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Abstract

This chapter presents a comprehensive review of the fundamental concepts regarding real estate and housing markets. It aims firstly to provide an overview of the specific features of real property in general and housing in particular that make property a unique and multidimensional “good.” Building upon that, the chapter presents the key analytical tools extensively used in the relevant literature to capture the functioning of the real estate market as a set of interconnected markets, namely, the user (or space) market, the capital (or investment) market,

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and the development market. In this context, property development is examined as a process serving to reconcile long-run demand and supply imbalances generated in the user and investor markets. With regard to the housing market, after an overview of the key determinants of housing demand and supply, this chapter places its focus on the link between housing and the macroeconomy. Finally, the chapter explores the role of financial internationalization in the operation of real property markets and housing in particular, in the context of an increasingly globalized economy.

8.1 Introduction

In economic theory, land is ascribed a very important role as one of the main factors of production. However, real property and the operation of real estate markets have been relatively understudied in mainstream economics, despite the fact that its operation has important implications, not just for the efficiency of individual firms but also for the economy in aggregate. The value of new construction of buildings, either private or public, represents a significant component of the annual gross domestic product (GDP) in most countries. The value of existing buildings is the largest part of a nation's stock of wealth and represents one of the most important assets in the balance sheets of most firms. As such, the analysis of the built environment has increasingly become an important part of the curriculum in urban economics and in subdisciplines of housing and real estate economics, as well as related disciplines such as economic geography and political science.

A common perception is that real estate economics study the business and institutional dimension of property markets, whereas housing economics is primarily focused on public policy (e.g., for a more detailed analysis of the different approaches, see Arnott and McMillen 2006, pp. 142–144). This chapter attempts to present aspects from both these approaches and offers a comprehensive review of the basic concepts regarding real estate and housing markets.

8.2 What Exactly Is Real Estate?

Real estate analysis usually focuses on a specific type of property – for instance, housing or commercial properties. Actually, such an empirical analysis has a spatial dimension, that is, housing markets in a specific town or area. Property types are usually classified, for analytical and practical reasons, as housing and commercial properties; the latter category is in turn broken down to retail properties, hotels, offices, and industrial properties. Sometimes logistics is added as a separate subcategory of commercial properties; moreover, vacant land is also part of real estate. Investors in advanced real estate markets belong to two major categories: individual investors and institutional investors. Most textbooks analyze the economic behavior of the latter category, “not because there aren't sizable individual investors engaged in real estate investing, but because they often team up with

institutions, which have the capital and set most of the ground rules for the investment program” (McMahan 2006, p. 59). The major institutional investors are life insurance companies, real estate investment trusts (usually referred as REITs), pension funds, open-end (they are called open-end funds because investors can periodically withdraw) and closed-end funds, and individual and institutional foreign investors.

Why is there a need for a separate treatment of built property from economics and other disciplines, when there is a vast body of existing literature regarding other types of goods? The answer is that real estate property in general, and housing in particular, has some distinctive features that make it unique.

Real estate property has primarily a *physical dimension*, as it involves a physical asset. At the same time, it has a *legal dimension* which refers to the property rights on the physical asset. In fact, what is traded in the property market is not the physical units of land and buildings but rather the legal rights or interests which exist over them. An important characteristic of this “physical” aspect of real estate which separates property from many other types of goods is its *durability*. The stock of real property constructed at any point in time lasts for many years, and its value can depreciate and/or become obsolete. The problem of property depreciation and obsolescence creates the need for maintenance which adds extra costs. It has to be noted that the depreciation or obsolescence of real estate property has to be construed in its economic and not “physical” meaning. It is possible that the “physical life” of a building may be longer than its “economic life” if nobody wants to use it either for housing or commercial use. Durability also implies that the supply for real estate property is considered “inelastic” – as property stock cannot easily be increased, at least in the short and medium run; as Baum (2009) observes, it is even more difficult to vary downward.

Another characteristic of real estate property is that it is highly *illiquid*. This is another way of saying that it is (very) costly to trade real estate property, as it involves direct cost such as taxes, legal fees, valuation fees, brokers’ fees, and indirect costs. This latter category of costs is of great significance, as it includes the “information costs” regarding property, the risk associated with the property transaction, and other transaction costs (e.g., for a more extensive analysis of these costs, see Baum 2009).

Due to the aforementioned characteristics of heterogeneity, spatial fixity, high transaction costs, and asymmetric information among the market “players,” it has often been argued that the real estate market is inefficient. The concept of what “efficiency” actually means for such a complex market as real estate has been inadequately theorized in the relevant literature. However, the judgment of inefficiency arises by reference to an “ideal” concept of efficiency, one which assumes a perfectly competitive market in equilibrium, characterized by a homogeneous product and rational, perfectly informed actors. The relevant research literature has primarily focused on the issue of *information efficiency* in the real estate market, not only in terms of how easy it is for participants to access all the potentially available knowledge before entering the market but also with regard to whether all relevant information is effectively capitalized into market prices.

Institutional approaches to the issue have “relaxed” the strict notion of efficiency and have offered a more pragmatic conceptualization, in which the degree of efficiency of the market in question is evaluated in comparison to its best potential (rather than absolute optimum) outcome. These approaches take into consideration the institutional environment with all the constraints that it imposes on the efficient operation of individual markets (see Evans (2004) for a detailed account of the issue of efficiency in real estate).

Due to availability of a wide variety of capital sources for both direct and indirect investment, the real estate market is increasingly becoming more “liquid” and less costly to trade and manage. Yet there remain significant “inefficiencies” in real estate, in both its user (or space) market and its investment market. High vacancy rates in commercial property, continuous fluctuations, and divergence across spatial submarkets, all of which are characteristics of real estate, are far from an economist’s vision of a perfect market.

8.3 Developers and the Development Process

Real estate developers can be classified into three categories. The first category is private-sector developers, which is the typical kind of developers. Another category is not-for-profit developers; they typically complete projects such as schools and hospitals. A third category, akin to the not-for-profit one, is public-sector developers. Private-sector developers charge development fees in order to cover their administrative costs and living expenses; they additionally earn reversionary profits on the sales of developed properties. Not-for-profit developers also earn developer’s fees, but they do not get any reversionary profits. This is also the case for public-sector developers; this category of developers is working in special markets, such as hospitals, schools, and governments buildings (Peca 2009).

Developers of all kinds have as their potential tasks to estimate future demand for the specific project in hand, and to calculate the costs, to obtain the necessary planning permissions, to find the necessary financial resources for the completion of the development project, to complete the construction phase, and to manage the constructed property (the developer can sell part of the property). A detailed description of these tasks can be found in Harvey and Jowsey (2004).

McDonald and McMillen (2006) define the stages of land development as follows: the first stage (initial contact by land broker) includes the site inspection, a preliminary market study and cost estimates, and an option contract with land owner; the second stage (option period) includes soil studies and engineering, feasibility appraisal and design strategy, finance plans, etc.; in the third stage (development period), the land is purchased, and loans have been secured; in the fourth stage (sales period), developers implement marketing programs, design controls, and facility management.

One potential breakdown of the development process is greenfield development, brownfield development, and greyfield development. The first category refers to development that takes place in “empty space,” for instance, farmland or forests.

Brownfield development is construction activity typically occurring in urban areas facing environmental degradation, for instance, in defunct industrial plants. The last category (which is rather controversial as a term) refers to cases in which existing “underutilized” buildings are improved (“redeveloped”).

Developers engage in one or more activities (or phases) of the development process. The development process is broken down to the site acquisition, cost planning, market planning, financial leasing, project timing and scheduling, property management, approval of the plan, architecture design, engineering design, and actual construction. Other suggested development “phases” in the relevant literature include concept and initial consideration, site appraisal and feasibility study, detailed design and evaluation, contract and construction, and marketing, management, and disposal (see Ratcliffe et al. 2004). What becomes evident from the complex process of development is that a real estate project involves a great array of professions, organized by the “developer” (for a more extensive analysis, see Peca 2009).

8.4 A Property and Asset Market Model

The most celebrated model of real estate markets is DiPasquale and Wheaton (1996). A similar model was presented by Fisher (1992). It is the staple model in advanced undergraduate and postgraduate courses in urban economics and real estate markets and in popular textbooks and papers alike (e.g., Achour-Fischer 1999; Geltner et al. 2007). Their model is elegant in its simplicity because it introduces two basic markets for real estate property: the market for “use” of built stock (“Property Market: Rent Determination,” in the model’s parlance) and the market of property as an asset (called “Asset Market: Valuation”). This analytical “device” connects these two different “functions” of real estate property and has a pedagogical significance of its own; nonetheless, it has the power to describe the “dynamics.” Yet Colwell (2002, p. 24) argued that the initial model reveals very little about short-run adjustments of real estate and construction markets in the context of a “comparative static analysis” (also see DiPasquale and Wheaton 1996, p. 11).

We present an abridged version of the DiPasquale and Wheaton model (D-W model). The focus on this model is due to its explanatory potential for the basic mechanics of real estate and construction markets, and secondly because some of its most important points go amiss while trying to grasp the complexities within a real economy. Of all the different aspects of the real estate markets assessed in the model, this section concentrates on the structure of the various markets, their interconnection, and on the repercussions an exogenous change would have on these markets. The model comprises four separate diagrams combined in one, thus forming a “cross”-type diagram, which allows to study the way in which changes in one market may affect others, as well as the feedback mechanisms built in the model.

The first market analyzed is that of “use” of built space. The fact that it is always the first to be analyzed does not imply that it is more significant than the other markets. Indeed, the most important feature of this model is the “interaction” of the

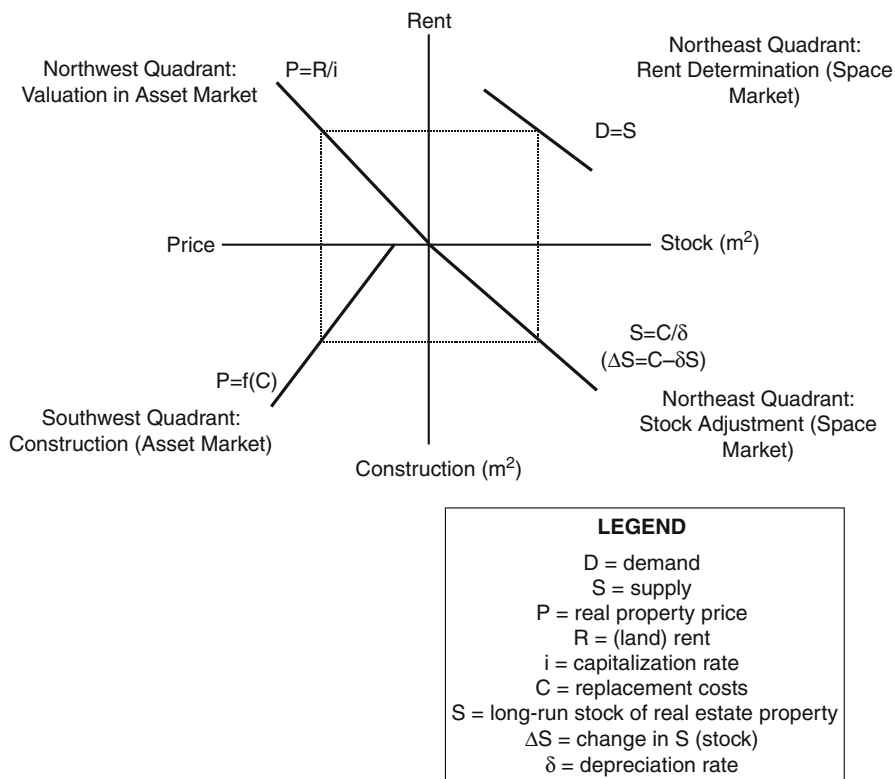


Fig. 8.1 The DiPasquale and Wheaton model of property and asset markets

markets. The diagram of this property market presents the physical stock of built property described as a vertical inelastic supply curve (the “quantity” of this supply and demand diagram, usually expressed in square feet or meters) on the horizontal axis, and on the vertical one the “rent” determined by space use (the “price” in the diagram); thus, at the point of equilibrium, supply equals demand. Demand is a function of the level of rent and the state of the general economy (DiPasquale and Wheaton 1996, p. 8). In some books, the four different quadrants which constitute the “cross” diagram are called northeast, northwest, southwest, and southeast, respectively, following an anticlockwise turn (this convention is followed here). Thus, the “property market for use” is the northeast of Fig. 8.1.

The second, northwest, part of Fig. 8.1 describes the valuation of property in asset markets; here, current rent is related to real property prices (needless to say that in this northwest part of the diagram, the horizontal axis, which is the price of real estate property, increases from right to left). The important question is how rent is “transformed” (related) to prices; this happens via the simple equation $P = R/i$, where P is real property price, R is (land) rent, and i a capitalization rate. This equation begs the next question which is exactly what a capitalization rate is.

The previous equation can be rearranged to $i = R/P$, but, again, this is rather tautological.

Capitalization rate is exogenously determined by a number of factors, such as forecasts about the demand and supply of space markets (e.g., Geltner et al. 2007, p. 24). Note that the capitalization rate is not the nominal interest rate, as it can be construed as a real rate of risk (Colwell 2002, p. 26). If the line in this quadrant is closer to (or further from) the rent axis, that is, this line is “steeper” (“flatter”), it then follows that a given level of rent will be “translated” to “lower” (“higher”) prices for property. A number of factors can make this line “steeper,” for instance, an increase in long-term real interest rates (or the inflation rate), an increase in taxes on real estate property, or greater perceived risk for real estate. To summarize, a “steeper” line in this quadrant is a graphic expression of an increase of the capitalization rate; such an increase will lower real estate prices.

The third part of the diagram, that is, the southwest quadrant, is the one describing the operation of the construction – the development industry. The line in this quadrant is the short-run supply curve of the construction industry. Here, the construction investment is gross, as it contains both the new investment on built space and the replacement of depreciated buildings. The construction line is a short-run curve, which in this diagram does not emanate from the intersection of axes as it is supposed that a minimum level of price is needed in order to have construction activity. This activity is linked with the equation $P = f(C)$, where P is real property price and C are the replacement costs. Factors that increase the construction cost will shift the line away from the construction level axis; such factors are, among others, an increase of short-run interest rates, stricter building or zoning regulations, etc. Colwell has argued that it is possible to reduce the range of prices over which there is no construction activity (Colwell 2002, p. 27). However, such an alteration would compromise the look of the diagram. Geltner et al. have observed that the slope of the construction line depicted in this quadrant represents long-run costs in the supply of the built space (Geltner et al. 2007, p. 27).

The last market of the diagram is that of the southeast quadrant, which represents the way in which the flow of new construction is converted into property stock. This relationship is described by the equation $S = C/\delta$, where S is the long-run stock of real estate property, C are replacement costs, and δ is the depreciation rate. Depreciation in this context means that older buildings are “either abandoned and demolished or converted to other uses” (Geltner et al. 2007, p. 27). The slope of the line in this quadrant represents the “speed” of depreciation process, that is, a steeper line represents faster depreciation. Note that in some cases this line can look as one half of a single line, if the other half is the line of the northwest quadrant. Of course, this is not the case, as the two lines are completely different.

It is argued above that this diagram can be used to show fluctuations and long-run equilibrium in real estate markets. Due to space limitations, only one exogenous change in the system is presented – a demand shift in the northeast quadrant; the interested reader can explore more exogenous changes in the three basic references of this section, that is, Colwell (2002), DiPasquale and Wheaton (1996), and Geltner et al. (2007). This case is presented in Fig. 8.2. The inner box depicts the initial state of

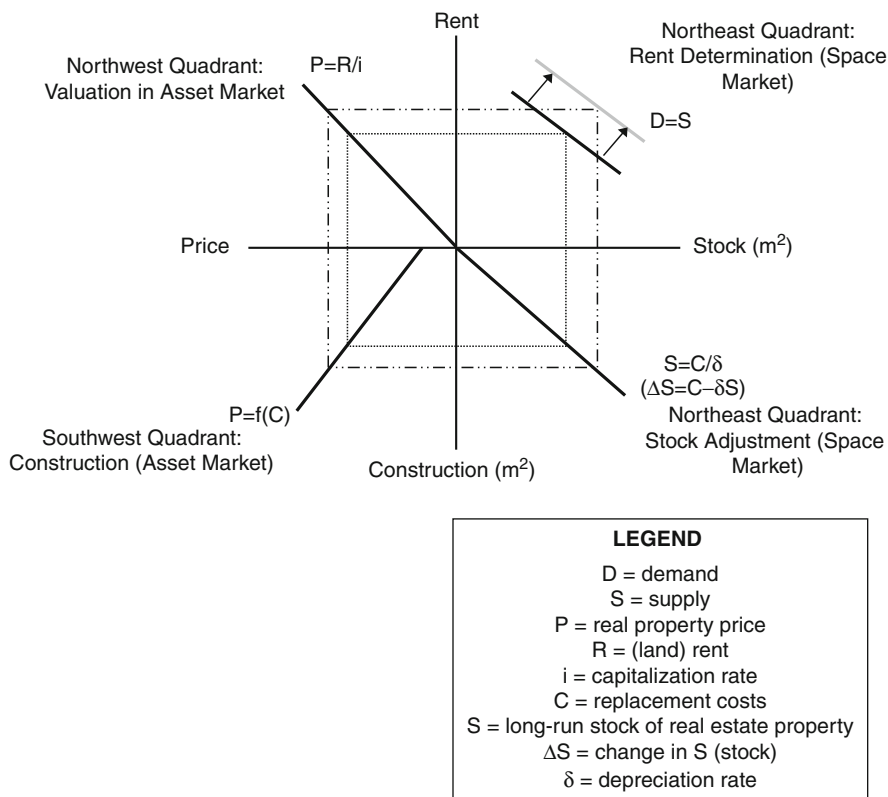


Fig. 8.2 The DiPasquale and Wheaton model: The effect of demand growth on property and asset markets

equilibrium and the outer box the new equilibrium achieved after the exogenous shock that is the increase of the demand for the use of built space. What is missing is the “path” of the adjustment process between the initial and the new equilibrium.

Figure 8.3 illustrates the adjustment process (this diagram is originally presented in Colwell 2002; a more extensive analysis is offered there). The demand for built space use shifts toward the right, and in the new temporary equilibrium, the supply is still the same (as there is not enough time for supply to adjust), and the rent is higher. This leads to an increase of property price in the northwest quadrant and, in turn, in an increase of the gross property construction in the southwest quadrant. This translates as an increase of the real property stock, via the southeast quadrant. As a result, in the northeast quadrant, there will be a shift of the supply curve to the right, which will eventually result in a decreased property rent. This process will continue until there is equilibrium in all four markets. An interested reader can find an altered D-W model in Colwell (2002), where the vertical supply line of northeast quadrant has been replaced by a long-run supply curve with negative slope.

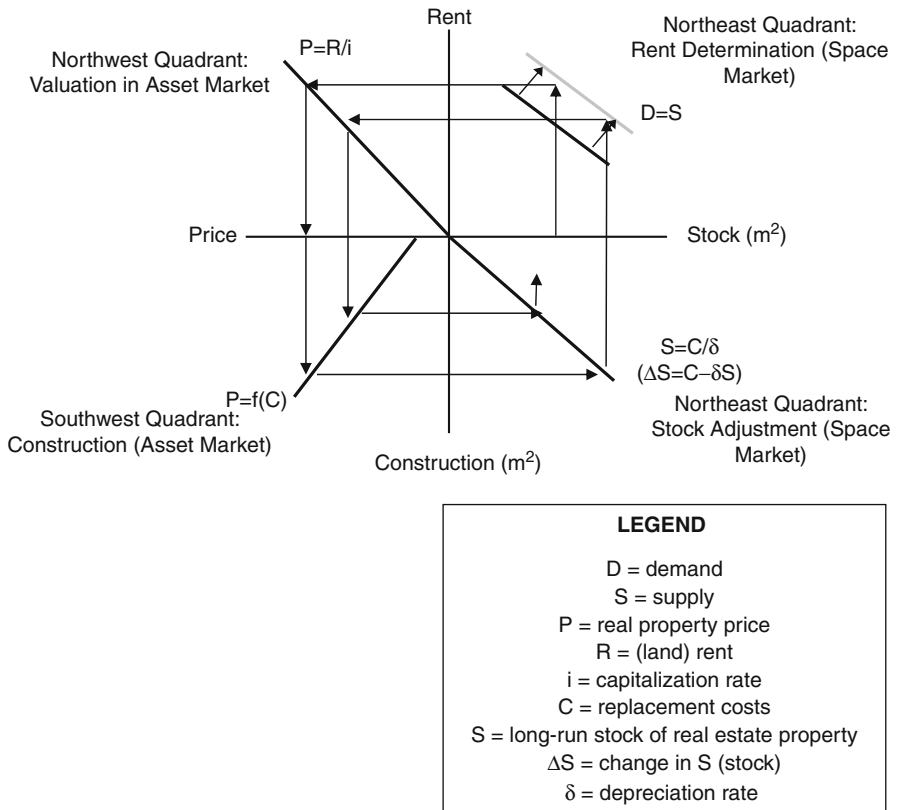


Fig. 8.3 The DiPasquale and Wheaton model: The adjustment process after demand growth

(In this case, there is an extensive presentation of the adjustment process toward the new long-run equilibrium). This equilibrium is presented in Fig. 8.2.

In the D-W model, real estate property, in its “asset incarnation” (i.e., in the northwest quadrant), is compared to alternative investment options, such as bonds and securities. One of the real estate characteristics is its “lumpiness” (Baum 2009), as property comes in large and uneven sizes, meaning that it cannot be diversified in the way other kinds of assets can. Thus, the creation of a portfolio based on real estate property can be rather challenging.

The overview of the complex characteristics of real estate markets shows that it is important to incorporate in any analysis both built space for “use” and real estate property as an asset. Formal analytical models make evident that real estate markets reach a state of equilibrium after a prolonged process; they also show that one of the most important dimensions of built property analysis is real estate finance. Real estate finance globally links the local and specific markets of real estate properties. This trend intensified in the second half of the twentieth century with increasing internationalization of the estate markets.

8.5 The “Internationalization” of Property and Asset Markets

The DiPasquale and Wheaton model presented above analyzes the interconnection between the different markets related to real estate property. It also shows, however, that one of the most important dimensions of the analysis is real estate finance. Modern real estate markets are based on underlying physical assets, which are the basis of a whole financial structure. One crucial difference that separates real estate market from other markets, for example, manufacturing, is that large real estate investors can own directly the underlying physical assets. How then is it possible for small investors to own these physical assets that are worth large sums? The answer is the use of liquid-traded property vehicles. These vehicles include real estate investment trusts (REITs), which own directly real estate property. Since they have access to capital, they can also build additional properties (Block 2006, p. 8). Other ways small investors can own physical assets include other unlisted funds, property derivatives, and mortgage-backed securities (Baum 2009).

It is argued earlier on that real estate markets have essentially a local “nature.” In one sense, the seller of a particular property is a monopolist, as that property is the only one in the specific floor, at the specific side, at the specific street. There is, however, the argument that there is an increasing internationalization/globalization of the real estate markets (e.g., Seabrooke et al. 2004). This trend has started, or at least intensified, in the second half of the twentieth century – when the confluence of several historical events, economic processes, and technological changes transformed the financial markets crucially linked to real estate investment and construction activity.

The seed for this “internationalization” of financial markets was sowed with the breakdown of the Bretton Woods agreement and the shift to floating exchange rates in the early 1970s. This led to the increase of the use of existing financial products and the creation of new ones. This “internationalization” hinged on the existence of new technologies such as computers, and sophisticated telecommunications, which make possible the (instantaneous in most cases) international transfer of vast amounts of money, ending to a large degree in the real estate markets. The question, however, is where these vast amounts were coming from. The brief answer is that there were several sources of global capital accumulation in the last 50 years (see Goldberg (2004) for more details). The oil crises of the 1970s and the trade surpluses of the oil-producing countries created the “petrodollar” markets. Other countries, for instance, Japan in the 1980s and recently China, had also accumulated huge amounts of capital resulting from trade surpluses; the economic growth of Asia led to groups such as the Southeast Chinese to amass a lot of capital. In Europe, the process toward a single economic market and the European Union has also had a deep impact on the real estate markets (Nicholls 2004 offers an extensive analysis). In the last decades, differences in exchange rates between the dollar and other currencies have created a flow of capital mostly from Europe to the United States. The overall conclusion of these fundamental changes in the real estate markets is that at one level, they keep their local characteristics, but at another level, associated with the financial (asset) “nature” of property markets, real estate is increasingly “internationalized.”

8.6 The Housing Market

Housing constitutes a major sector in national economies, and therefore, the way housing markets function is closely interlinked with many elements of the macroeconomy. The functioning of housing markets can be explored through the standard tools of supply and demand analysis; however, housing, like all real estate, is a multidimensional commodity with inherent complexities and distinctive characteristics. This means that the analysis of housing markets needs to take into account these complexities.

First of all, like all the other forms of property, housing is a *heterogeneous* good. Each house is made up of a bundle of characteristics – both structural (number of rooms, garden size, presence of a garage, etc.) and location specific (proximity to a park, coastal or mountain location, proximity to schools, etc.). These characteristics affect how much people are willing to pay for a particular housing unit (for a detailed account of how the heterogeneous nature of housing is captured and theorized in house price models, please refer to ► [Chap. 9, “Housing Choice, Residential Mobility, and Hedonic Approaches”](#) in this handbook).

Secondly, housing is spatially fixed. In terms of the analysis of the housing markets, this characteristic gives rise to two analytical issues:

- (a) Since housing cannot move, households need to move to homes. This means that the availability or absence of appropriate housing in a location will influence location decisions of households and therefore generate mobility. This is one way in which housing is linked with the macroeconomy and the labor market in particular. Moreover, the spatial fixity of housing is the reason why housing development gives rise to major planning debates, as there can be mismatches between demand and supply of housing in different locations.
- (b) The housing market is not an “aggregate entity” but a series of interconnected location-specific submarkets: these can be international, regional, or urban. Analyses at these different spatial scales give rise to different analytical and policy issues. For instance, while the study of international housing markets focuses primarily on the global interaction of housing markets, the study of regional housing markets highlights regional differences and views housing markets as one factor reflecting (as well as explaining) regional growth variations. In the case of urban housing markets, the focus is on intraurban location decisions of households, spatial segregation, and social exclusion in the housing market. A key difference between international/national housing market analysis and regional/urban analysis is that in the former cases, the spatial dimension is absent.

Finally, like all the other forms of property, housing is a *durable* good. Housing stock lasts for many years (60–100 years), which implies that the existing stock is quite substantial in relation to the flow of newly constructed housing. Most importantly, the characteristic of durability automatically implies that other than a “user function,” housing has an investment aspect as well. Therefore, when looking at the motives for holding residential property, analyses should consider and distinguish between demand for housing for consumption (occupation) and demand for housing

for investment purposes. However, housing other than a durable “consumer” good and an investment good is also a *social good*: governments are committed to provide decent accommodation to disadvantaged parts of the population. Housing subsidies and tax incentives exist in order to make housing more affordable. These can be argued to generate distortions in the functioning of the market and the price of housing.

All these complex characteristics of housing, combined with the aforementioned high transaction costs that generally apply to the property market (legal fees, estate agent fees, search costs), constitute sources of inefficiency in the functioning of the housing market. Traditional neoclassical space/access models do not take into account these complexities. As MacLennan and Tu (1996) note: “*Although the insights of the standard neo-classical model are very important, it is clear that economic phenomena such as mis-information, commodity variety, space, time and the nature of the market itself are all victims of the abstraction process*” (p. 388). In these models, housing is approached as a one-dimensional homogeneous product, and the focus lies predominantly on the relationship of housing with the wider urban structure rather than on the operation of housing markets. In these models, the price of housing is demand determined, as supply of housing seems to respond “unproblematically” to changes in demand conditions. As such, these models do not take into account factors that affect the supply of housing, such as future expectations for house price changes, changes in construction costs, time lags, uncertainty, and speculation in the land and housing markets.

8.6.1 Demand, Supply, and House Price Determination

One of the building blocks of housing economics is the assumption that in the short-run, housing supply is inelastic. Factors such as uncertainty, monopolistic ownership, high transaction costs of property changing hands, and, most importantly, the time new housing takes to be constructed imply that short-run supply is measured in terms of just the existing housing stock, which is assumed to remain unchanged. Therefore, in the short run, house prices are assumed to be dependent only on changes in housing demand.

The factors that determine housing demand (H^d) can be expressed as

$$H^d = f(\underbrace{Y, PH, PC, r, Cr, W, T}_{\text{Short Run Determinants}}, \underbrace{\text{Pop, HR, MG}}_{\text{Long Run Determinants}}) \quad (8.1)$$

where Y denotes income, PH house price, PC price of other goods, r mortgage interest rates, Cr credit availability, W wealth, T housing taxation, Pop population size, HR headship rates, and MG migration.

Housing demand in the longer run is determined by (a) natural population growth and (b) population growth due to migration and (c) changes in headship rates. Fluctuations in real incomes and interest rates are considered the most

important determinants of housing demand especially in the short run. As a result, they constitute key causes of house price fluctuations. However, the extent to which house prices “respond” to changes in real incomes depends on the income elasticity of housing demand. Different studies have provided different estimates of income elasticities, ranging from values of as high as two to close to zero. Observed differences in income elasticities can result from the use of different measures of income: for instance, income elasticities are higher when permanent (predicted) income rather than current income. Moreover, the use of aggregate rather than individual data would inflate observed income elasticities. For instance, Mayo (1981) suggests that most US estimates find income elasticities greater than one when aggregate data are used and below one when individual data are used. Finally, income elasticities will vary significantly for rental as opposed to owner-occupied housing (Meen 2001). The estimation of income elasticities is a core issue in housing studies, as it plays an important role with respect to both urban structures and housing policies. Indicatively, Meen (2001) highlights the importance of the study of income elasticities, by pointing out that estimated income elasticity greater than one might imply that income increases would lead households to relocate away from the city center to the suburbs.

In the long run, housing supply is responsive to changes in demand for housing. New housing development takes place in the longer run, and the housing supply curve is no longer inelastic due to the addition of newly constructed units in the existing housing stock.

Housing supply (H^S) at any period can therefore be expressed as

$$H^S = (1 - \delta)H^S_{-1} + Q \quad (8.2)$$

where H^S_{-1} denotes the existing housing stock (stock “inherited” from previous period), δ depreciation rate, and Q new housing construction.

This expression shows that the total housing stock for a city/metropolitan area at a specific point in time equals to housing constructed in (“inherited” from) previous periods, after taking into account the rate of depreciation, plus the new supply of housing due to construction in the current period. In turn, this new supply Q , which affects H^S in the longer run, can be expressed as a function of

$$Q = h(PH, CC, r) \quad (8.3)$$

where CC denotes construction costs including the cost of land for development.

New housing construction is negatively affected by increases in interest rates and construction costs, whereas it is positively related to changes in house prices. The sensitivity of housing construction to interest rate changes illustrates how monetary policy can have an effect on housing construction cycles. In the long run, housing supply is considered to be more responsive to changes in house prices and therefore not perfectly inelastic. Excessive price decreases or increases experienced in the short run will “ease,” and, in the long run, prices will move in line with construction costs.

Differences in house prices in different locations (as well as variations in price among different housing types) will reflect consumer preferences. Willingness to pay sends “signals” to the market and will affect the price the construction industry is prepared to pay for acquiring land for housing developments of certain types and in certain locations.

8.6.2 The Effect of Planning Controls on the Housing Market

The responsiveness of housing supply is affected by the availability of developable land, which in turn depends on the land use regulations in place. Studies of the European (including the UK) and US housing markets demonstrate a strong positive correlation between the level of strictness of land use regulations, low house supply elasticities, and house prices. Land use and planning policies can impose restrictions on land availability and new construction and affect – directly and indirectly – the profitability of land developed for housing purposes. Moreover, such policies change the spatial benefits of particular locations through infrastructure provision. Monk et al. (1991) offer a systematic approach of the complex relationship between planning and the ways it can affect land and house prices. He describes that an effective planning system directly affects the supply of land made available for housing not only by restricting the total quantity of land for development but also by restricting the location of the land that is made available. This pattern restricts the way in which land is developed and determines the timing of development. Moreover, the existence of housing submarkets and the heterogeneity of housing as a complex good means that development constraints in one location cannot be “counterbalanced” by increased availability of land for housing development in another location. The degree of substitutability of house types and locations will determine whether constraints applying for a certain type or location will affect another.

Development control and planning regulations do not only affect the supply of housing and the amount of land put forward for housing development purposes; they can also affect housing demand: negatively by the imposition of costs and by long delays or uncertainties associated with obtaining planning permissions, and positively by setting environmental and design guidelines that will affect potential buyers’ willingness to pay for housing and consequently increase the value of housing as an investment good. In this latter case, planning restrictions are viewed as a mechanism that can correct negative externalities such as overcrowding and incompatible land uses (nevertheless, density controls could be considered to have negative effect for those households demanding small plots at high densities, such as low-income households).

8.6.3 Other Types of Intervention in the Housing Market

Other than planning restrictions, housing markets in most countries feature various degrees of government involvement, which can take several forms, from direct

subsidies (housing allowances, public housing) and fiscal interventions (taxation, mortgage incentives) to market regulations such as rent controls or tenure protection legislation (For an example of the complexities of modelling housing choice in the context of regulated urban housing markets, see Aufhauser et al. (1986)). The reasons for an active role by the government are multifaceted; one reason for government intervention is the well-documented inefficient functioning of the housing market which makes government action necessary in order to achieve Pareto efficiency; moreover, there is a “welfare” aspect based on the premise that housing is a necessary good and society ought to provide housing if an individual cannot afford it; therefore, supporting housing consumption and investment serves as a mechanism to redistribute income and wealth. However, what needs to be noted here is that relevant research suggests that, while housing market regulation such as public housing provision is undoubtedly a means to alleviate affordability problems, it can be far from unproblematic, due to its high supply costs, as well as due to the fact that can often exacerbate (or even be the cause of) socioeconomic segregation.

Whitehead (1999) notes that housing policy has been approached – and analyzed – very differently in the European and American literature. Traditionally, in the American literature, local and national governments are seen as actors that can influence private investment in housing through housing taxation, rent controls, subsidies, and zoning. These forms of regulation are largely local policies and, as such, can be evaluated through cross area comparisons. In Europe, on the other hand, housing regulation is approached by the relevant literature mainly in relation to welfare and social policy. Supply subsidies and rent controls are primarily decided at the national level while often mediated by local governments. Consequently, such policies apply either at a national level or across population groups/households.

8.6.4 Housing Market and the Macroeconomy

Housing constitutes a major sector in national economies and represents the largest share of household assets. As a result, changes in house prices will have an effect on many aspects of national and regional economies and, most importantly, incomes, consumption, and the labor market.

There is the argument that one of the most important aspects of housing is its connection to the welfare state; this line of reasoning originates in the work of Kemeny (1980) and Castles (1998). Schwartz and Seabrooke (2009) have provided a classification of western countries according to the characteristics of their housing markets. One category refers to the countries in which the housing market is highly commodified. These countries have, according to Schwartz and Seabrooke’s (2009) terminology, a *liberal market* in which houses are treated as assets, and where there are high owner-occupation rates and high property tax revenues, and where mortgages as percentage of GDP are high. These markets are more integrated in the global financial system. Another type is *corporatist markets*, which have lower

owner-occupation rates, but high percent of mortgages versus GDP. In both of these housing market categories, there is strong market stratification. The *statist-developmental* category refers to countries in which housing is regarded as a social right. Here, the owner-occupation rate is relatively low, as are also mortgages as percentage of GDP. In this category of countries, property tax revenues are low. There is, finally, the *familial* category in which housing is a familial social good. It is characterized by high owner-occupation rates and low percentage of mortgage on GDP (see Schwartz and Seabrooke's (2009) extensive description).

These differences across western countries imply that the housing market will affect, and will be affected by, the overall economy in different ways. In countries with a liberal economic system, it is expected that households which invested in residential property would accumulate wealth over their life cycle. These households would prefer (and, thus, vote for) lower taxation and lower interest rates. In these societies, pensions, *ceteris paribus*, would be expected to be low and houses to be a substitute for retirement income (for a detailed analysis, see Schwartz and Seabrooke 2009).

The strong links of the housing market and the macroeconomy and its effects on both aggregate demand and supply have been widely discussed (Meen 2003; Case et al. 2005). The relevant literature specifically focuses on the effects of changes in house prices on consumer expenditure (Muellbauer 1990; Holmes 1993; Parkinson et al. 2009), the links between the housing and the labor market (Cameron and Muellbauer 1998; Cannari et al. 2000; Engelhardt 2003; Henley 1998), and the analysis of housing booms and busts in the context of increasingly globalizing economies. The following sections look at these issues in turn.

8.6.4.1 House Prices and Consumer Expenditure

The relationship between house prices and consumer spending is not only a causal one: factors such as changes in interest rates, or people's expectations about future incomes, affect both the demand for consumer goods and services and the demand for housing and therefore have an effect on house prices. Especially with regard to future expected income, empirical evidence suggests that this affects the behavior both of homeowners and renters and therefore plays a significant role in the co-movement of consumer spending and house prices. However, theoretical and empirical research in the field also discusses the causal relationship as well, as house price fluctuations are expected to contribute to fluctuations in consumer spending. There are various ways in which this link can be explained.

The degree of credit market liberalization plays a big role in the way house price growth affects growth in consumer spending, since it leads to house price increases being translated into increased borrowing for consumption purposes. The expansion of mortgage markets in recent years has strengthened the linkages between house prices and consumption. Moreover, the liberalization of credit markets has increased the sensitivity of housing markets (and consumption) to interest rate changes. Housing as an asset can be made more "liquid," either through equity release schemes or through remortgaging. Credit products that are secured against

the value of a house allow consumers to access the equity that their house “contains” without having to sell it.

In the context of the UK housing market, Muellbauer (1990) examines this causal relationship between house price growth and excessive growth in consumer expenditure in the UK. In a similar context, Holmes (1993) discusses the phenomenon of equity withdrawal (the borrowing on mortgage more than it is required to finance the purchase of a house) in the UK and provides evidence of the positive impacts from equity withdrawal on the average propensity to consume. Boelhouwer (2000) reports similar findings for the case of the Netherlands, where the dramatic increase of house prices in the 1990s led to a high rise in consumer spending, partly financed by the overvaluation of the Dutch homes. Again, in the Dutch case, credit market liberalization and the opportunity of commercial banks to expand their offer of mortgages led to increase borrowing, of which only a small part went to the purchase of new homes. Parkinson et al. (2009) examine comparatively the phenomenon of mortgage equity withdrawal in the cases of Britain and Australia, concluding that equity borrowing “*is not just about using housing wealth as routinely as an ATM; rather housing wealth is funding some substantial ‘one-off’ or sustained expenditures*” (p. 385). Their research suggests that in the recent financial crisis, housing wealth took more of an insurance role (a safety net) rather than a pure consumption one, where households used it to meet expenditure demands associated with job loss, childcare, and general welfare.

In the case of the USA, macroeconomic studies find evidence that there is an important relationship between the wealth effect associated with housing and the propensity to consume. Indicatively, the study of Case et al. (2005) uses a panel of quarterly data for US states and a panel of annual observations on 14 developed countries to find a large and significant effect of housing wealth upon household consumption – while at the same time evidence on the wealth effect of financial assets seems weak.

8.6.4.2 The Effect of Housing on the Labor Market

Households seldom make employment decisions independently from housing decisions. The functioning of local and national housing markets will affect labor mobility through house price levels and housing tenure structure. High relative house prices in a region can be a factor that discourages in-migration (net of amenities), and relative house prices can have an effect on choosing where to migrate. Moreover, as banks and mortgage lenders allocate mortgages based on loan-to-house value and loan-to-income ratios, first-time buyers interested in buying property in more prosperous regions could face cash-flow problems if mortgage rates increase, while, conversely, residents in richer regions could be in an advantaged position of being able to use their equity in order to reduce borrowing or to move up the property ladder by moving to other regions (Cameron and Muellbauer 1998).

Tenure structures in the housing market are also related to labor mobility. The relevant literature suggests that even though in more recent years, local authority tenants have become more mobile, they are still the least mobile, followed by owner occupiers, whereas private tenants have the highest levels of mobility.

Even though mobility between regions can be the result of reasons irrelevant to employment choice, there is strong international evidence to support the link between the housing market and labor mobility. Indicatively, in the case of the UK, Henley (1998) finds evidence to suggest that negative equity in the early 1990s impaired households to sell their property and move and therefore reduced their ability to find a better job match elsewhere. Labor immobility leading to inability to match vacancies and consequently causing labor market inefficiencies is also noted in Cameron and Muellbauer (1998) who also find that, as levels of owner-occupation rose in the UK, the influence of relative house prices on net migration rates has also risen. In the case of Italy, Cannari et al. (2000) use market price data at a provincial level to examine whether the housing market played a role in the decline in internal migration between 1965 and 1995. They provide evidence to suggest that differences in the cost of housing between the north and the south of Italy have restrained migration flows and are an important factor in explaining falling patterns of labor mobility.

8.6.4.3 Housing Markets in the Global Economy

In recent years, the integration of increasingly deregulated international financial markets and the general business cycle linkages has led to the co-movement in house prices across countries globally. Strong similarities in house price fluctuations across different countries are not a characteristic of just the recent house price boom: studies of house price data for the period 1970–1992 from OECD countries show that house price dynamics are interdependent, even though there is no evidence supporting the existence of an international house price cycle (Englund and Ioannides 1997). In more recent years, the degree of international housing market *synchronization* has been widely researched (Kim and Renaud 2009). Even though individual countries might exhibit differences in levels of house price growth, there are significant ties between housing markets of big European countries and the USA. Studies have indicated significant correlations between real house price trends between the USA and the EU, with EU countries following US house price trends with an approximate 2-year time lag.

The recent economic crisis and the international slump in housing markets starting in 2007 have stimulated further research of the interdependences of international housing markets. The housing market has played a key role in the economic boom of recent years, as well as and the subsequent downturn. This can be explained by the fact that, as housing and housing-related spending (for renovation, maintenance, as well as furniture and appliance purchases) “pull” large amounts of capital, they allow high levels of equity extraction, which can generate large amounts of household debt. The aforementioned increasing liberalization of housing markets, with the confluence of the persistent (and unsustainable) increase of house prices and low interest rates, encouraged less affluent homebuyers to enter the US housing market, triggering the subprime mortgage crisis. Banks and mortgage lenders sold mortgage derivatives (“packaged” mortgages) to institutional buyers, the value of which soon “crashed” as some households started defaulting on their mortgage payments. The consequence of uncontrolled mortgage

lending and loan distribution was disastrous not only for major US financial institutions but for institutions worldwide, some of which had to be either bailed out by their national governments or were taken over by other financial institutions (for a more extensive analysis of the main reasons for the collapse of the housing market, as well as of the role of new “exotic” financial products in the crisis, see Schwartz 2009).

In recent years, comparative studies on international house price trends have also looked at the issue of housing affordability. Apart from the destabilizing effect that the recent international house price boom has had on national economies, it also raised major concerns with regard to housing affordability (measured as the house price to earnings ratio). On the one hand, factors mentioned earlier, such as low interest rates and favorable borrowing and mortgage conditions designed to enhance affordability to potential homebuyers by reducing monthly payments, made the housing market more “accessible” to lower income and younger households (first-time buyers). However, in most countries, wages and household incomes of middle- and low-income households did not rise proportionately to rising house prices, leading to ownership affordability problems. Kim and Renaud (2009) review relevant studies for different countries (France, Spain, New Zealand, Australia) which provide evidence to suggest that low interest rates and the subsequent rise in house prices caused declines in homeownership rates.

8.7 Concluding Remarks

The analytical intricacies arising from specific features of real property in general and housing in particular make the study of the operation of the real estate market a complex task. This chapter has touched upon these complexities and has highlighted the multidimensional nature of the property market as a set of interconnected markets – the user market, the investment market, and the development market, all of which are invariably linked to the macroeconomy.

On the one hand, demand for commercial property is derived directly from economic activity; land and property are very important inputs in the production process. As a result, in most developed economies, the decline in manufacturing and the growth of the service sector were reflected in decreased demand for industrial property and increased demand for retail and office space. In fact, more recently, the fast pace of globalization in information and communications technology (ICT) and the emergence of a plethora of dot.com firms in the 1990s (all of which were seen as the foundations of a new so-called “weightless” economy), gave rise to a debate as to whether the role of real estate as an asset in the production process would weaken. This raised the following question: will demand for real estate decline, as information technology starts substituting real estate in production functions? Evidence suggests that the relevant debate of the “death of real estate” has been largely exaggerated. Naturally, developments in ICT have brought significant changes in business processes, which have affected traditional sectors and have caused radical changes in all sectors of commercial real estate (for an extensive analysis, see Dixon et al. 2005).

However, real estate space is increasingly adapting, leading to the emergence of new types of real estate, and the reconfiguration of existing real estate spaces that take into account changes in customer and service provider relationships.

With regard to the housing market, this chapter has underlined its strong interaction with the macroeconomy and in particular with household incomes, consumer spending, wage formation, unemployment, and migration. Construction of housing (and commercial property alike) is highly dependent on monetary policies through the effects of interest rate fluctuations on construction costs. The effects of the recent housing boom and subsequent bust have been a clear illustration of this interconnectedness, in the context of an increasingly globalized economy and in times of financial liberalization and internationalization.

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