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Introduction

Yukio Noguchi and James M. Poterba

The economics literature is replete with comparisons between various aspects of the Japanese and U.S. economies. Previous studies have analyzed their saving rates, their industrial structures, and their productivity growth rates. Until very recently, however, the housing markets in the two nations have escaped systematic comparison or contrast, perhaps reflecting a naive view that the housing market does not affect international trade or manufacturing productivity growth. Recent emphasis on the differences in personal saving between the two nations, however, has drawn attention to the role of the housing market in affecting wealth accumulation and the flow of saving available for corporate investment. The comparison between house price to income ratios in Japan and the United States is sometimes invoked as a key factor explaining the higher saving rate among young Japanese than among young U.S. households. More generally, because investment in housing capital comes at least in part at the expense of investment in other physical assets, such as plant and equipment, there is a growing realization that incentives for housing consumption and investment may be central factors in determining business investment and productivity growth.

Housing markets in both Japan and the United States have also attracted more attention, independently, in the five years. The rapid rise in Japanese land and housing prices in the late 1980s was an important factor in explaining the increase in share prices. The decline in real estate values, along with falling stock prices, in the early 1990s has led to concern over the fragility of some Japanese financial institutions. In the United States, the decline in nominal house prices in some major cities in the late 1980s triggered concern about the

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possibility of a long-run house price collapse. Recent financial innovations such as the rise of home equity loans have made housing wealth more liquid, and are often cited as contributory factors in the decline of the U.S. personal saving rate.

Housing also plays a key role in comparisons between living standards in the United States and Japan. Since housing is a large component of the consumption bundle in both the United States and Japan, real wage comparisons using a price index of imported goods suggest that Japanese workers receive higher wages than their U.S. counterparts. When the comparison uses comparable consumption baskets including nontraded goods, however, the real wage of U.S. workers is higher because the cost of housing services is significantly lower in the United States than in Japan.

This volume brings together ten studies of the housing markets in Japan and the United States. There are two papers, one by a Japanese author and one by an American, on each of five major issues—house prices, the link between financial markets and housing markets, housing and the journey to work, housing and saving, and public policies toward housing. The papers provide a wealth of statistical information about the similarities and differences in housing markets in the two countries.

This brief introduction has three parts. The first provides an overview of the housing markets in Japan and the United States. It presents summary statistics comparing housing conditions, and the role of housing in the economy, for both nations. The second section summarizes the topic papers that make up the remainder of the volume. A brief conclusion suggests further directions for research.

Overview: Housing in Japan and the United States

Housing conditions are systematically better in the United States than in Japan. Table 1 reports several measures of housing quality for Japan, the United States, and three other developed nations. It shows that the average number of persons per room is substantially larger (0.71) in Japan than in the United States (0.50), and that the average living space in U.S. houses is more than 50 percent greater than in Japanese houses. Many Japanese homes still lack basic amenities. While only 2.4 percent of U.S. housing units lack access to a flush toilet, 41.8 percent of Japanese units lack such plumbing.[1] The 1988 *Survey on the Demand for Housing,* conducted by the Japanese Ministry of Construction, finds that 51.5 percent of households are dissatisfied with their housing conditions. More than one-third of homeowners want to enlarge or improve their current homes, and another third wish to switch to another house.

Current Japanese housing conditions are the results of a decades-long shortage of housing. Much of the urban housing stock was destroyed during World

1. Japanese Ministry of Construction, *Nihon no Juta ku Jijo,* rev. (Tokyo: Gyosei), 1993.

Table 1 **International Comparison of Housing Conditions**

	Japan	United States	Germany	France	United Kingdom
Rooms per house	4.7	5.1	4.5	3.7	5.0
Persons per room	.71	.50	.60	.75	.50
Area per house (m^2)	81	135	94	85	N.A.
Home-ownership rate (%)	62	65	40	51	63
Average new house price/average household income	7.4	3.4	4.6	N.A.	4.4

Source: Chochiku Keizai Kenkyu Center, *Yearbook of Individual Financing* (1989) for all entries except last row, which is from Housing Industry Newspaper Company, *Housing Economy Databook.*

War II, and the shortage was compounded by rapid migration from rural to urban areas in the 1950s and 1960s. Industrial development was a national priority during this period, and housing investment was discouraged. Housing loans were not available from private financial institutions. As a result, the number of households sometimes exceed the number of houses in Japan.[2] In part because Japan has less housing per person or as a share in GNP than does the United States, the ratio of residential investment to GNP has been substantially higher in Japan than in the United States for most of the last two decades.

The United States has not experienced comparable periods of housing shortage. The volume of new housing built in a given year is subject to substantial variation, and a doubling in the level of new construction between a trough and a peak of the construction cycle is not unusual. Nevertheless the overall level of construction has been adequate to provide more than enough housing units for the stock of households. In the U.S. rental market in the late 1980s, the vacancy rate for housing units was sometimes above 10 percent.

Housing conditions in both the United States and Japan have improved over time. In Japan, the total floor space per dwelling rose 22 percent between 1968 and 1988, and the area per person rose even more quickly, by 71 percent.[3] This reflects a reduction in the number of individuals per housing unit, as well as an increase in housing unit size. In the United States, the median dwelling increased from 5.0 rooms in 1970 to 5.3 rooms in 1990. For new homes, the increase in apparent quality is even more dramatic. The average new single-family home completed in the United States in 1970 contained 1,500 square

2. The household-to-housing unit ratio was 0.96 in 1958, 1.01 in 1968, 1.08 in 1978, and 1.11 in 1988 (Japanese Statistics Bureau, *Housing Survey of Japan,* various issues).

3. Ibid.

Table 2 **Home ownership Rates, Japan and the United States, 1960–90 (%)**

Year	Japan	United States
1950	N.A.	55.0
1960	68.4	61.9
1970	59.6	62.9
1980	61.2	65.6
1990	61.4[a]	64.1

Sources: Japan: Statistics Bureau, *Housing Survey of Japan.* Entries are interpolated as necessary from surveys conducted in years ending in 8 and 3. United States: 1950–70 from U.S. Bureau of the Census as reported in U.S. League of Savings Associations, *Savings and Loan Fact Book* 1979. More recent entries from Harvard University Joint Center for Housing Studies, *The State of the Nation's Housing 1991.*

[a]From 1988 survey.

feet of living area; this increased to 2,080 square feet by 1990. In 1970, 32 percent of all units completed had one bathroom, while only 48 percent had two or more. By 1990, 87 percent of new houses had two or more baths.[4]

Although the characteristics of housing units differ between the United States and Japan, the tenure mix—the fraction of households who own their own homes—is similar in the two nations. The current home-ownership rate is near 65 percent in both countries, although this reflects the convergence of two quite different trends. Table 2 presents time series on home-ownership rates in the two countries. In the United States, the home-ownership rate rose between the end of World War II and the mid-1980s. It has been stable, or possibly declined, since then. The Japanese home-ownership rate, however, declined in the two decades after World War II. This reflects the population migration from rural areas, where home-ownership rates are high, to urban areas, where renting is more common. The Japanese home-ownership rate has not changed substantially since 1970.

Overview of Subsequent Studies

The comparison of housing markets in Japan and the United States is an enormous undertaking. To structure and limit the subsequent analysis, we chose to focus on five issues that are central to understanding the housing markets in both countries. Our choice of topics necessarily excludes some that are of great importance in one nation but not in the other, such as the decay of central city housing in the United States or the policy-induced distortion between agricultural and residential land use in Japan. The remainder of this section presents a brief overview of the issues considered in the subsequent chapters, and introduces their research findings.

4. U.S. Bureau of the Census, *Construction Reports C-25: Characteristics of New Housing* (various issues).

Land and House Prices

Both the United States and Japan have experienced rising real house prices during the last twenty years. In Japan the most rapid price increase took place in the late 1980s, and it was attributable largely to rising land prices. In the months since our conference was held, land prices have stabilized, and in many areas, they have declined. For the nation as a whole, prices fell just over 5 percent between 1991 and early 1992, while in Tokyo and some other urban areas, the price decline was more than 15 percent.[5] In the United States, the 1970s were the period of most rapid price appreciation, and the 1980s were a period of stable real house prices. The U.S. real price increase of the 1970s was much smaller, however, than the Japanese price increase of the late 1980s.

Table 3 presents summary information on real house prices in both countries. It shows the 30 percent real price increase in the United States during the 1970s, and the 45 percent increase in Japan a decade later. The table also reports the ratio of the price of an average house to average household annual income. This ratio is higher in Japan, often by a factor of two, than in the United States for the entire sample period. In addition, this crude measure of housing affordability shows that housing became less affordable in Japan during the mid- and late 1980s. At the end of the 1980s, an average house in the greater Tokyo metropolitan area cost 7.4 times the average worker's pretax income. As the data in table 1 suggest, this ratio is higher than that of any other major developed country.

The principal source of rising house prices in Japan was rising land prices. The Japanese paper on house prices, by Yukio Noguchi, is therefore directed toward understanding the causes and consequences of the recent price run-up. The paper argues that it is difficult to reconcile the time series on Japanese land prices in the 1980s with an "efficient markets" view in which land price changes are driven by fundamentals involving the supply of or demand for land. Rather, the paper concludes that the land price appreciation was due in part to a "speculative bubble." The paper also considers the long-term differences between house prices in Japan and other nations. It concludes that high prices in Japan are largely the result of government policies that distort land use, rather than an absolute land shortage.

The companion paper, on house prices in the United States, is by Karl E. Case. He summarizes the available time-series data on real house price movements in the United States. The paper focuses on the period since 1960, although it also provides some longer-term historical data. Case emphasizes the important differences in the house price experiences in different regions of the United States, and notes that one area may experience rapidly rising house prices while another region faces falling prices. This paper also addresses the

5. Report of the National Land Agency as summarized in the *New York Times*, 28 March 1992, 37.

Table 3 **House Prices and Annual Household Income**

	Index of Real House Prices		Average House Price/ Average Annual Income	
Year	Japan	United States	Japan	United States
1970	—	101.4	5.4	2.6
1975	2101	109.2	6.4	3.0
1980	3051	132.9	6.2	3.5
1985	3537	123.1	5.6	3.2
1989	5371	125.0	7.4	3.2

Sources: Japan: 1970 entry is from Takatoshi Ito, *The Japanese Economy* (Cambridge: MIT Press, 1991), 412. Subsequent data are from Housing Industry Newspaper Company, *Housing Economy Databook.* Real house price is the ratio of the nominal price of new units divided by the consumer price index, deflated to 1987 prices. United States: House price index is the price of a constant-quality house (1987 quality, thousands of dollars) divided by the personal consumption deflator. The ratio of house price to income is constructed as the median price of an *existing* home sold in a given year, divided by median household income. Both data series are drawn from the *Statistical Abstract of the United States.*

extent to which house prices should be viewed as set in a rational asset market. Case observes that there is downward nominal rigidity in changing prices to meet market conditions.

Housing and Financial Markets

Financial policies and credit market conditions can exert profound influences on the level of new construction and the demand for housing. In the United States, housing investment has historically been subsidized through a variety of credit market institutions, such as savings and loans. Policy has been quite different in Japan, with strict limits on the availability of housing finance and consequent restriction on the supply of new homes.

The paper on housing finance in Japan, by Miki Seko, provides detailed information on the structure of financial arrangements that are used by home buyers in Japan. The paper explores the role of the Japan Housing Loan Corporation, which is responsible for one-third of the mortgage originations in Japan, in affecting housing demand. It provides important information on typical mortgage loan characteristics, such as the down-payment ratio of approximately 30 percent. The paper closes with a discussion of options for increasing the flow of financial capital to the Japanese housing market.

The companion paper by Patric Hendershott tracks the rapid changes in the links between credit markets and housing markets during the 1980s. In the three decades after World War II, most mortgage loans were originated by savings institutions, such as thrifts and savings and loans. These institutions attracted a large inflow of saving deposits in part because they were legally sheltered from competition from commercial banks and other financial intermediaries. The thrift institutions were also covered by various government deposit insurance programs. The prominence of these institutions in housing finance resulted in occasional "credit crunches" when deposit inflow was inadequate to cover the demand for new home purchases, but on balance provided a subsidy to housing.

Beginning in the late 1970s, mortgage markets in the United States became better integrated with other credit markets. The market for mortgage-backed securities, bundles of individual home mortgages that were traded as financial commodities, became one of the largest fixed-income security markets, and the inflow of funds to thrift institutions ceased to be an important factor in housing finance. The increasing sophistication of investors in mortgage securities, however, led to a wave of increasingly complicated mortgage products, such as adjustable-rate mortgages and insured mortgages. Hendershott explains how these changes have affected the cost of borrowing for house purchase, and what effects they will have on housing markets in the future.

Housing Markets and the Journey to Work

The third pair of papers tackles an issue that is central to understanding the local structure and housing markets and metropolitan areas. How do housing market conditions interact with commuting decisions? The Japanese paper, prepared by Tatsuo Hatta and Toru Ohkawara, begins by describing the lengthy commutes faced by many Japanese workers. They focus on the Tokyo metropolitan area and argue that, because Tokyo is the largest metropolitan area in the world and housing is scarce in the central city, workers have little alternative but to commute long distances.

The Hatta/Ohkawara paper begins with a careful comparison of Tokyo and New York, as a means to provide insight on the structure of large cities in Japan and the United States. The paper then considers two public policies that affect commuting distances in Japan. The first is the income tax provision allowing employers to deduct their costs of reimbursing employees' commuting expenses. The authors demonstrate that this provision raises land prices near Tokyo, because it reduces the amount commuters must pay to reach the center city. The second policy concerns land use. The paper shows that the provisions that encourage agriculture relatively close to large cities and inhibit skyscrapers in downtown Tokyo lead to less concentrated employment in Tokyo than in New York. The paper concludes that these policies have distorted the allocation of jobs and the length of journeys to work and that removing these distortions would result in efficiency gains.

The companion paper by Michelle White highlights the differences between journeys to work in the United States and Japan. White presents descriptive information on commuting patterns and shows that most commuting in the United States involves trips in private cars rather than the use of public transit, as in Japan. White also argues that the traditional focus on a central business district where jobs are located and a periphery of residential suburbs is an increasingly inaccurate description of urban structure in the United States.

The ongoing shift of jobs to sectors that do not require access to harbors, rail lines, or other features of central cities has resulted in job migration to the perimeter of many urban areas. This has led to shorter commuting times for many workers, but also has induced a set of long-range problems for U.S. cities, which are faced with shrinking employment bases, declining housing stocks, and rising tax burdens.

Housing and Saving

One of the key factors inducing recent interest in the housing markets of Japan and the United States is the possibility that differential rates of saving for house purchase explain part of the disparity in personal saving rates in the two countries. The paper by Toshiaki Tachibanaki provides a wealth of valuable information on the interaction between housing market conditions and household saving. It documents the striking decline over time in the fraction of Japanese households who claim their saving is primarily for house purchase, and argues that this is primarily due to renter households in Tokyo and other metropolitan areas *giving up* on the hope of ever being able to afford a home. The rapid rise in land and house prices in the 1980s has apparently led to a group of "discouraged renters" who are not saving to purchase a house as they might have two decades ago. In spite of this trend, saving for housing is still an important factor in Japanese personal saving. The study documents the key role of forced saving through mortgage principal repayment and notes that its importance has increased through time. Finally, Tachibanaki observes that intergenerational wealth transfers play a key role in housing acquisition. Nearly one-third of Japanese homeowners obtained their house as a result of bequest or inheritance.

Jonathan Skinner presents a companion paper on housing and saving in the United States. After describing the important role of housing in the net worth of U.S. households and pointing out that for many low- and middle-income households their home is their principal asset, his paper focuses on the effect of rising house prices on household saving. The 30 percent increase in real house prices during the 1970s could affect the household saving rate in various ways. It could lead to increased spending by current homeowners, who receive a windfall when their house price rises. It could lead to increased saving by current renters, who plan to purchase a home in the future. It could also lead to reduced saving by some renters, if the "discouraged renter" model that applies to some Japanese households applies in the United States. Skinner notes that the existing empirical evidence suggests that some homeowners increased their spending as a result of the house price increase, while there is not much evidence for the "discouraged renter" view.

Public Policies toward Housing Markets

The final two papers examine the impact of public policies on housing markets in the United States and Japan. This is a very broad topic, and each paper narrows the subject area in various ways. Takatoshi Ito describes the Japanese policy environment, focusing primarily on tax policies. While credit policies are another important public policy instrument affecting housing markets in Japan, this subject was examined in an earlier chapter. Ito argues that several tax policies have dramatic effects on the structure of Japanese housing markets. First, the relatively light property tax burden on land in agricultural uses distorts land use patterns and precludes converting agricultural land near cities to housing or commercial development that would be more profitable in the absence of tax incentives for farming. Second, the favorable bequest tax treatment of real estate induces "lock-in" effects, with elderly households choosing not to sell their homes and move to alternative accommodations, because they would forgo substantial tax benefits by doing so. Finally, the paper outlines a range of tax incentives for company-provided and government-provided housing that arguably reduce the quality of housing in the owner-occupied and rental housing markets.

The last paper, a companion paper on public policy and housing in the United States by James Poterba, also focuses on tax policy issues. In the United States, tax subsidies to both owner-occupied and rental housing are substantial. The magnitude of these subsidies has varied over time, and while historically there were credit market subsidies to housing investment, these subsidies have largely vanished. Poterba describes the changes through time in the level of housing market subsidy, explaining the very substantial tax incentives for home ownership in the late 1970s, when high inflation rates combined with high marginal tax rates and interest deductibility to result in very low user costs of owner-occupied housing. The paper also explains the important changes in the tax treatment of rental housing in both the 1981 and 1986 tax reforms. The 1981 reform substantially expanded tax subsidies to rental properties, while the 1986 reform countermanded this policy and eliminated these incentives. The paper provides an overview of the various other public policies that affect housing in the United States, including a range of instruments designed to encourage the provision of housing for low-income families.

Future Directions

The papers in this volume only begin the vast task of comparing the housing markets in Japan and the United States. They highlight the institutional differences between the two nations and suggest the need for further empirical research to quantify their effects. The issues they raise are of interest both for understanding how the efficiency of the domestic economy might be improved and for considering the link between housing markets and international economic linkages.

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