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GLOBAL PERSPECTIVES ON HOUSING MARKETS AND POLICY

ABSTRACT

As countries grow and urbanize, the efficient and equitable production and delivery of housing and its associated infrastructure are key elements of successful urbanization. From a social perspective, housing is the most widely held form of wealth in most societies; and through this channel and through the operation of rental markets, housing is an important determinant of the distribution of welfare as well as its average level. Furthermore, housing is a good that is characterized by important external costs and benefits, so it is not surprising that all governments intervene in some fashion in housing through various taxes, subsidies, regulations, and sometimes direct public provision. But the efficacy of these interventions varies widely.

The purpose of this working paper is to present an overview of how to design interventions that work – and how to avoid interventions that do not work – based on experience in a range of countries, and on applied research. By thinking about interventions that “work,” we mean to provide some directions for housing policies and programs that have proven to be effective – both equitable as well as efficient.

CONTACT

Stephen Malpezzi
smalpezzi@bus.wisc.edu
<http://smalpezzi.marginalq.com>
<http://wisconsinviewpoint.blogspot.com/>

I. INTRODUCTION

As countries grow and urbanize, the efficient and equitable production and delivery of housing and its associated infrastructure are key elements of successful urbanization. In the aggregate, housing typically comprises something on the order of half a country's tangible capital stock, a fifth to a third of gross fixed capital formation, and 10 to 30 percent of consumption. Housing often leads the business cycle, and is often one of the main channels of monetary policy. It is intimately tied to the development of (and sometimes to serious problems in) a country's financial markets.

From a social perspective, housing is the most widely held form of wealth in most societies; and through this channel and through the operation of rental markets, housing is an important determinant of the distribution of welfare as well as its average level. Furthermore, housing is a good that is characterized by important external costs and benefits, i.e. costs and benefits that are not "internalized" or paid directly/received by individual market participants, so it is not surprising that all governments intervene in some fashion in housing through various taxes, subsidies, regulations, and sometimes direct public provision. But the efficacy of these interventions varies widely.

The purpose of this chapter is to present an overview of how to design interventions that work – and how to avoid interventions that do not work – based on experience in a range of countries, and on applied research. By thinking about interventions that "work," we mean to provide some directions for housing policies and programs that have proven to be effective – both equitable as well as efficient. This chapter is brief and, in the main, non-technical. Selective references are provided as each subject is discussed, but there is a much larger body of research and policy analysis behind this chapter. A longer version of this chapter, with more detailed presentations of some of the data and evidence, and a more complete set of references, is available from the author. Additional broad-ranging reviews include Buckley and Kalarickal (2006), Glaeser and Gyourko (2008), Green and Malpezzi (2003), Inter-American Development Bank (2012), Malpezzi (1999), Renaud (2010), Tibaijulea (2009), Whitehead (1999), World Bank (1993), and references contained therein.

The rest of this chapter is organized as follows. First we will briefly discuss the "industrial organization" of the housing market, including public and private roles. Then we discuss some of the issues involved in measuring and monitoring the housing market, presenting a few very simple measures across a range of markets. The fundamentals of demand and supply are then reviewed. Section V discusses property rights, housing tenure, and mobility. Then we briefly examine issues connected to the key input markets of land, infrastructure and finance. Section VII tackles government interventions in markets, namely taxes, subsidies, and regulations. Our penultimate section touches on some issues connecting housing markets to the aggregate economy. We conclude with a basic checklist of some lessons, the "do's and don'ts" of housing policy.

II. PUBLIC AND PRIVATE SECTOR RULES

Figure 1 presents a schematic diagram of how the housing market works. Demand is conditioned on fundamentals such as the incomes and demographics of homeowners and renters, as well as the prices of different kinds of housing. Inputs such as land, labor, finance, materials, and infrastructure are combined by supply-side agents such as landlords and developers to produce housing services. Homeowners, and to a lesser extent, renters, are also producers, if they maintain and upgrade their houses. Critically, relative prices inform producers of housing services about whether to provide more or less housing, and the input suppliers about providing more or fewer inputs.

Several other important features of housing markets are implicit in Figure 1. First, transactions within and across "boxes" work well only to the extent property rights are defined, recognized and enforced. Second, government interventions can have profound effects upon the operation of the housing market. Third, fully understanding housing markets requires analysis of key input markets and the regulatory environment, as well as revealed market behavior in the housing market per se.

Economists start with producers, consumers, and governments, as in Figure 1, but there are additional "actors" or "agents" that can also be important. Increasingly we have learned of the roles played by community organizations and other non-governmental organizations, which have often played key roles in the housing market. This can be particularly true when we examine successful programs and policies addressing low income housing; for examples and discussion see Patel and Arputham (2008), Burra Patel and Kerr (2003) and Buckley (2011).

Every introductory real estate textbook emphasizes a number of other salient features about housing. It is a large share of every country's wealth and productive capital stock. Because its stock price is large relative to incomes, it must be financed. Some households own their own housing capital, others lease it. Housing is fixed in location, extremely durable (slowly depreciating), and can be viewed alternatively as a composite commodity yielding a flow of "housing services," or as a set of individual characteristics.

Each of these interesting features will be discussed in one or more places below. But first let us briefly explore some basic data and stylized facts on housing within and across markets, and discuss how researchers and policymakers can organize and improve their monitoring of and knowledge of the housing market.

III. MEASURING AND MONITORING THE HOUSING MARKET

We have already noted the fact that housing is a complicated good. Houses differ in size, location, and many other characteristics. Transactions occur relatively infrequently, and are often unobserved by either governments or any centralized market-makers. Anyone interested in housing markets, whether government official, developer, financier, or ultimate consumer, needs to grapple at some level with data and measurement issues.



A good place to start is with several related efforts that go by the Housing and Urban Development Indicators rubric.¹ Circa 1990, the World Bank and UN Habitat (not to be confused with Habitat for Humanity International) began a data collection project called Housing and Urban Development Indicators (HUDI). HUDI came out of two ideas. The first was a realization of the importance of careful international comparisons, as demonstrated by the success of the World Bank's World Development Indicators (WDI). The second inspiration for HUDI was an increase in comparative research on housing markets, initially that carried out by a group of World Bank affiliated researchers.

The original HUDI project was spearheaded by Steve Mayo and Shlomo Angel based at the World Bank, with additional support from Habitat. Data were collected and first published based on indicators circa 1990. The first wave collected some 50 variables, comprising data on, among other things, demographic basics, incomes, housing rents and prices, size and quality of housing, financing, and transportation. Prior studies such as Malpezzi (1990) and Malpezzi and Ball (1993) showed that even rough and ready methods of measuring housing policies, especially regulatory policies, provided surprisingly robust, albeit partial, explanations of important outcomes like price-to-income and rent-to-income ratios, housing investment per capita, and so on. So the first wave indicator effort was especially notable for its collection of more details on housing policies across markets, as well as outcomes like rents, prices, and other measures of housing conditions. The most complete and readily available analysis of the 1993 version of the indicators is by Angel (2000); see also the detailed review of Angel's book by Murray (2001).

After this first effort HUDI was taken over by UN Habitat as the World Bank reduced its support for urban research. Two additional waves of data collection were carried out and collated under Habitat's umbrella, in 1993 and 1998. Advantages of these waves include a larger sample size (more countries, and especially multiple cities from many of the countries). A number of variables were also added. But the second and third waves concentrated on housing conditions and some simple price measures, but focused less on the admittedly difficult issue of measuring housing policies. These later waves can be found at <http://www.devinfo.info/urbaninfo/>.

Of course there are many other ways in which we can study housing markets, including case studies of individual markets, as well as cross-city or cross-country studies. Methodologies include surveys of households and/or producers, financial analyses, and participant-observer studies. See, for example, Mayo et al. (1981), Hannah et al. (1989), Malpezzi (2000), and Field and Kremer (2005).

IV. HOUSING DEMAND AND SUPPLY

HOUSING DEMAND

¹ See <http://www.bus.wisc.edu/realestate/publications/hofinet-urban-indicators.asp>

Understanding the demand for housing is central to solving many academic and practical problems. Private market participants naturally want to understand demand patterns in order to better understand market conditions, pricing points on mortgages, etc.; the demand for housing undergirds no small part of the financial markets (and the recent financial crisis and "Great Recession"). Housing demand undergirds the proper design of government interventions in housing and related markets (e.g. the design of housing subsidies). Assumptions about housing demand are often embedded in a wide range of economic models, e.g. in several recent macroeconomic models that incorporate housing explicitly (Leung 2004).

Economists use elasticities as summary measures of the responsiveness of markets. Specifically, we define the income elasticity of demand for housing as the ratio between the percentage change in housing demanded and the percentage change in income:

$$\epsilon_r^D = \frac{dQ^D/Q^D}{dY/Y}$$

where ϵ represents elasticity, Q the quantity of housing services, and Y is income. The formulation is quite general, so we can also refer to price elasticities of demand, elasticities of supply, etc. by straightforward substitution of prices, quantities supplied, or for that matter other arguments such as demand elasticities with respect to population growth, interest rates, etc.

Literally hundreds of studies have been carried out examining the demand for housing. Early studies examined housing demand using aggregate data on how housing expenditures and incomes changed over time. These studies generally found income elasticities around 1.0. If the income elasticity is 1, then the fraction of income devoted to housing stays constant as income rises and falls.

In the 1970s a large number of papers appeared based on household survey data. Generally these studies found lower income elasticities, and (to the extent that comparisons are possible) lower price elasticities, than the aggregate studies. A simple but representative study is by Green and Malpezzi (2003). There is a parallel literature on price elasticities of demand; price elasticities of demand are often found to be similar in magnitude to income elasticities, but of course of opposite sign (as prices rise, consumption falls).

Housing demand can also vary across tenure types (owners and renters), notably because while renters' demand is presumably based on solely on the desire to consume housing services (space, quality and facilities, neighborhood and location), homeowners may also have a separable investment motive. Research usually finds that investment demand elasticities with respect to income and wealth are higher than the corresponding income and wealth consumption elasticities. Consumption demand elasticities with



respect to demographic variables like age, education and household size are often larger than the elasticities of these variables with respect to investment demand.

Figure 2, from Malpezzi and Mayo (1987), illustrates the differences we find when we examine housing expenditure patterns due to differences in income within markets, compared to those due to differences in income across markets. (The figure focuses on renters, but broadly similar results are also obtained for homeowners). In the Malpezzi and Mayo study of 14 cities in developing countries, income and price elasticities of demand within cross sections were remarkably similar to those found in developed countries. Cross-section elasticities within cities were generally in the range of .5 to .8 for owners and renters. Tackling issues like price specification and permanent income as well as the simultaneity between demand and tenure choice tended to push elasticities up to the higher end of this range but they generally remained less than one in absolute value.

The studies discussed in the previous paragraphs mainly examine demand within a market. However, there is evidence that housing expenditures across markets increase at least as fast as income. Davis and Ortalo-Magné (2010) find the median rent-to-income ratio is surprisingly constant across U.S. metropolitan areas, implying a cross-market elasticity of about one; and we have already noted that many studies using time series data also have higher elasticities. Malpezzi and Mayo (1987) argue that cross market comparisons reveal a longer time frame; following the well-known principle that elasticities tend to be higher as markets have greater latitude to respond.

On reflection, it is perhaps unsurprising that housing, like food, is revealed to be a necessity. Interestingly, many policy discussions of “housing affordability” run contrary to this finding. Policy analysts who use a single rule of thumb (“households can afford to spend 20 percent of their income on housing”) or who implicitly assume housing is a luxury (“rich households can afford to spend 30 percent of their income but poor households can only afford 10 percent”) are making purely normative statements that are rarely grounded in actual revealed household preferences.

HOUSING SUPPLY

If supply is elastic in the very long run, housing supply should mirror the demand patterns discussed above. Malpezzi (1990) compares the demand results in Figure 2 and finds they mirror supply, specifically the plot of housing investment as a share of total output or GDP, as calculated in Burns and Grebler’s classic (1996) study.

Burns and Grebler examined the share of housing investment (measured by new residential construction) to gross domestic product, using data from 39 countries, and two time periods. Burns and Grebler regressed the share of housing investment against GDP per capita and its square, change in population and its square, and a measure of urbanization, squared. They find evidence that the share of housing investment increases at an early

stage of development but on average declines past about \$1,600 per capita GDP (1970 U.S. dollars). Further, although there was a wide variance in their dependent variable at different income levels, their simple model explains that variation quite well, and the turning point is quite sharp and measured with apparently reasonable precision.

Of course this turning point in the share does not imply that the level of housing investment decreases with development, at least throughout the observed range of the data. Studies by Renaud (1980) and by Buckley and Madhusudhan have shown the Burns and Grebler result to be qualitatively robust. Renaud analyzes time series data from Korea and confirms the nonlinearity of the relationship between the share of housing investment and per capita GDP, but finds the exact turning point to be sensitive to specification. Renaud also considers several additional explanatory variables reflecting financial constraints. Buckley and Madhusudhan test the effect of additional financial variables, namely the anticipated rate of inflation, changes in the rate of inflation, and the extent of capital deepening. Their analysis confirms the importance of financial conditions in explaining housing investment. In particular, they find that countries with deeper financial markets invest relatively more in housing *ceteris paribus*.

Another under researched area is housing from the existing stock. Other than the few studies surveyed in Ferchiou (1982) and Johnson (1987), very little has been done on filtering and other changes in utilization of the existing stock. There is a useful literature on upgrading, for example Jimenez (1982). Analysis of the utilization of the existing stock is particularly important in understanding rental markets, as will be discussed below.

PUTTING SUPPLY AND DEMAND TOGETHER

Now that we know a little about supply and demand individually, we can examine how they interact within markets. As we’ve already suggested, supply and demand are each multivariate concepts. Demand depends on income, housing prices, demographics, among other fundamentals. Supply is affected by housing prices, the prices of inputs, and the regulatory environment, among other things. The familiar supply and demand curves pick a single variable (most often the price of housing) to analyze, while at least temporarily holding other things (income, prices of inputs, etc.) constant.

Figure 3 illustrates. Suppose, for simplicity, that all housing units are the same, so that we can measure quantity by simply counting houses; then rent per house is the same as the flow price per unit of housing services, and the value or asset price per house would also be a true price measure. Holding for the moment the other variables that affect supply and demand fixed, we highlight the effect of prices on both supply and demand. Demand slopes down – the higher the price, the less we demand. Supply, using similar reasoning, slopes upwards. If supply was fixed, the supply curve would be vertical. If supply was horizontal, that would indicate that the market would supply any quantity demanded, at a constant market price.



Now let's change one of the other variables, which we initially held fixed. Suppose income in our city increases substantially; this would shift the demand curve out, i.e. the market would demand more housing, at any given price. The intersection of supply and the new demand shows that some new houses would be built ($Q_1 - Q_0$ houses) and housing prices would increase from P_0 to P_1 .

Notice that the supply curve as drawn in Figure 3 is somewhat steep (though certainly not vertical!) Let us postulate that Figure 3 represents a somewhat stringently regulated market with fairly inelastic supply. Contrast this with Figure 4, which is more or less the same except that the markets are more elastic. The increase in demand does give rise to a price run up over the medium term, as one would expect, but the run up is much less than in Figure 3; in the more elastic market, more of the adjustment is from increases in the quantity of housing, less so from increases in price.

We can go much farther with this kind of analysis than space permits. For example, Malpezzi and Wachter (2005) demonstrates how inelastic supply curves can give rise to “boom and bust” markets, and are of the real cause of market instability, rather than “speculators.” They also show how such cycles are also exacerbated by badly designed government responses to rising housing prices by one-time programs to get the market moving, as in a “Million Houses Program;” these can be characterized as occasionally shifting an inelastic supply curve to the right.² This leads perforce to a boom and bust cycle, as in Kim and Renaud (2009) and Kim and Suh (1993). The analysis suggests it would be more effective to tackle rising prices by improving the efficiency of the supply of developable land, and real estate generally, including the development of an appropriate regulatory framework for real estate.

Reform measures that tackle the root causes of inelastic supply have the effect of flattening the supply curve and moderating the boom and bust cycle, reducing risk for investors.

V. PROPERTY RIGHTS, TENURE AND MOBILITY

What does it mean to “own” or “rent” a housing unit, or the land underneath it? Is the “bundle of rights” best described as fee simple ownership, a leasehold, or some form of common property? Who has the right to use the property, to lease or sell it to others? Are there common areas (in the land or the structure) that are governed differently than the family's living space? Are some groups (ethnic or racial groups, women, foreigners) subject to different rules of the game? How are disputes about such things to be settled?

Property rights are the sine qua non of housing market development. Property rights are defined and assigned through both formal legal systems, and by custom or tradition.

Since DeSoto's influential (2000) polemic, property rights have often revolved around the provision of a title to “informal”

² Examples of such one-time shifts from a “million houses program” or its equivalent can be found from the United Kingdom, Korea, Sweden, and Sri Lanka, among others.

residents or “squatters,” and research by Field (2005) has demonstrated that titling programs can generate significant benefits. But more wide-ranging reviews e.g. by Gilbert (2002) and Woodruff (2001) make clear that titling is by itself not the “silver bullet,” as DeSoto's work has been interpreted by some. Beyond title, unlocking the potential benefits of improved property rights includes, inter alia, working systems for property registration and adjudication of disputes, an appropriate regulatory framework for land use (zoning, density regulations and so on), infrastructure, and a property tax or other mechanism to fund municipal services.

Two areas of law that particularly affect the operation of housing and real estate markets are contract law, and land use and development regulation. Contract law defines and facilitates the transfer of property and property rights, allocates those rights, and settles disputes. In formal systems these functions are associated with such instruments as contracts of sale, leases, easements and rights-of-way, operating agreements, mortgages and deeds of trust, etc. In all countries, rich and poor, some of these functions are also affected by less formal “mores and folkways of society.” In many countries, including most of the transition countries and many African countries, these systems are in flux. Land use and development regulation includes the body of custom, law, regulation, and case law which governs the rights to locate certain uses in certain locations and provides standards of development and operation of those uses. Formal instruments include zoning ordinances, building and housing codes, subdivision regulations, private deed restrictions, environmental laws and regulations, etc.

For housing markets to work well, tenant and landlord rights must be balanced and well defined, whether with a formal or informal contract. There must be clear remedies for violation by either party. These rights and obligations will generally be freely negotiated between the parties and represent the outcome of a competitive market process.

In a well-functioning system, property rights will be transferable from seller to purchaser upon payment of consideration. The bundle of such rights can be largely complete (fee simple, although still limited by land use regulation), or partial, including leasehold. Specific rights include the right to use or modify the use of the real estate, the right to derive income or other benefits from its use, the right to bequeath the ownership interest, the right not to be evicted, etc. Implicit in the contract of sale is not only an obligation to the seller, typically to pay a specific amount for the real estate interest but sometimes a more complex obligation such as to limit future uses or to bequeath the property in a certain way.

Maximum social return to the housing stock value, generally requires liquidity, or the ease of transfer of real estate interests. Landis (1986) shows that high fees or other rights of entry to the market, restrictions on appropriate purchasers or tenants, unreasonable constraints on use, excessively costly development standards, etc. can be counterproductive. Markets are rendered



most efficient to the extent that they are “thick”, i.e. there are many transfers and prices/rents are well established. Because the high purchase prices of real estate requires finance for most transactions, maximum benefit is obtained when financing is freely available at market rates. Financial innovations and reforms, discussed below, which enhance the liquidity of the mortgage market, such as the development of the secondary market or securitization, also enhances the liquidity of the real estate market in general.

FORMS OF TENURE

In much of this Chapter, as in much of the housing market literature in both developed and developing countries, households are classified as either homeowners or renters. As always there is a tradeoff between simplicity and analytical tractability, and realism. Households can own or rent structures and/or land. Usage rights can be fee simple or leased for short or long term. Households may or may not hold title or customary rights over adjacent property and common space; they may rent from relatives or the government as well as private landlords. Long-term tenants may be treated differently from recent movers, rent may be paid in cash or in kind, periodically or in a lump sum, or some combination of the two. Lump sum payments may or may not be returned, with or without interest, on leaving the unit. Tenants may or may not receive utilities, maintenance and other services as part of the package. Tenants from family or kinship groups may have different rights than strangers. There are a hundred kinds of informal tenure if there is one.

The above list is confusing but by no means exhaustive. A number of schemes can be suggested to try to categorize tenure forms, or put them in a spectrum. Anglo-American lawyers refer to a “bundle of sticks,” that is, that any property right can be broken down into component rights. Particular tenures in particular places can be described in terms of the property rights they comprise. This can facilitate comparison and even ranking. Unfortunately, detailed classification and analysis of such property rights remains for future work.

Despite these necessary qualifications, there is wide range of home ownership among urban households. The median home ownership rate among these countries Englund et al.’s sample of 65 countries is about 50%. We see the wide range of tenure, from close to 80% homeowners in countries as varied as Nepal, Tunisia, and Israel, to very low home ownership rates in China, Poland, Portugal and Switzerland.

Studies of tenure choice have been carried out in developed, developing, and emerging markets (e.g. Lim et al. 1980). These studies usually find income and stage of the life cycle are important determinants of tenure choice, as is the relative cost of owning versus renting.

Several studies have gone beyond the simple own-rent dichotomy. Ambrose and Kim (2003) used a hierarchical logit model to study Korea. In addition to homeownership, Korea has several types of rental tenures, usually distinguished by their payment

schemes. In the most common form, *chonsei* (“key money”), tenants put down a large lump sum deposit. In recent years this can be as much as 40 percent of the cash value of the unit. At the end of the lease period, the deposit is refunded, but without interest. Other tenants pay periodic rent; and there are mixed forms (deposit and rent). Ambrose and Kim find both permanent and current income measures, as well as demographic variables, explain tenure choice in Korea.

A number of papers have presented evidence that in some cities, large fractions of low income households own in the informal sector; as incomes rise they rent in the formal sector; and the richest again become homeowners. Yet such patterns have not been scrutinized or explained carefully. Strassman (1980) suggests that availability of services such as piped water may catalyze investment by some households and make the shift to renting such units attractive relative to current owners of informal units without such amenities. In a very stylized version of such a world we would observe the lowest income households owning very low quality housing, perhaps in the informal sector or with little tenure security; past some threshold, households would begin into a higher quality rental submarket; finally, at higher incomes and (perhaps) overcoming financial constraints, households would be able to purchase such housing.

Finally, it is often critical to deal with the fact that housing investments – whether publicly lead or privately developed – are never “Pareto optimal,” that is, there are winners and losers. The same is true for other actions we discuss here, e.g. infrastructure investments. If we don’t sort out methods to deal fairly with these problems, including compensation, then not just public projects but all projects are at risk. See Lall, Lundberg and Shalizi (2006) for an example of a careful treatment of these tradeoffs.

VI. KEY INPUTS: LAND, INFRASTRUCTURE AND FINANCE

URBAN LAND MARKETS

Our discussion here complements Bertaud’s contribution to this volume, which discusses the operation of the land market in much greater detail. And naturally the starting point for understanding land markets is to refer back to our previous discussion of property rights, and tenure issues.

One important strand of the developing country literature on urban land markets focuses on the operation of the so-called informal sector. For example Gilbert and Ward (1985) undertook a three country comparative study of Valencia, Mexico City and Bogota. They also found that so-called land invasions and other extra-legal market mechanisms worked reasonably efficiently under the circumstances. In effect these pirate subdivisions were able to evade formal regulations which would imply large plot sizes and high development standards inconsistent with the incomes of the bulk of the city’s populations. Mayo et al. (1982) is a very detailed study of the informal housing market in Cairo and Beni Suef, Egypt. All these studies find that the quality and quantity of housing produced in contravention of strict legal



codes is impressive. Moreover, conditional upon the income of the occupants, such development is often indistinguishable from formal or legal land development.

Regulatory and planning issues also arise in socialist land “markets”. The quotes remind us that in true socialist economies land is often allocated by nonmarket means. As Bertaud and Renaud (1994) point out, socialist planners made investment and location decisions under a system in which land had no value, capital had no interest opportunity cost, and energy prices were a tiny fraction of loan prices. Since enterprises could not capture any gain from redevelopment or conversion of land to highest and best use, socialist cities often had a pattern of sprawling industrial plants, often using what would be the highest value and highest density office and residential land use under any kind of market system

Bertaud and Renaud illustrate, for example, that population density in Moscow some ten miles out is about the same as population density in the center of Paris. The negative population densities exhibited in Moscow and a number of other socialist cities would not be as problematic if it were not for the fact that employment is generally highly centralized (unlike say Los Angeles which has decentralized residential patterns but also highly decentralized employment).

Of course this pattern is changing as Russia and a number of other formerly socialist economies move to the market. Not only are land and housing and other real estate markets emerging, but property rights are becoming assigned de facto if not de jure, meaning that enterprises can capture the gains from redevelopment. Movement towards world energy prices also encourage a shift in the form of the city.

Perhaps the most pathological case of land market regulation in any large country was South Africa’s Apartheid system. Turok (2001) presents a concise description. Brueckner (1996) analyzes the welfare gains from dismantling Apartheid in the context of the standard urban model.

INFRASTRUCTURE

The provision of infrastructure and related services – transport, water, sanitation, and so forth – is a traditional public sector activity, and one of particular importance to low-income households. Directly, households benefit from several types of infrastructure through saving time and money (for example, publicly supplied water rates versus user charges) and through improved living conditions. Often infrastructure investments encourage new construction and upgrading of existing housing, including the provision of more houses to rent. Households also benefit indirectly from infrastructure investments, if these are seen as legitimizing previously illegal or informal settlements (discussed in the previous section).

Like land and finance, infrastructure for housing generally needs to be considered in conjunction with infrastructure for other uses. Roads, electricity, water and sanitation are at some level

all shared by households and firms, or are if economies of scale are taken advantage of. In a series of studies of infrastructure in Nigeria, Thailand and Indonesia, Lee and his associates have examined the efficiency losses from inappropriate infrastructure policies, with a particular focus on manufacturing, although many of the arguments can be generalized to other sectors (need more here). See, for example, Anas, Lee and Murray (1996) and Kessides (1993).

Water and sanitation are especially key components of infrastructure that are also closely connected to housing; these are often key components of “slum upgrading” programs, for example. Large economies of scale – both pecuniary, and nonpecuniary – as well as public health concerns argue for special attention by public as well as the private sectors and community groups. Decades of research on both the engineering side have given us a wide range of options suited to different costs, population densities, and geographical conditions; decades of research on the economics helps us match the right technology to the context. See Burra, Patel and Kerr (2003), Gulyani, Talukdar, et al. (2005), and Whittington and Hanemann, et al. (2008), and references therein.

Another key infrastructure element, and one deserving of its own chapter, is transportation infrastructure. Here we only highlight a few key issues and references.

Congestion is endemic in developing countries. Traffic and Lagos, Bangkok, and Mexico City, to name only three cities, is legendary. In many cities this increase traffic congestion contributes to additional air pollution. The cities of Eastern Europe and the former Soviet Union, on the other hand, face somewhat different transportation issues in general. Often these cities face much slower population growth, and have more existing transport infrastructure. But given the common repression of automobile ownership under socialist regimes, we can expect large increases in auto use and dramatic increases in congestion in the decade ahead in many of these cities (see World Bank 2002).

HOUSING FINANCE

Bertrand Renaud put it best: “Cities are built the way they are financed”. Housing is the largest asset owned by many households. Housing is always financed, in the sense that virtually all owners of housing capital must pay for their units over several periods. Even households which own their units “free and clear” finance the unit in the sense that holding such a large asset has a financial opportunity cost.

But in most countries only a small share of this potential finance, roughly equal to the value of the underlying assets, is in the form of mortgages or other formal sector finance. Renaud (2010) show that in both developing and developed countries formal sector finance is only a small part of the total. Chiquier and Lea (2009) provide a broad review of these issues that goes into much more than space allows here.

³ Health benefits are not fully obtained until there is near-universal coverage in a neighborhood.



Because housing is such a large item in household spending and wealth, access to mortgage finance can provide a strong incentive for people to save and invest. Savings in housing finance institutions, while generally used to provide mortgages, can become a large part of a country's total savings, available for financing infrastructure and other non-housing projects. The housing finance system can also help to ensure that housing projects are repeated, as repaid loans provide money for new mortgages.

A large literature now exists on the relationships between financial development and economic development in general (e.g. Demirguc-Kunt and Levine 2004). It is well known that financial deepening takes place as countries develop, in general; what is less well known is that as countries develop, the formal housing finance system generally grows faster than finance in general. For example, data from the Housing Indicators Project show that mortgage loans average roughly 6 percent of total formal sector loans for countries with GNP per capita under \$1,000. For middle income countries (\$1,000 to \$10,000 per capita), the average is about 16 percent. For countries above \$10,000, the average is about 25 percent. Of course there is great variation within groups, but the overall trend is quite clear.

The viability of housing finance institutions has often been jeopardized by governments which, in wanting to make housing more "affordable," have sought to keep down interest rates. Particularly during the 1970s, when inflation was rapid in most developing countries, many housing finance institutions lent at negative real rates of interest, which often led to considerable decapitalization by the early 1980s.

In the past, housing finance in many countries evoked the 30 year fixed rate mortgage, and specialized depository institutions like U.S. savings and loans, UK building societies, and Japanese jusen. However for quite some time mortgage instruments have been shifting to designs that share inflation risk, e.g. adjustable rate mortgages in the U.S., rollover mortgages in Canada, etc. Of course instrument design has been well discussed elsewhere (Bernstein, Lea and Renaud, 1999).

A number of sources have distinguished between housing finance systems based on deposits (buildings societies, savings and loans, banks) and those based on capital markets. Renaud (1999) describes these in the context of emerging markets. The clear trend is to use capital markets as sources of funds for real estate finance. Of course depository institutions still play a role in many financial systems, but in general their role as sources of funds for mortgages has been reduced in a range of markets.

Second, in the stylized modern housing finance system, and very germane to the present study, social housing funds, i.e. lending focused on low income households and at subsidized rates, has generally been separated out from the rest of the housing finance system. The trend has been away from implicit taxes on the financial system and mixing market and subsidized finance, to a cleaner system where subsidies are on budget and separable (Renaud 1999; Diamond and Lea 1992).

VII. TAXES, SUBSIDIES AND REGULATION

In this section, we'll discuss, very briefly, why governments intervene in housing markets – that is, the concept of market failure. We'll also discuss the kinds of instruments governments have for such interventions, revolving around property rights, taxes, subsidies, regulation, and direct provision.

There are a number of possible reasons why private markets might not reach an efficient allocation, giving rise to a possible rationale for some government intervention. While often presented in texts as mutually exclusive and clear cut, in practice these types of market failure often overlap.

A classic rationale for public intervention is the existence of a natural monopoly due to decreasing or increasing returns to scale over the entire relevant range. This is the rationale generally cited in the discussion of public utility regulation. Housing markets per se are usually viewed as more or less competitive (Olsen 1969). Landis (1986) discusses conditions under which local development regulations could make give housing suppliers market power.

Another very broad class of market failure often discussed in the literature is the existence of large transactions costs. A particular type of transaction cost much studied in the recent literature is information failure, more specifically asymmetric information. These issues have been much discussed in the literature on brokerage and matching, for example Hendel, Nevo and Ortalo-Magné (2009) and Yavas (1994).

But the class of market failure most commonly related to housing is surely that of external costs and benefits. Externalities are costs that are imposed upon parties outside the transaction. External benefits are in parallel benefits conferred upon parties outside the transaction. What potential externalities could raise social costs of real estate above private costs, and hence, in principle, require some interventions (taxes, subsidies, or regulations)? Among many candidates are the following:

- *Congestion.* Building additional housing generally increases traffic.
- *Environmental costs.* Housing development may reduce the local supply of green space, may affect air quality, and may increase pressure on local water, sanitation and solid waste collection systems.
- *Infrastructure costs.* These may rise as communities invest to grapple with the above problems.
- *Fiscal effects.* In addition to the obvious effects from the above, demand for local public services may increase with both residential and commercial development (education, fire and police protection).
- *Neighborhood compositions.* New households may



be different from existing households. Regulation can be exclusionary in nature and intent.

- *Productivity and employment.* Firms need locations for their activities. A well-functioning housing market is generally required for a well-functioning labor market.
- *Health benefits.* Lower crowding and improved sanitation may be associated with lower rates of mortality and morbidity.
- *Externalities associated with homeownership.* For households that own their unit, the unit is generally their largest asset, after their human capital.
- *Externalities associated with poverty and unequal distributions of income and wealth.* Poorer/less wealthy citizens might make more demands on public services; might experience higher rates of crime, and incarceration; might participate less in voting and other community activities; might be a fiscal liability from a local government perspective, and so on.

If such externalities are large, and are correctly measured by the regulating authority, and the specific policy instrument used to regulate is sufficiently precise, government intervention can correct for these externalities. But even if such externalities exist, departures from the preceding stringent requirements could leave society worse off in practice.

What are the potential policy instruments for tackling these market failures? We may categorize these instruments into four broad types:

- Defining and enforcing property rights;
- Subsidies (including, at one extreme, direct public provision);
- Taxation;
- Regulation.

In one sense these interventions can be treated as substitutes. Certainly they can each be valued, and the incidence of the tax, subsidy, regulation or whatever can be studied (see Malpezzi and Mayo 1997 for methodology and examples). Economists often note that taxes and subsidies are more or less analytically the same, “except for the signs,” i.e. a subsidy is money in hand and a tax is money out of pocket. Regulations can be “priced” and analyzed as a tax. But of course there are other senses in which they are not equivalent. For example, in the environmental literature there is a huge body of work that suggests that, in many circumstances, taxes will be superior to command and control regulation.

We have already discussed property rights above. We discuss the other three broad categories here, in turn.

TAXES

We begin by considering how housing would be taxed under an “ideal” income tax. First, consider housing like any other asset that yields a return.⁴ Economists commonly posit that if income is adopted as the basis of taxation, real income from whatever source derived should be subject to tax, but that income should be measured after the costs of producing it have been subtracted, as “net” income. Both recurrent income (from wages and capital) and capital gains would be subject to tax, but only real (i.e., inflation-adjusted) capital gains would be taxed.

What if we could not implement our “ideal” system? If we could not or would not tax the income from an asset, it follows that we should not permit the deduction of the costs of producing the (untaxed) income. This would be what economists call a “second best” solution.

For rental housing, our ideal system suggests that net rental income and real capital gains be taxed as ordinary income. Offsetting deductions would be permitted to landlords for the costs of doing business, including maintenance and repair, interest payments, property taxes, and net economic depreciation of the unit. “Extra” taxes, including implicit taxes such as rent control, would not be imposed.

For owner-occupied housing, since few countries tax imputed rent and capital gains fully and effectively (most don’t tax the former at all), the “second best” approach would be to avoid providing deductions such as the U.S. deduction for mortgage interest and property taxes, since the income from the asset is largely untaxed. Englund (2003) and Green and Malpezzi (2003) provide discussion.

A separable and important tax issue is how to raise funds for required municipal services. See Bahl and Linn (1992) for an elaboration of why we should use property taxes to pay for improvements and services that “run with the land,” as well as how to set up a fair and efficient system.

SUBSIDIES

Subsidies are public actions reduce the cost of something to particular recipients. A common type of subsidy is an explicit payment to someone for a particular purpose, such as an allowance used for rent. But implicit subsidies are also created when government makes rules which change the price that someone is to pay for a good or service, such as rent control.

There are two ways of measuring subsidies which are important for analysis of government policy. The first is called a financial subsidy and it measures the apparent money value of the transfer.

⁴ To the landlord of a rental unit, the return is explicit. To the owner occupant, the return is implicit; the owner saves money she or he would spend on rent.



The second way to measure such a subsidy is against market rent, or the opportunity cost of the subsidy.

In many countries, the pattern of subsidies which has grown up over time has little to do with explicitly articulated policy objectives. Many countries pay lip service to the notion that housing subsidies should be at least partly targeted to low income households. But in fact, in many countries larger subsidies go to higher income households, especially when indirect subsidies through the tax and finance subsidies are considered.

Mayo (1986) makes an important distinction between production efficiency and consumption efficiency. Production efficiency refers to the economic value of the unit in relation to the cost of producing it. Consumption efficiency refers to the value the tenant places on the unit in relation to its market value. The concepts are equally applicable to rental programs and other programs.

Sources of potential production inefficiency in public housing include: inappropriate location, high wages, using the wrong factor proportions, high administrative costs, off budget costs of financing, tax breaks, higher maintenance costs, and absence of market discipline (i.e. private developers will go broke if they consistently build units worth less than their cost; public developers may not, or at least going broke may be deferred). Production inefficiency would not exist if public developer/landlords were as efficient as private. A priori there is no obvious reason why public sector landlords might have true comparative advantages over private ones; there are not generally great economies of scale, and most private rental markets have many participants and reasonably open entry and exit.

Consumption inefficiency implies that the tenants value the housing less than the market, or that their consumption is constrained by the requirements of the program. This is a particular problem with public rental, since typically the product is very standardized while demand is not. Cash is, of course, the most efficient transfer in the sense that if the market works at all well most households would prefer the cash equivalent of a program to the program itself. A priori we might expect policies and programs which rely on private landlords to provide a wider range of options and to reduce consumption inefficiency.

Empirical evidence suggests that public housing is rarely a very efficient way to increase housing consumption or welfare. Mayo (1986) reported that the consumption efficiency of U.S. public housing is about 86 percent (ratio of benefits to costs), and its production efficiency is only 43 percent (ratio of value to costs); thus for every taxpayer dollar spent through these particular projects, recipients' benefits were 37 cents. Agrawal (1988) reports that for the 300,000 public housing units in Australia the mean consumption efficiency is .75 to .68. Yu and Li (1985) study Hong Kong's public units, which house 40 percent of its population. In 1980, the rent charged for public units was \$10 per sq. meter; the market rent for comparable units was \$56 per sq meter. Consumption efficiency is .75.

There are examples of more successful systems. Chile's system of lump sum grants for housing is well known, and one of the most imitated (Ferguson et al. (1996). The centerpiece of the Chilean system is the partial replacement of subsidized loans and direct public production with lump sum grants to consumers.

While currently much discussed in developed countries, off budget expenditures are also often problems in developing countries. In developed countries tax expenditures receive much of the attention. In developing countries there are often large implicit subsidies in the provision of land for shelter projects, although these are somewhat self-limiting, as large implicit subsidies limit their scale. Housing finance subsidies are often "off the books;" Buckley and Mayo (1989) discuss the example of Argentina, and Hoek-Smit and Diamond (2003) provide a more discursive review of different kinds of housing finance subsidies. Little data exist as yet on the size of off-budget expenditures for public rental housing.

REGULATION

Regulatory reform can play a key role in the three areas previously discussed, i.e., increasing the supply of finance, infrastructure, and developable land. Zoning, taxes, rent controls, and building standards are other obvious regulatory areas to study for possible change. Governments must carefully weigh the costs and benefits, and the distributional consequences, of regulation. Regulation should strive for a "level playing field" in so far as is practical. Land regulation has already been briefly discussed; we now discuss the issue more broadly, based on a simple framework laid out in Hannah et al. 1989 and Malpezzi and Mayo 1997.

An oft-discussed set of housing regulations are those that control rents and otherwise regulate rental housing. Roughly 40 percent of the world's urban dwellers are renters; in many developing country cities, two thirds or more of the housing stock is rental (Malpezzi and Ball 1991). A majority of these countries have some form of price control on some or all of their rental housing stock.

Rent control is usually thought of as a policy applied to private markets, but publicly provided housing is also subject to controls, and to some of the attendant problems like reduced revenue and maintenance. For example, until a decade or so ago, much urban housing in Russia and in China was owned by the government or by state enterprises. Rents were based on historical costs and extraordinarily low in real terms. As a consequence, housing subsidies were a huge share of government budgets. Many units were under-maintained because of lack of financing. Severely controlled prices can cause problems for public as well as private housing.⁵

The lesson of a number of studies is that regulation per se is neither good nor bad; what matters is the cost and benefit of specific regulations under specific market conditions. Having said that, it is common for regulations to exceed their costs in develop-

⁵ Struyk (1996) discusses the privatization of Russian public housing, and Man (2011) the recent evolution of housing policy in China.



ing countries and the former socialist economies as well as in developed countries. In Mexico, for example the waiting period to obtain a building permit is eight to ten months (Zearley, 1993). In Malaysia, Mexico, and Peru as well as Indonesia research has documented literally 100 steps or more in the development or house purchase process. Each step increases risk, delays development or purchase, and often is associated with explicit as well as implicit cash transactions (De Soto 1989).

A number of countries have recently taken steps to reduce the regulatory burden notably Mexico and Malaysia. Green, Malpezzi and Vandell 1993 document the extraordinary rigid development regulations in Korea. Cook (1984) describes building codes and bye-laws in Africa with a series of recommendations for changes in codes that recognize the progressive step by step building methods used in the informal sector. It is often not recognized that given cost constraints as well as climate and materials availability so called traditional materials such as mud and wattle adobe or rammed earth are not always inferior materials. Generally research in this area has argued for coded based on outcomes and performance rather than inputs, paralleling the developed country literature. For example a well-constructed and maintained house of rammed earth (swish) in Ghana can return 100 years or more of service.

There are examples of model codes and “best practices,” for example Vranicar, Sanders and Mosena (1980). But it almost goes without saying that any model code requires careful thought and analysis before application to developing countries especially. Malpezzi (1999) discusses a wide range of specific land use and development regulations that are commonly applied to housing.

INCENTIVES ANALYSIS: SUMMARIZING THE EFFECTS OF SUBSIDIES, TAXES, REGULATION, AND OTHER INTERVENTIONS

Hannah et al. 1989 and related papers point out the obvious fact that government subsidizes, regulates, taxes and otherwise intervenes in housing markets for a variety of purposes. Each policy intervention can be analyzed in turn by examining how the interventions change the prices and corresponding present values. Present values have the advantage of enabling direct comparisons of the costs and benefits of quite different interventions in different programs. Some interventions impose costs (e.g., land use regulations, taxes, rent controls, building regulations) and some benefits (e.g., land subsidies, tax relief, financial subsidies). Some interventions confer corresponding costs and benefits on different market participants; for example, rent controls benefit some tenants at the expense of landlords (and perhaps some other tenants). Other interventions confer costs and/or benefits on some participants without an obvious corresponding gain or loss elsewhere. For example, some very high infrastructure standards can confer large costs on developers without producing much in the way of benefit for anybody.

The incentives model starts with the standard economic cost-benefit of a representative investment, then adds the major inter-

ventions, with simple assumptions about incidence:

The Economy

- + Market Value of the Unit
- Resource Cost to the Economy
-
- Net Economic Cost-Benefit

The Developer

- Resource Cost to the Economy
- + Land Subsidy
- + Development Period Infrastructure Subsidy
- + Construction Subsidy
- Cost of Land Use and Building Regulations
- Land Acquisition Taxes
- + Sales Price
-
- Net Financial Cost-Benefit to Developer

House Purchasers

- Sales Price
- Registration Taxes
- Property Taxes
- Extra Transactions Cost of Program Participation
- + Market Value of the Unit
- + Recurrent Infrastructure Subsidies
- + End User Finance Subsidies
-
- Net Financial Cost-Benefit to Purchaser

The relationship between these calculations and market behavior is now clear. If the economic cost-benefit is positive, the unit is efficient. If the developer’s cost-benefit is positive, a supply response will be observed. If the purchaser’s cost benefit is positive, there will be demand for the units.

Hannah et al. 1989 and Malpezzi and Mayo 1997 show how to calculate the incentives and “disincentives” faced by developers of a representative SLCHP unit in great detail. The developer receives substantial subsidies through low-cost land and reduced infrastructure standards, but these are more than outweighed by the costs of regulations and the pricing restriction that effectively requires the unit to be sold below cost. The net effect of these interventions is to add about M\$4,000 to the developer’s cost leading to a net loss on each unit of about M\$2,000. This compares to a selling price of about M\$25,000.

The next step is to tally the incentives and disincentives to purchasers of the representative unit. The estimated subsidy to the purchaser of nearly M\$9,000 was mostly due to below-market pricing restrictions and mortgage financing.

How does this sort out from the point of view of the economy, the



developer, and the purchaser? This particular unit is efficient, i.e. the benefits to the economy outweigh its costs. Demand would be strong in the absence of additional purchaser incentives, but will be very high given the additional subsidies involved. But because of regulation developers lose money, so they would build these (efficient) units only if forced to do so (e.g. to obtain planning permission for other units) or if purchasers paid higher than official prices.

VIII. HOUSING AND THE MACROECONOMY

Housing has strong links to general development, both forward and backward (Malpezzi 1990, Buckley and Mayo 1989, Renaud 1990). In this section we explore the relationship between housing investment and development; housing policy and structural adjustment; and housing investment and the business cycle.

Housing and Long Run Growth and Development

In policy discussions macroeconomists sometimes point to housing's allegedly unfavorable incremental capital output ratio (ICOR) as evidence that reducing housing investment will increase growth of the economy. While the ICOR can be derived from (for example) a simple Harrod-Domar growth model, such models abstract from the different useful lives of capital and are of little use in distinguishing between investment in one form of capital over another. At the same time one can find a housing related literature which strains to find multiplier and externality arguments for investment in housing.

Malpezzi (1990) develops the argument that housing investment decisions are generally best made on the basis of internal rate of return/present value criteria, as are investment decisions generally, rather than often spurious multipliers and ICORs of dubious comparability. Generally high and rising prices for housing can be viewed as signals that the market requires additional investment.

This is not to imply that there are no general equilibrium or aggregate effects of housing in these economies. Buckley and Mayo (1989) present some examples. Buckley and Mayo examine two case studies: Argentine housing policy, with special emphasis on financial linkages, and Polish housing policy, with special emphasis on interactions with the labor market. As of the mid to late 1980s they find the present value of welfare costs of Argentine housing subsidies through the financial system are on the order of 6% of GDP in present value terms. We will discuss this case somewhat below in our discussion of finance. Buckley and Mayo find that Poland's insufficient housing investment and ill located housing are equivalent to a compensating wage differential or tax of about 10% of labor income in the late 1980s. (Both the Argentine case and the Polish case are illustrative; both countries have followed quite different policies in recent years.)

Many "housing advocates" and other people working in the shelter sector are not used to thinking of its investments as productive. This is true of many developing country housing analysts and was certainly true under socialist central planning, where housing was explicitly labeled 'nonproductive' and was not even

counted in Net Material Product (the socialist analogue of Gross National Product). But of course in fact shelter and infrastructure investments are by definition productive: they are investment in an asset which yields a flow of services over time. To label such investment as "consumption," as is quite common, is incorrect. The same criteria which governs choice of other investments governs housing. Arguments about externalities, indirect contributions to labor productivity, and employment multipliers obscure this central point. Malpezzi (1990) discusses these issues in some detail, including the role housing market reform can play in structural adjustment.

HOUSING AND STRUCTURAL ADJUSTMENT

Research surveyed elsewhere suggests when housing markets are not performing their problems can be traced to one or more of the following:

- a poorly designed finance system
- dysfunctional land market
- failure to clearly assign and adjudicate property rights
- an inappropriate regulatory framework
- public sector production crowding out private sector
- infrastructure deficiencies

The existence of these distortions suggests how housing should be viewed as part of the structural adjustment program. Typically, when a structural adjustment program is put in place, the economy suffers from an overvalued exchange rate. In such a world, imports are "cheap" in local currency, and exports are "dear" in world prices. Therefore imports will be large and exports small; the traded goods sector is therefore small. The stylized solution, and one that housing economists can generally support, is to reform the exchange rate. A corollary of such an adjustment is that the non-traded goods sector, i.e. housing, will contract. But the correct policy is to reform the exchange rate, and let housing investment find its proper level, rather than repress housing as a substitute for exchange rate reform.

While the above is true as far as it goes, we argue that in many countries because of the distortions mentioned above the economy is nowhere near the efficiency frontier, quite possibly due in part to one or more of the distortions listed above. By attacking the micro distortions listed above, and by also attacking similar distortions in other areas of the economy, including traded goods, we can simultaneously adjust and improve housing conditions. However, such an improvement requires more than just getting the price of foreign exchange right. More fundamental micro economic reforms are required.

HOUSING AND THE BUSINESS CYCLE



Housing tends to lead the economy; commercial real estate tends to follow it. For example, U.S. housing investment averages 4-6 percent of GDP. Housing boosts construction employment, materials, consumer durables like furniture. Increases in housing equity lead to higher non-housing consumption (and some investment). Especially during the home price run up, the availability of “home equity lines of credit” (“HELOC”) made it easier to tap home equity (Greenspan and Kennedy 2008).

Research on housing prices and consumption makes these links clear. Davis and Palumbo estimate that for every dollar in additional housing wealth (a stock), consumption increases by about 5 cents (a flow, every year, after an adjustment period). The range of serious estimates seems to be 4 to 10 cents per dollar of wealth. U.S. consumption is about 70 percent of GDP. According to Davis and Palumbo, without the boom, consumption would have been about 2 percent lower than peak levels of 70 percent of GDP. Does the effect work in reverse? Apparently, as the Great Recession has reminded us.

We could expect the biggest direct hits in a city or region that has house prices well out of line with fundamentals (e.g. California), and perhaps a regional economic shock (e.g. Detroit and autos). A large “investor” market could exacerbate the shock (e.g. the Miami condo market). But if consumption falls enough to throw the macro-economy into recession, no city is exempt.

Reinhart and Rogoff (2009) take a broader comparative focus on some of their more recent cases in which housing markets and/or housing finance play a significant role in a financial and economic crisis.

Their book examines many cases over many years, but data on housing prices are only available for 21, most in the past few decades. They present data on the timing of banking crises and their associated economic downturns, along with timing of house price declines and the amount house prices actually fell.

They note that that “banking crisis” is not synonymous with “recession.” R&R demonstrate elsewhere that recessions associated with financial crises are more severe and of longer duration than other recessions; the duration of completed downturns with an associated housing and financial crisis averages 5 years.

There have been many housing-related financial crises that don’t make the list because of a lack of house price data. Caprio and Klingebiel (1996) list many such episodes, including Spain (1977-85); Argentina (1980-82); Chile (1981-83); Venezuela (1994-95); Mexico (1995); Israel (1977-83); and Côte D’Ivoire (1988-91), among others.

The take-aways on housing and the macroeconomy are as follows. Housing is important on its own terms, as consumption and investment. But when conditions are ripe, there are big “external effects” – spillovers – to the rest of the economy. Such externalities can form a classic case of “market failure,” are the economists classic case for intervention in private markets. But beware! Just

because government intervention can improve a market outcome in principle does not mean the intervention will do so in practice. The intervention must be well designed and effectively implemented. Easy to say, hard to do.

IX. CONCLUSIONS

While countries differ tremendously in their initial conditions, there are many basic questions of housing policy that are nearly universal. How can we improve the housing conditions of our fellow citizens? What’s the best way to provide a safety net for housing our poorest or otherwise most disadvantaged? What’s the right balance of regulation to deliver enough affordable housing while limiting any “negative externalities” of development? How should housing be financed? These are universal questions, about which we now know a great deal, but which nevertheless do not often admit to simple pat answers.

Policy transfer in housing markets works in two directions. It’s rare for the “expert” from a university or a development institution or NGO to arrive in a city or country where the residents are unaware of a problem or of likely solutions. Rather, the role of external research and experience is to help frame the problems and solutions in ways that others have found fruitful; and to help review and adapt lessons from research and practice elsewhere to move the policy discussion in a positive direction.

Nevertheless, we can draw some lessons of the past four decades of housing research and policy analysis for today’s decision makers and other “actors” in the housing markets, especially in developing and emerging economies. Let us summarize some lessons in this concluding section.⁶

KEY LESSONS REGARDING PROPERTY RIGHTS AND THE ORGANIZATION OF HOUSING MARKETS

There is no successful urban development at any scale without some working property rights system, implicit or explicit, formal and ‘legal’ or informal and traditional.

The power of titles per se has perhaps been overstated by some; nevertheless, reviews of best-practice suggest that governments establish land registration systems that cover the entire country; in some contexts these can be implemented gradually. Freehold titles have their advantages, and countries may offer titles that can be upgraded to full freehold titles over time. But secure property rights are not necessary coterminous with fee-simple ownership; well defined and enforceable leaseholds have worked well in many countries. Tenure security requires much more than just a title; improved registration procedures, the formalization of informal settlements, and well-defined rules related to condominium ownership, foreclosure, are examples of other actions that may be required.

Governments with large legacy public housing stocks have often found that transferring this stock to residents can improve both

⁶ In addition to the discussion above, this section draws heavily on Malpezzi, Mayo and Gross (1987), World Bank (1993), Tibaijulea (2009), among other sources.



the efficiency and the distributional effectiveness of housing markets. Much depends on both initial conditions, and the pricing of the transfers; condominium and housing cooperative legislation may be needed for such transfers and to ensure proper maintenance of properties once they are transferred. Governments contemplating large increases in public housing production, especially public rental housing, should carefully study the cautionary experiences of countries that have found such programs to be extremely costly and less effective than initially planned.

KEY LESSONS REGARDING LAND MARKETS AND INFRASTRUCTURE

The governance of land markets always has a strong political element. There is no such thing as “Pareto-optimal,” land development, i.e. there are always some individuals and groups who bear costs, as well as those who benefit. Effective land delivery systems generate benefits in excess of their costs, and share them fairly, while minimizing rent-seeking and regulatory capture. Fairly-designed property rights, along with effective institutions and processes, as discussed in the preceding section, are an important pre-requisite. Transparent systems for allocating land work best, for example public land sales or leaseholds should be carried out with well-designed auctions or other open systems.

Urban planners play a key role, by organizing the market and developing key information, by rationalizing infrastructure, and by regulating development (discussed in greater detail below). Good planning departments maintain an up-to-date database of the city’s real estate, associated infrastructure, and provision of other services that “run with the land.” Related departments assess property values based on up to date information and collect related taxes.

Sometimes one institution, like the planning department, will undertake several of these tasks. In other cases responsibilities are more unbundled. In the latter case different departments will need clear lines of communication. Whatever style is chosen, keep it simple. Streamline the regulatory process where possible.

Regarding trunk infrastructure such as major roads, water mains, sewerage collection and treatment, an improved electricity grid, and so on, remember that both existing patterns of settlement and land prices provide important signals regarding where and what to invest in. When marginal investments in such infrastructure lead to increases in the value of newly serviced land greatly in excess of the costs of such infrastructure, the market is signaling that these services are seriously underprovided.

Well-designed sites and services projects can be thought of low cost land development; while there are successful examples of such projects, improving slum infrastructure with upgrading projects has the advantage of lower risks for the simple reason that people are already in place.

Appropriate infrastructure technology is often very contextual. The appropriate water and sanitation solutions depend critically on income levels and willingness-to-pay of recipients; on popula-

tion densities; and often on climactic and soil conditions as well.

KEY LESSONS REGARDING HOUSING FINANCE

At the national level, it’s important to keep in mind that improving and growing housing finance systems are about developing the financial system generally, as well as serving as a key enabler of housing market development.

Well-designed housing finance systems contain a range of institutions that, taken together, service a wide range of incomes, finance sales of existing houses as well as new, and also lend for major house improvements. Loans are available, on terms appropriate for the risk and duration of the activity, to finance land development and construction; mortgages are available on suitable terms for landlords as well as homeowners; and different property types are mortgagable, including condominiums and cooperatives where these are common and well-governed.

A well-functioning housing finance system competes for funds on equal terms with other investments, whether through deposit-based or capital markets-based models of resource mobilization (or some combination of the two). Directed credit models have proved inefficient, inequitable, and unsustainable. In particular, forcing housing finance institutions to lend at consistently negative or highly subsidized interest rates proven problematic; deeply subsidized state lenders have created financial problems in countries both rich and poor.

Appropriate mortgage instrument design is important; such designs share risks between borrowers and lenders in some way proportionate to their ability to bear risk. Inflation-prone countries do best when they index mortgages and permit variable rates, but it must be recognized that mere financial engineering never substitutes for prudent macroeconomic policy; enough inflation will “break” any mortgage design. A legal framework for foreclosure should protect the financial interests of lenders, but legal rights of borrowers should be protected with appropriate procedures. Where foreclosure procedures are weak, personal or group guarantees may usefully supplement property as collateral.

On the institutional and investor side, sustainable development of housing finance institutions proceeds hand-in-hand with the overall financial development. Deposit insurance and “too-big-to-fail” guarantees may limit bank runs but can build up even more dangerous risks unless financial institutions are required to hold sufficient capital, price their products in line with their risks, and are appropriately regulated.

“Micro-lending” and other small-scale mutual credit institutions and alternative lending instruments attuned to the needs of households undertaking incremental house-building should be encouraged, but recognize that these are no panacea and also must be appropriately regulated.

KEY LESSONS REGARDING HOUSING SUBSIDIES AND TAXES

Housing everywhere is taxed and subsidized, often both at the



same time. Rarely are the full panoply of these interventions (and other interventions including regulations) transparent, well measured and clearly understood. A careful analysis of overall incentives (described above and also briefly in the next subsection) is a good place for local and national governments should begin.

Make subsidies transparent and on-budget, rather than through the financial system or rent control as these distort the financial system and resource allocation; and are usually less progressive than imagined. Target subsidies to low-income households and others at risk such as the disabled and infirm elderly. Careful administration requires we devise practical means of identifying eligible beneficiaries and minimizing leakage of benefits to ineligible households.

Set up an appropriate system for the taxation of income from capital, including housing. A good principle is to tax income from housing and other capital on an equal basis, from whatever source derived; but permit the deduction of the costs of producing that income.

Sustainable subsidies must be consistent with available fiscal resources. Remember that once subsidies are introduced they are difficult to remove. Where substantial housing reform is taking place and major subsidies need to be removed, it may be necessary to introduce new, targeted subsidies as part of a social safety net to protect vulnerable households.

A wide range of international experience suggests that demand side subsidies (housing allowances or vouchers) often work better than supply side subsidies (public housing, construction subsidies). In countries where the housing supply system is not keeping up, it's usually the case that addressing supply constraints directly is more effective than subsidizing some favored segment of a poorly performing development system. One-time capital grants or housing allowances that have a finite duration or a built-in review procedure put a bound on the taxpayer's liability and can improve transparency and distributional effectiveness.

KEY LESSONS REGARDING THE REGULATION OF HOUSING AND RELATED MARKETS

There are many instruments for the regulation of real estate, among them master plans, zoning, growth controls, planning guidelines, and other restrictions on land use; impact fees and exactions; subdivision and building codes, and deed restrictions, just to name a few.

Look for regulatory overdesigns such as codes that specify large lots, that require curbs and gutters for all streets, and inappropriately wide roads. Are construction codes linked to local conditions? For example, are foundation and footing requirements linked to soil type? Are infrastructure standards linked to density and income? For example, low cost sanitation alternatives like Ventilated Improved Pit (VIP) Latrines may work well in a range of conditions, but not in the densest areas of, say, Shanghai.

Undertake a "regulatory audit" from time to time. The "Bertaud

model" of land use planning and the "Malaysia model" of incentives are examples of the kinds of analyses that can serve well here.

Permit density, but allow for a mix of densities and income levels. Do not micromanage the development process. If governments find themselves legislating lots of low and middle income development, where the big market is, that's a signal that some regulations or other upstream interventions are tilting profitability away from the middle and to the high end. Find and treat the disease, don't try to legislate away the symptom.

Use cost-benefit principles to examine proposed regulations. Quantifying benefits, even approximately, with likely bounds when precise figures are unavailable, is far superior to making a regulatory judgement with no such quantification. Every regulatory decision imposes real costs and confers some benefit; better to measure with error than not to try. Every regulation put in place means we've made an implicit judgement about benefits and costs. Put these judgements to the test.

If necessary undertake "regulatory triage." Separate regulations into (1) those whose benefits clearly exceed costs, and strengthen and enforce them; (2) those whose costs clearly exceed benefits, and remove or reform them; and (3) a middle category of those for whom the net cost-benefit is too imprecisely known to be confident of the need for change. In many if not most cities, an initial focus on (1) and (2) will keep regulators busy enough for some time, and will yield significant returns.

Don't adopt regulations that no one can realistically follow. The rules will be broken, corruption will increase, and the rule of law will be weakened. But when regulations are appropriate, that is well founded in cost-benefit terms and equitable, allocate sufficient resources for their administration and enforcement.

KEY LESSONS REGARDING INSTITUTIONS, PROCESSES, AND RESEARCH

Solicit feedback from a wide range of actors, developers, and community representatives. Voice is important. Many real estate professions are small scale and decentralized. Encourage development of professional organizations for developers, builders, lenders, brokers, appraisers and so on. When such professional organizations are well run, they can give voice to the concerns of their industry and foster ethical and professional behavior. Similarly, well run community organizations can represent the interests of consumers and the general citizen. But find the balance between voice and regulatory capture; beware giving any such groups untrammelled power to write their own rules of the game, limit competition, or veto development; some broader accountability is needed.

Recognize that urban development in general, and changes in housing policy in particular, have winners as well as losers. Transparency and voice can help but well-designed compensation schemes can also play an important role.



Push decisions down to local level, where possible. But push decisions up, in cases where insiders have an inordinate say at the expense of outsiders.

Monitor housing markets, both policies and outcomes. Join the Housing and Urban Development Indicators movement.

When housing supply is unresponsive – “inelastic” – the solution is not a one-time increase in approvals or production. Don’t just shift an inelastic supply curve to the right. More fundamental reforms flatten the supply curve – make the market more responsive to demand.

Cities that have large informal settlements underserved by infrastructure – slums – often need a “pincer movement:” well-designed upgrading programs can improve conditions in the informal market, while regulatory and financial reforms can help the formal sector move down-market.

Don’t tilt profitability away from the middle and low end of the market by imposing unnecessary differential costs. Large lot zoning, excessive land use standards, and the like, have this effect around the world.

Beware the “omitted middle” of the market. If housing suppliers aren’t able to deliver product where the customers are, look for regulations and other interventions that may be tilting profitability away from the middle and the bottom of the market.

Provide a range of options suited to the income, preferences and culture of the city’s inhabitants. Standards must fit local conditions: income, density, materials availability, soil and topography. Forget VIP pit latrines in dense, middle-income cities. Forget Western-standard sewer systems in small low-income settlements.

Don’t import a foreign system whole. But do study foreign systems for ideas. Consider local conditions. For example, Ghanaian building codes have often forbidden building in indigenous materials (“swish,” or rammed earth) even though well maintained houses of such construction can last for over a century.

This paper focuses on housing, but don’t neglect commercial and industrial development, and its associated infrastructure. Commercial and residential uses are complementary. People need jobs as much as they need houses.

Finally, support sound economic policy generally. What’s good for the economy is good for housing. Keep inflation under control, diversify and grow the economy. Under almost all conditions, the most effective single way to improve housing conditions is to foster improvements in income.

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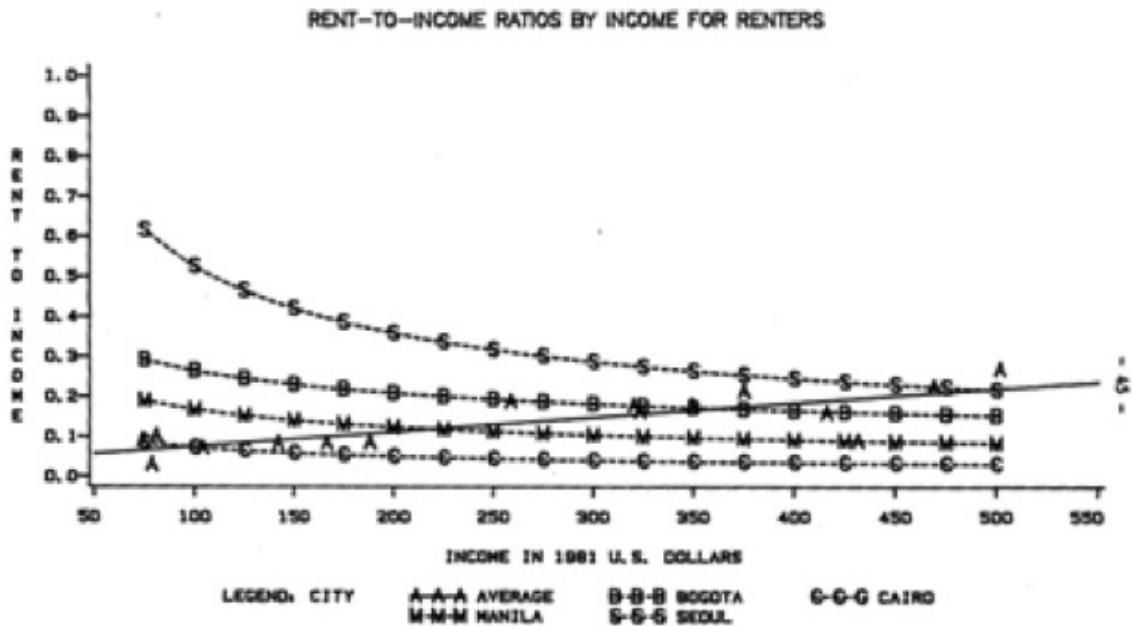
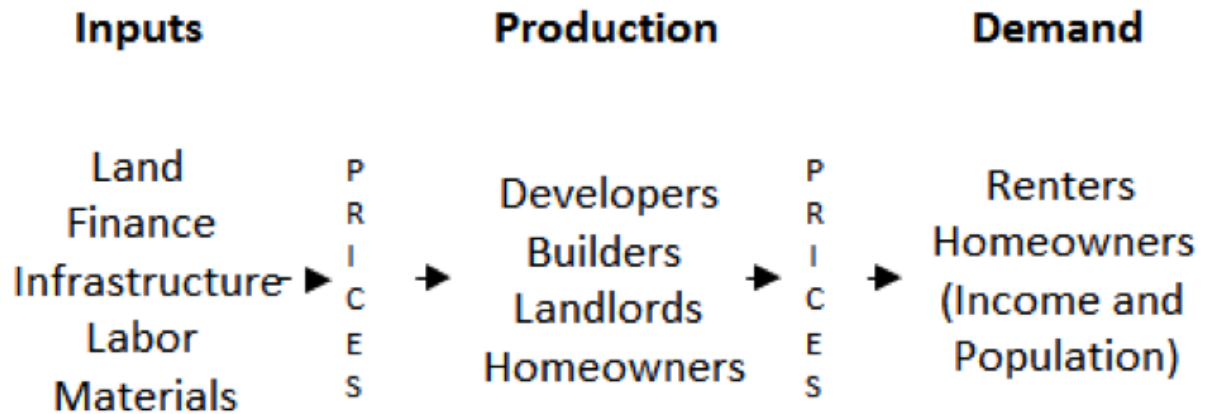


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How Housing Markets Work

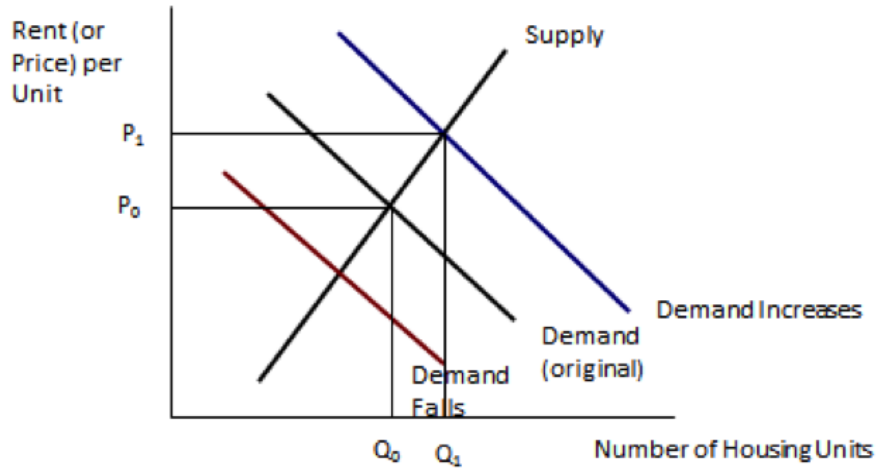


AVERAGE IS FOR EACH LDC CITY AT ITS AVERAGE INCOME

Malpezzi and Mayo

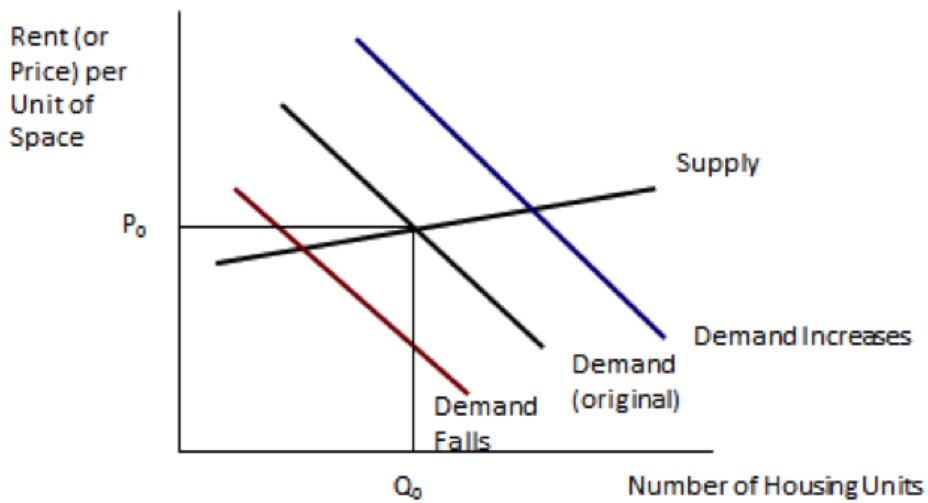


Simple Supply and Demand Analysis



6

Demand Shocks with Elastic Supply



7

