1. House prices are subject to a short run variability rarely matched by other consumer durable goods. Demand may shift rapidly while supply changes slowly (Giussani and Hadjimatheou 1991).

2. The purchase of a house is generally the largest single item purchased by a household. Its market value is usually several times the household's annual income, and the value of a nation's housing stock is a significant proportion of its total capital stock. For the typical house owner, the house is the major asset in his or her portfolio. Thus, the purchase of a house is as much an investment decision as a consumption decision. As such, it is tied closely to the cost and availability of credit and so, to government monetary policy (Giussani and Hadjimatheou 1991). Due to tax provisions, the purchase of a house can be an attractive instrument of wealth accumulation (Arnott 1987, Jones 1990). Also, the relatively high cost means a rental market will exist;

3. Housing can have a strong impact on the rest of the economy. For instance:
   - Unexpected changes in house prices and the attendant effect on housing wealth may have a substantial effect on the personal savings ratio (Green and Hadjimatheou 1990);
   - For many households, the purchase of a house represents the largest (and often only) source of accumulated savings (Goodman 1989);
   - Regional differences in house price changes may lead to labour migration between regions (Muellbauer and Murphy 1989);
   - Increases in house prices are likely to affect the distribution of wealth in favour of homeowners and older households (Giussani and Hadjimatheau 1991);
   - The Housing Industry Association of Australia (HIA 1983) believes that housing has an income multiplier of 2.4. The HIA claims that for every $100 million invested in new housing, national income increased by $240 million, with the creation of 1500 full time jobs directly within the house building industry and another 1500 jobs created in housing related industries. By way of practical example, the HIA reported on the negative multiplier effect of the 1981-3 downturn in housing activity which lead directly to a loss of 56000 jobs and a fall in government revenue of some $4bn due to lost taxes and increased social outlays.

Housing and competitive markets

As an economic phenomenon, housing is analysed through conventional market theory. And as with many goods, the basic view of housing is that it is a competitive market, though in reality it is differentiated from other types of competitive markets by several features. These features are not individually exclusive to housing and each by itself does not make housing a unique market. Rather, it is their concurrence that sets housing apart as a special market. Unique to the housing market is a combination of durability, heterogeneity, and spatial fixity.

Durability. A house is a capital good with a very long lifespan. Unlike foodstuffs and other single use or short term consumer goods, housing continues to provide services over many years. Houses have a longevity greater than other consumer durables. Older houses that may become "obsolete" will still be used and may even be "modernised". Indeed, houses do not necessarily depreciate because of their age (Giussani and Hadjimatheou 1991, Quigley 1979). The durability of a house and the level of services it continues to provide are often dependent on the quality of its construction, the type of building materials used, and the level of maintenance.

Heterogeneity. Unlike most goods such as those bought in a supermarket, housing is not homogenous. It is not a single, undifferentiated, homogenous product. Houses differ in size, shape, age, building materials, construction, and location. Houses differ qualitatively and quantitatively. Units that command the same market price may be viewed as substantially different by both buyers and sellers. It is the attempt to model this differentiation that is at the crux of hedonic pricing.

Spatial Fixity. For all intents and purposes a house is immobile. It occupies a fixed location in three dimensional space, and while its occupants come and go, the house remains. Spatial fixity suggests that there are important physical and social externalities inherent in the location of a house that will affect its ability to give utility and thus its price.

Taken together, the durability, heterogeneity, and special fixity of housing suggest that there is not one all embracing housing market, but rather a series of local submarkets (Charles 1970), "a collection of closely related, but segmented, markets for particular packages of underlying commodities differentiated by size, physical arrangement, quality and location" (Quigley 1979).

The assumptions made by economists in their analysis of housing markets are the standard ones posed by neoclassical economics for all products. Analysis of them reveals their inappropriateness for “the” housing market, even for its submarkets.

1. ***There are many buyers and seller and each buyer and seller is too small to affect the market place***.
   Taken together, these two basic conditions underpin the theory of competitive markets, by holding that, at any one time, individual buyers and sellers represent only a small proportion of the market, thus allowing no one individual or group to exert power over others in the marketplace.

Superficially, this would appear true for the housing market. At any one time, only a relatively small proportion of the total stock of houses are bought and sold. The appearance, however, is misleading. As Arnott (1987) argues: for one, both buyers and sellers will have some market power brought about by the thinness of households and housing units in locational space and the mobility costs on both sides of the market; and two, due to the moving, search, advertising, and modification costs, only a small proportion of housing units are likely to be on the market at a given time.

Because households purchase homes only infrequently, with a small proportion of households active at any time, small changes in the aggregate behaviour of a few households can, locally at least, have a significant effect on prices. This is due to the highly variegated nature of housing and the ways in which housing choices are constrained by finance, knowledge and locational considerations.

2. ***Buyers and sellers have both perfect knowledge and perfect foresight of the market.***
The assumptions of perfect knowledge and foresight are central to competitive markets. No one buyer or seller can manipulate information in the market to his or her advantage over another buyer or seller if all buyers and sellers have the same full understanding of the marketplace.

These assumptions, however, bear little relation to reality in the housing market. Findings suggest that the housing market may be imperfect (Miller 1982, Locke 1986, Arnott 1987, Liu, Grissom, and Hartzell 1990). At the very least, it is not efficient (Linneman 1986, Gau 1987), and this of itself will distort the relativities of house prices. Knowledge and therefore prices are specifically affected by the level of buyer and seller experience (Gibler and Meglolugbe 1992); and asymmetrical buyer and seller information (Miller 1982). Asymmetries in external information brought about by regulations that affect production, exchange, and consumption, for example, zoning and building codes, can be significant (Arnott 1987).

Prices vary enormously within and between cities, even for similar dwellings; house price changes occur spasmodically rather than regularly; and price movements are never uniform within and between cities. Very few buyers and sellers would possess anything remotely resembling perfect knowledge of current prices and even fewer have perfect foresight with respect to future prices. Even the most experienced estate agents, working in the local areas that they know best, rarely have perfect knowledge. House prices appear to be set largely through irrational expectations of current and future prices rather than though fully understood market demand and supply fundamentals (Clayton 1996). Players work with hindsight to set current prices and to predict future prices (Case and Schiller 1988, 2003).

3. ***Buyers and sellers try to maximise their individual returns and there is no collusion amongst or between buyers and sellers.***

Taken together, these two conditions ensure competition and the independence of players in the market. Buyers and sellers are deemed to act independently in their own best interests, each trying to maximise their own total returns. Within the competitive housing market, buyers are assumed to want more housing services at lower prices, while sellers are assumed to be willing to sell more housing services for higher prices.

These assumptions, while appearing sound, are unrealistic and there are few reasons for accepting them unconditionally. It is difficult to see how buyers and sellers can maximise returns if they do not have perfect knowledge of the market place. Even putting aside the whole vexed issue of how one measures buyer and seller return when applied to housing, the assumptions fail in that they ignore the role of the real estate agent and the process of negotiation. House prices are largely set by negotiation between buyers and sellers (Lean and Goodall) through a system that centres on agents, list price and offers. It is a bargaining process of give and take, rather than the arm's length, take it or leave it, buy it or don't buy it process that attends the buying and selling of most products.

The assumptions do not capture the actual behaviour of buyers and sellers, as motivated by their expectations in buying and selling. Many potential buyers may hold off buying if they think prices will fall or ancillary costs such as interest rates will rise. Many sellers may fail to put their houses on the market if the feel the price is too low, preferring to wait for better times. Often, within housing markets, the buyer is simultaneously a seller and the seller is simultaneously a buyer, as buyers and sellers move between houses. This means that one market transaction is interdependent with other transactions in a chain. Settlers may settle on a quick sale (below their hope and expectation) in order to secure another property.

4. ***There is free entry into and exit from the market for both buyers and sellers.***

Competitive markets assume costless entry and exit by players. That is, buyers and sellers can move into and out of a market at no cost to themselves.

This is patently not true of housing markets where the presence of a variety of fees, charges, and opportunity costs prove entry and exit to be far from costless. Differences in buyer search costs (Miller 1982, Turnbull and Sirmans 1993); moving costs and transaction fees (Crockett 1982); mortgage costs (Miller 1982, Arnott 1987); agents' fees (Wu and Colwell 1986, Zorn and Larsen 1986, Chinloy 1988) all contribute to form barriers to movement. The ease and degree of maintenance (Boehm and Ihlanfeldt 1986) and the ability to renovate also constitute barriers. Buyer and seller opportunity costs show up in the time it takes a house to sell (time on market [Haurin 1988, Kang and Gardner 1989, James and Zumpano 1992, Wilson and Dwyer 1994] and settlement time [Asabere and Huffman 1992]).

5. ***Buyers have continuous, transitive and established preferences over a wide range of alternative choices of products within the market.***
This condition holds that buyers choose (or do not choose) to buy a particular product at any one time according to set preference.

While plausible for most everyday consumer goods, this assumption is particularly difficult to reconcile with the reality of the housing market. While buyers would appear to have a wide range of housing choices, their capacity to exercise any choice is constrained to varying degrees by wealth and income. The housing preference itself will also change over time in accordance with changes in income and family demographics. Preferences, moreover, are influenced by government policies such as home buyer subsidies and the taxation treatment of capital gains arising from owner-occupation. If such capital gains are not taxed, then people may deliberately increase housing expenditure compared with other expenditures, knowing that this will generate a long-term untaxed capital asset. This means their preference among various housing services is influenced by non-market arrangements affecting house provision.

6. ***The market tends towards equilibrium free of distorting influences on the demand and supply of the product and the resources used to produce it.***
Competitive markets are assumed to be free of non-market distortions that would either constrain market demand and supply or encourage them. This assumption ensures flexibility in the market and a tendency to equilibrium (the clearing of the market at a price that reflects buyer/seller values, free from outside influence and artificial constraints).

The housing market can never be said to tend to equilibrium, let alone ever be in equilibrium. The market's imperfections do not allow the flexibility needed to ensure this condition. Distortive influences abound, relating in the main to government regulations, government subsidies and taxation, credit rationing, constraints in supply, and even patterns of ownership (Harrison 2002). As well, the existence of vacancies and the vacancy rate's negative relationship to the level of housing demand ensure that prices do not adjust instantaneously, as they would do in a competitively market (Arnott 1987).

At any one time, one part or another of the housing market is keeping it from achieving equilibrium. For one, the supply of land is a binding constraint, working against price falls. Again, supply at any one time tends to be rigid in the sense that sellers may not come into the market if selling conditions are adverse. New construction, when needed, may take several years to come on line.

The assumption of a competitive market, since it masks many of the imperfections inherent in the housing market, allows economists to model housing according to aggregate demand and supply graphs. Along textbook theory, the market is visualised graphically through supply and demand curves that describe the relationship between the prices (on the vertical axis) and the quantity of goods supplied and demanded (on the horizontal axis). Buyer demand is represented by a downward-sloping curve, implying that buyers will buy more at lower prices while seller supply is depicted by an upward-sloping curve implying that sellers will supply more at higher prices. Supply is occasionally shown as a vertical line, suggesting that, under certain circumstances, supply is fixed. The price for the product is established at the point where the two curves intersect. At this point, the quantity demanded and supplied of housing are equal, the buying/selling price is set, and the market is said to be 'cleared'. That is, buyers and sellers agree to buy/sell a certain quantity of housing services at a certain price per unit.

This macro aggregated approach even underlies microeconomic studies of the housing market. The *monocentric approach* to house price determination, for instance, assumes housing to be a homogeneous unit supplying an indivisible concept called "housing services". Homogeneous houses are priced according to distance-transport cost tradeoffs. This approach is centred in the urban general equilibrium theory of, inter alia, Alonso (1964) and Muth (1969). The *hedonic pricing approach* disaggregates the locational, structural and neighbourhood attributes of a house and tests for their individual or perhaps partially grouped influences on house prices. Under the assumption that the attributes of a house cannot be priced explicitly, this approach employs the technique of hedonic regression to discover a house's implicit prices. In hedonic pricing, the individual independent variables are regressed onto the dependent variable, the exchange price of the house, and the implicit prices that are revealed indicate the market's valuation of each of the attributes. The housing attribute is considered generic and is priced the same for all houses that have that attribute. The price of the house then becomes the sum of the implicit prices for its attributes. This approach is centred in the microeconomic consumer theories of Lancaster (1966) and Rosen (1974).

Housing economists talk of competitive markets and an aggregated product in an attempt to fit the buying and selling of houses into some kind of generalised intellectual framework, a one shoe fits all approach to understanding housing market behaviour. Armed then with some all purpose norm, they can then look on the margins for variations from that norm. This aggregated approach, in its treatment of houses as an homogeneous product varying one unit from the other only on the edges, may suit newspaper discussions, political imperatives, and central bank concerns, however, it does not reflect the true reality of housing markets. It is at best a rule of thumb. At worst, it may actually be hindering the study of housing services and house prices. We are taking a textbook, theoretical, mathematical modelling approach (and all that this implies) to the practical world of uncertainty, speculation, purposeful behaviour, and change.

The residential housing market is imperfect. There is no central market place; buyers and sellers are relatively inexperienced and largely uninformed; prices are negotiated; and there is no uniform "product" since the product differs from unit to unit and within the mind of each buyer and seller. This makes the task of discovering the value of housing much more difficult than in those markets where there are standard units or products such as stocks, shares, gold, cars and so on.

Perceived value versus price

For economists, "price is price". It is most often defined as the monetary value or cost of a product (Hirschey and Pappas 1993). Occasionally, in acknowledgment of a product's functionality and substitutability, price is defined as "use value" or "value in use". These economic definitions of price are adopted almost exclusively in the housing market. The attitude that "price is price", however, has long been abandoned in other domains.

Buyers do not appear to buy *price*, rather they buy *perceived value* (Hall et al 2000). Monetary price is simply one factor subsumed within the more complete notion of perceived value. Essentially, perceived value can be thought of as the overall perception of a buyer to the product and involves weighing up perceived sacrifices made with perceived benefits gained (Zeithaml 1988, Duman 2002). In simple terms, it is a trade off between what one gets for what one gives. Perceived value is more individualistic and personal than price and is applied holistically to the total experience, not just to the specific consumption process (Duman 2002).

Perceived value covers both price (exchange price) and the ancillary costs that attend any sale. These ancillary costs capture the explicit and implicit costs surrounding the exchange and are threefold: price related costs (agent's fees, stamp duty, bank charges, mortgage deposit etc); time related costs (search costs, holding costs etc); and psychology related costs (esteem, image, tension, anxiety, joy, anxiety, satisfaction etc). Though usually small in dollar terms for most products, ancillary costs can make up a significant percentage of perceived value. Some ancillary costs will change during purchase and consumption, especially those related to psychology and expectations.

While perceived value appears, in the main, important in capturing the attitude of buyers to value, in housing markets it applies equally to sellers. Sellers have their own perceived value of the house they are selling (usually guided by agents). Indeed, since buyers of one house are often sellers of another house, the buyer/seller must play off two perceived values.

The difficulty in measuring perceived value is that it means different things to different people. It is a relative notion, dependent on how the buyer compares one product against another over time. As such, perceived value is not fixed but varies with ever changing factors that would appear to encompass emotional values, social values, functional values, and the expectations that underlie them (Duman 2002). These are largely psychological and are basically private and personal in nature, though they can sometimes find expression in public or group behaviour (as shown by the bandwagon effect of buying a house as prices rise in case you miss out).

Housing economics choose to ignore perceived value, preferring to focus instead on exchange price and price expectations. For housing economists, exchange price is simply the negotiated price that falls somewhere between the separate price expectations of the buyer and the seller. By default, all influencing factors find their expression under an aggregated approach to modelling current and future price expectations, which is viewed rather narrowly as an adaptive process framed on the basis of past price movements. The past and its trend into the present and future are held by economists to capture all economic and non-economic (social, environmental, political,

cultural, emotional) information affecting current and future prices. This is patently not true as evidenced by the suddenness of booms and recessions in the housing market. Adaptive price expectations may encapsulate past behaviour, but it ignores the present and future individual psychological motives and personal (and group) expectations of buyers and sellers.

How one measures perceived value and personal expectations is an issue. A satisfactory approach has not yet been found. We continue to model mathematically and in the aggregate, possibly as a simple reflection of the limitations of both our intellectual approach and our modelling capabilities. However, if perceived value and expectations are to be determined effectively and successfully, then we cannot continue to model this way. Buyer and seller behaviour and expectations should not be modelled mathematically and hedonically as a linear additive function embracing implicit values for aggregated buyer and seller values with weighted coefficients for emotional, social, and functional elements. If we take this approach, then we are modelling the psychological, the emotional, and the social mathematically in the aggregate, much as we have done for the hedonic pricing of myriad physical locational, structural, and neighbourhood attributes.

The question for housing economists has now become: how do we capture the individual satisfaction that the buyer/seller associates with his/her action and with/her expectations?

Conclusion

Neoclassical analysis of the housing market with its emphasis on aggregated competitive markets and its confusion of value with monetary price does not adequately describe the true workings of the housing "market". It allows neither for imperfections in the market nor for the perceived value of housing, the true personal value to the buyer/seller of a house. Imperfections, perceived value and the role of expectations are fundamental to any study of the housing market.

Housing economists must begin to put aside the tried but not true textbook assumptions of competitive markets and underlying fundamentals of demand and supply. We must develop ways of determining current prices that are not simply extensions of past prices. We must develop ways of forecasting future prices that do not rely on some form of present value assessment of imputed future rent. We must develop ways of incorporating individual psychological values.

Housing economists must begin to explore the insights offered by research into buyer and seller behaviour. Once the avenue has been sufficiently explored, the trick will be to successfully meld it with the existing theory so that a well rounded approach can be developed: one that incorporates past prices, commuting, house and neighbourhood attributes, associated exchange costs, and buyer and seller psychology.

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