Some International Perspectives on Affordable Housing, and Possible Lessons for Korea

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I. Introduction

Successful real estate markets provide a wide range of products. Every country needs property types ranging from modest and affordable housing of safe, healthy and appropriate design, to (a much smaller number of) higher—end housing units, as well as an astonishing variety of commercial real estate—offices, factories, warehouses, retail establishments, and so on. In this short article we focus on housing that is inhabited by our fellow citizens of modest means, or what is often called “affordable housing” in the literature. We readers of Noble Asset have two broad motivations for studying and striving to improve the efficiency of this important market segment. First, in well-functioning markets, affordable housing provides opportunities for investors. Indeed, it is often noted that the best way to ensure a plentiful supply of a socially necessary good or service is to ensure its providers can earn an

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appropriate return-doing good while doing well, as the saying goes. The other reason, of course, is that before we are real estate professionals, we are also citizens, with the natural concern for the welfare of our fellow citizens that this implies. Some would even argue that given our expertise, we have a special responsibility in this area.

The housing and housing finance markets of Korea have undergone drastic changes during recent decades. In one sense this is completely unsurprising, as one would hardly expect housing markets in one of the world’s most dynamic economies to remain static. Some developments have been positive—for example, Korea’s housing market was on balance a positive contributor to macroeconomic stability during the 1997 “Asia crisis.” But in some respects Korea’s housing markets have not quite kept up with other aspects of its economy. For example, a flip side of Korea’s dynamic economy is that Korean housing is expensive, and places particular burdens on low-income households. Thus the recent review of Korean housing markets and policies edited by KDI’s Dr. MoonJoong Tcha is especially welcome and timely. In this short article I want to focus particularly on the supply of low-income housing, by surveying evidence from a range of countries on the pros and cons of alternative ways of delivering affordable housing.

To summarize, the principal finding of a wide range of international research and experience is that, when considering low income housing, there are important differences among housing subsidy alternatives, but that these are often dominated by, and always interact with, supply conditions in the market. Supply conditions in turn are determined partly by natural constraint—physical geography—but even more so by regulatory decisions and other public interventions. Worldwide, the trend is for most countries, especially other OECD countries, to move away from subsidizing particular housing units—“supply side” subsidies—to subsidizing particular households—“demand side” subsidies. International experience points, then, towards a coordinated effort of refining the regulatory environment for housing and real estate, while shifting subsidies from solutions like public rental housing towards housing allowances.
II. A Few Fundamentals of Housing Market Behavior

The efficacy of different housing programs and policies is partly determined by housing market conditions, and the responses of consumers, suppliers and governments to those conditions. If the program or policy is of sufficient scale, causality can also run the other way, of course, as we will discuss later. But before we discuss housing programs, policies, subsidies and regulations, it will be useful to establish a few stylized facts about housing market behavior.

A theme that runs through much comparative research is that housing demand is much more predictable and regular across countries, indeed across markets within countries; whereas housing supply is much more idiosyncratic. The demand proposition does not mean, of course, that demand is everywhere identical, but that there are regularities that make it largely predictable. In particular, within markets—cities or countries—households increase their housing consumption in response to an increase in income, or a fall in its relative price; but the increase in consumption is proportionately less than the increase in income or fall in price. In economists’ jargon, income and price elasticities are less than unity in absolute value. However, in the very long run, as cities and countries develop, these elasticities are somewhat larger, and consumption responds more to a change in fundamental demand determinants.

However, while demand responses to income or population shocks are fairly regular and predictable, as already noted supply behavior is much less so. The price elasticity of supply of housing tends to be larger in markets with less stringent regulation of land use and real estate development, and a better “industrial organization” of the housing market; and to some extent in markets with less geographic constraint.

Several related points can be made. First, when analyzing housing supply, note that in a dynamic market like Korea’s, supply can be seriously constrained even when increasing housing starts are the norm; it is price, not quantity, that is closest to a “sufficient statistic” for the state of the housing market. Second, note that housing markets are local in nature, and that submarkets can be delineated by income level of consumers as well as
geographically or by structure type. In very stringently regulated markets, low income submarkets may become less connected to the state of the market in general; in particular, filtering processes may be impeded. Third, despite the existence of submarkets, note that submarkets are connected, more or less, and take care not to overstate the degree of segmentation. What is good for the housing market in general is usually good for low income housing consumers. Fourth, and perhaps most importantly, note the emphasis on the stringency of regulation, but do not misinterpret calls for appropriate regulation as calls for total deregulation. Regulations, like other private and public actions, have costs and benefits; overly stringent regulations are those whose benefits are less than their costs, but housing development does generate externalities and there are correspondingly appropriate regulatory frameworks.

<Figures 1> and <Figures 2> briefly summarize what’s happened to “Q” and “P” in Korea over the past three decades. In the seventies and much of the eighties, housing starts ran between 100 and 300 thousand units per year. However, between 1987 and 1990, starts tripled from about a quarter of a million units per year to 750 thousand. Since that upward shift, starts have averaged half a million or so, albeit with a greater annual volatility, mainly

<Figure 2> Korea Real Land Price
connected with the post 1997 recession.

Prices broadly behaved as we might expect, given that the average rate of inflation–adjusted price growth was over 10 percent per annum between 1974 and the peak of aggregate prices in 1990. Simple arithmetic tells us that average real housing prices cannot increase at 10 percent or more indefinitely, given that real incomes in Korea are growing 5-7 percent in the long run; were this the case, eventually all income would be devoted to housing, leaving nothing for food, clothing, or other necessities! Thus it is not surprising that since their inflation-adjusted peak in 1990, average Korean housing prices have been growing about 2 percent less than general inflation. It is also unsurprising that these broad averages mask very different price changes for particular locations and market segments. For example, recently concern has been expressed about rapidly increasing real housing prices in Gangnam, while prices are much softer north of the Han River, and for that matter much of the rest of the country. Given the emergence of what might be considered Seoul’s second city center in the past few decades, and the fact that world-wide prices are usually rising faster outside of traditional city centers, housing economists are unsurprised at such changes in the relative
price of location within Seoul’s metropolitan area.

Despite the increase in supply in the 1990s (compared to the repressed supply of the 1970s and 1980s), and soft prices, at least at the aggregate level, housing in Korea generally and Seoul metro area in particular remains quite expensive, particularly for those of modest incomes. The rest of this note discusses worldwide trends in how affordable housing is subsidized, and the effects regulations and other constraints have on this market segment.

III. How Governments Intervene in Housing Markets

In general, there are five major ways governments intervene in housing markets: (1) the definition and enforcement of property rights and contracts; (2) taxation; (3) regulation; (4) subsidy; and (5) direct public provision.

In this note we focus on the latter three, regulation, subsidies and direct public provision; and we can consider direct provision as a particular kind of subsidy. Other papers delivered to KDI’s Conference focus in much more detail on important issues we neglect here, including taxation, and housing finance.

Subsidies, in their turn, are often divided up into supply side programs (“bricks and mortar” subsidies) and demand side subsidies (housing allowances, or payments to households to be used for housing).

A wide range of research and experience—in OECD countries as well as developing and transition economies—gives us the ability to examine many kinds of housing subsidies, supply side and demand side, direct public provision and through the private market, and through the financial system. One heavily researched topic of interest to many other countries is the efficiency—production and consumption efficiency, see above—of different generic types of housing subsidies.

Many studies find that supply subsidies, especially direct public provision, is often less efficient than housing allowances applied to appropriate privately developed units. Several reasons are explored in the full paper, but the main issue seems to be the different set of
incentives that face public supply side agents (and private agents acting at public behest). Private agents maximize the difference between value and cost. Public agents generally have a quite different objective, for example maximizing the number of units built for a given budget, subject to constraints on location that are often as much political as financial. In market transactions, developers who produce projects that are worth less than they cost go out of business. In public projects such market discipline can be weakened or even absent. International evidence on the ratio of market value of units produced to its true resource cost—what economists call production efficiency—suggests that public producers rarely approach the efficiency of private producers, and in some countries do much worse.

Another issue is consumption efficiency, or how the recipients of publicly developed units value those units—their design and location—relative to the market. Economists call the ratio between the recipient’s valuation of a housing unit, and the market value of the unit, as its transfer efficiency. Generally, research shows that unconstrained housing allowances have the highest consumption or transfer efficiency, while the more directly involved the government was in the supply side, the lower the transfer efficiency.

Production and consumption efficiency are measured at the micro level, i.e. the individual household and/or housing unit. What about broader effects on the market? The key issue for understanding market effects of housing programs is the market’s supply elasticity or responsiveness. If the market is generally unresponsive, supply side programs could, in theory, be a net addition to the stock, and could, in principle, have price effects, lowering housing prices generally. If the market is unresponsive, spending on large demand side programs will be at least partly dissipated in higher prices. On the other hand if the market is highly responsive, supply side programs will produce units which will merely substitute for units that would otherwise be privately produced. There would be no significant price effect from supply side programs in an elastic market. And finally, in an elastic market, large demand side programs will increase the purchasing power of low-income households without having significant price effects.

In many markets—such as the U.S., or Thailand—research tells us that the market is fairly elastic in the long run, and that therefore well designed demand side programs will not have
undesirable price effects. However, Korea’s market has been shown to be less elastic, which suggests that market effects of housing allowances could be more of a concern. These concerns can be mitigated by appropriate design of the details of the housing allowance system; and even more so, by fundamental reform of the regulatory environment, discussed more below.

In the event, most OECD countries, including the U.S., most European countries, and Canada, have also been shifting broadly from bricks and mortar, supply side, subsidies towards demand side studies. In Europe, particularly, these shifts are taking place with the backdrop of greater economic and social integration.

IV. The Regulatory Environment and the Supply of Housing to Low Income Households

When considering low income housing, there are important differences among housing subsidy alternatives, but that these are often dominated by, and always interact with, supply conditions in the market. Excessive and inappropriate regulations “in-elasticize supply” so that demand increases from population and income growth lead to rising real estate prices, rather than increased supply.

Of course many things besides regulations affect supply, notably natural constraints. Large cities with large bodies of water and/or hilly terrain like Hong Kong, Honolulu and San Francisco—and to some extent Seoul—would likely be expensive markets even in the absence of stringent regulatory regimes. That said, many studies have demonstrated the strength of the relationship between the regulatory environment and housing and real estate prices, and the cities named above are even more expensive than they need be, given their physical geography and size.

By now the fact that excessive regulation leads to high prices is well documented. What is less widely appreciated is the effect regulations have on second moments and risk. In fact, more stringently regulated markets are also more volatile. We can illustrate the process in a
simple comparative static fashion with <Figures 3> and <Figures 4>. In <Figure 3>, a heavily regulated market with fairly inelastic supply has an initial demand shock characterized by the demand curve moving from $D_1$ to $D_2$. Given this demand shock in a very inelastic short and medium run supply, little supply response is observed and prices increase substantially from $P_0$ to $P_1$. But over the very long run, there is some elasticity even in the most convoluted markets. Eventually, markets and governments do respond to extraordinary price increases and supply shifts out. This results in a housing price crash from $P_1$ to $P_2$.

Contrast this with <Figure 4>, which is more or less the same except that the markets are more elastic. The initial increase does give rise to a price run up over the medium term, as one would expect, but the run up is much less. Therefore the boom and bust cycle is moderated. These are indicated by shifts from $P_0'$ to $P_1'$ and back down to $P_2'$.

<Figure 3> Demand Shocks with Inelastic Supply: Boom and Bust

These processes are not merely a theoretical curiosity. Many observers have suggested that Korea is a country with an extremely stringent regulatory environment that has greatly inelasticized supply. If we were to increase the elasticity of housing supply with appropriate
regulatory and financial reform, demand-side pressures from speculators are unlikely to have any significant impact on the market; indeed, "speculation" is more a symptom than a cause of a poorly performing housing market.

But at some point, as prices skyrocket and shortages become more apparent, the Korean government responds as it did with the Two Million Houses Program circa 1990. This has the effect of shifting an inelastic supply curve to the right in a series of discrete jumps. <Figure 3> illustrates. After the crash from $P_1$ to $P_2$, the process starts over again. As demand grows further, prices rise again to $P_3$.

Thus a world in which government responds to rising housing prices by one time programs to get the market moving, as in Korea’s Two Million Houses Program, can be characterized as occasionally shifting an inelastic supply curve to the right. This leads perform to a boom and bust cycle. 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 homeowners and investors.
V. What Specific Regulatory Actions Might Be Considered?

Housing and land development generate *external* costs as well as benefits, i.e. what a developer or housing consumer does affects his neighbor. New housing developments can generate congestion, environmental costs, and other costs that are not borne directly by developers or consumers. Distributional considerations, including a concern for housing affordability for lower income households as well as younger families not yet in the housing market, generate another kind of external concern. How can these be appropriately weighed? As economists see it, a good regulation is one that successfully deals with such external costs and benefits, but regulations themselves have benefits as well as costs. But there are systematic reasons why regulatory costs are sometimes--far too often--much greater than benefits.

"The devil is in the details," then. Fortunately, there is a wide range of Korean as well as international research that points the way towards developing a more flexible, appropriate regulatory framework for land and housing. The international comparisons of planner Alain Bertaud are an excellent starting point; and scholarly work by Choi Mack, Kim Chung-Ho, Kim Kyung-Hwan, and Son Jae-Young, among others, examines specific changes that could be considered in (for example) greenbelt regulations, price controls on new housing, and the system for conversion of approved land uses.

VI. Concluding Remarks

There seems to be a bias held by many housing activists towards programs that deliver new and countable housing units. In Korea, this has led to an overfocus on the housing supply ratio (ratio of units to households). Housing prices are closer to a "sufficient statistic," in the sense that if housing's relative price is stable (and assuming prices themselves are not regulated or controlled), generally that is powerful evidence that the market is working well, however many starts or completions were observed last quarter.
Many housing economists argue for the general superiority of demand side programs, i.e. housing allowances or vouchers, over supply side. While most studies find greater micro-efficiency of demand side programs, some observers argue that market effects can outweigh these. One difference in perspective is based on what we believe about the long run price elasticity of supply. But to the extent one accepts the argument that inelastic supply could result in adverse market effects of a widespread housing allowance, the latter authors tend to argue that it is better to attack the cause of inelastic supply—and high costs for low and moderate income households—rather than simply try to treat its effects. Regulations, taxes and subsidies matter—in the long run, probably more than most direct provision programs. Work to flatten supply curves, not merely shift an inelastic supply curve every few years. Housing and land and real estate markets need to be regulated appropriately. Use the same cost-benefit criteria for regulation that we use for other public activities.

Worldwide, the trend is towards vouchers and housing allowances and away from bricks and mortar subsidies. While of course there are exceptions to the trend, the advantages of demand side subsidies in most markets are telling. This is not to imply that there is no work to be done on the supply side—far from it. Improving the efficiency of land development, while safeguarding environmental outcomes, financing and developing appropriate infrastructure, re-tuning the regulatory environment for housing development and management, and improving housing finance are among the many actions that can be taken to improve housing supply in general and low income housing in particular.

Housing policy and housing markets are complex, and there is continued need for learning-by-doing. Fortunately there exist well-tested techniques for evaluating housing programs and policies. Such evaluation is hard work, and ongoing. Research on specific programs and policies must be complemented with, indeed is much informed by, more basic research on key parameters such as key supply and demand elasticities. Finally, more careful thinking about the political economy of housing policy, along the lines demonstrated by Kim, will enable the crafting of more effective and realistic policies.
References

1. Many additional references can be found in the papers from KDI’s June 2005 International Conference on Residential Welfare and Housing Policies, at http://www.kdi.re.kr/

2. Planner Alain Bertaud’s papers can be found at http://www.alain-bertaud.com/


