

Urban Housing Markets, Residential Location, and Housing Policy

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It should now be clear that how well you live depends in part on where you live. Some urban areas have plenty of jobs, while others are losing employers and jobs. Some cities and suburbs have better schools than others and you—or at least your children—therefore have a better chance of gaining the human capital needed to succeed in the labor market.

How well you live also depends on a city or suburb's physical and social infrastructure. Better city services and transportation, better health care, and safer streets can make life a lot more pleasant. Housing is important not only because it affects residents' living standards but its price and quality also may affect the municipality's ability to attract workers and their families, as well as business investment.

To understand the housing market, we need to examine a range of important issues. Why do housing prices and apartment rents vary so much within and across metropolitan areas? What determines whether a family will want to rent rather than own a home? How do housing prices affect a metro area's ability to attract young families and new business ventures? And, how have federal—and state and local government—policies affected the housing market over time?

The Housing Consumer: The Price of an Individual Home

To begin with, it is important to note that a great deal of our wealth is tied up in housing. The total value of residential structures in the United States represents more than one-third of our total net tangible wealth. As **Table 12.1** indicates, the value of housing stock is more than 50 percent higher than the value of all factories, commercial buildings, retail establishments, and other nonresidential structures combined. The nation's housing stock is nearly four times as valuable as all other consumer durables, including the value of all motor vehicles on the road and all the furniture and household equipment that families own. In the year 2000, the asset value of the total U.S. housing stock was nearly \$11 trillion, with three-fourths of this in owner-occupied housing and a quarter in rental units. That is a lot of wealth wrapped up in housing.

In many ways, housing is a unique commodity. In almost all cases, it is highly durable, provides service for decades or even centuries, and unlike most other goods,

Table 12.1 Net U.S. Stock of Fixed Tangible Wealth, 2000

	Billions of Dollars	Percent of Total Wealth	Percent of Total Residential Fixed Assets
Total Net Tangible Wealth	\$31,022	100.0	
Private	22,190	71.5	
Nonresidential Structures	6,767	21.8	
Nonresidential Equipment	4,355	14.0	
All Residential Structures	11,012	35.5	
Consumer Durable Goods	2,830	9.1	
Motor Vehicles	849	2.7	
Furniture, Household Equipment, Other	1,981	6.4	
Public (Defense and Nondefense)	6,002	19.3	
Total Residential Fixed Assets	10,719		100.0
Owner Occupied	\$8,123		75.8
Renter Occupied	\$2,596		24.2

Note: Total Residential Fixed Assets excludes nonfarm residential assets such as dormitories and fraternity and sorority houses.

Source: U.S. Bureau of the Census 2003, table 711, p. 470, and table 978, p. 631.

it is spatially fixed. Where housing is located makes a great deal of difference in terms of its value, unlike an automobile or a television set.

Housing is also a very complex good, and many factors go into both its use value to the homeowner or renter and its market price. Imagine a consumer, Gail, who has a hankering for ice cream. Her favorite flavor is butter pecan and her favorite ice cream parlor is close by, so she stops on her way home from work and leaves the store enjoying her purchase. When asked why she picked butter pecan, she replies, "I think it tastes the best." Later that week, and certainly after weeks, months, or even years of shopping around, Gail buys a house. When asked why she picked that particular house, she gives a lengthy answer: "It wasn't quite the design I would have preferred, but it was closer to public transportation than the other houses that were available, so I'll have a shorter commute to work. The kitchen is small, but it has a good backyard for the kids, it's only a short bus ride for them to school, and it's in a good neighborhood."

The difference in the length of Gail's explanation is indicative of an important characteristic of complex goods. While Gail could evaluate ice cream with regard to a single source of pleasure—taste—and its price, the house that she chose to buy had to fulfill a wide range of preferences.

The characteristics of both the dwelling itself and its site are important. Several of the attributes of interest to Gail depend upon the existence of other goods and services, so that the full value perceived in the house is not exclusively internal to the house itself. Instead, the value of the house comes from its use in *conjunction* with external goods and services, including the local school and mass-transit system. As such, municipal government actually plays a considerable role in the prices that housing fetches on the market.

Attributes Theory and Hedonic Prices

Recognition of goods and situations like this led to the development of the **attributes theory of consumer behavior**. As articulated by one of the pioneers of this approach, Kelvin Lancaster (1972), the theory eschews the idea “that goods are the direct objects of utility,” and instead states that “it is the properties or characteristics of the goods from which utility is derived.” This might seem obvious, but it has profound implications for how we value things.

Because a good with numerous attributes may involve different types of value, consumers’ choices about these goods must involve the trade-offs between these different types of value. For example, Gail implicitly chose certain attributes—like the size of the backyard, access to transportation, and her ideas about what a “good neighborhood” is—over the size of the kitchen and the design of the house. Importantly, the attributes theory recognizes that utility obtained from a good (the house, in this case) may change over time as the internal characteristics of the good change (e.g., as the house gets older) or as the external attributes change (e.g., if the city decides to discontinue the nearest public transit route, or if homes nearby are either renovated or left to deteriorate).

Because of the many attributes considered in the choice of housing, economists often resort to a **hedonic price index** to measure the value of one house against another. In theory, any given house can have hundreds of attributes, each of which can be given a value. For expositional purposes, however, assume that Gail considered only the six characteristics we mentioned above: overall house design, size of kitchen, size of backyard, proximity to public transportation, the quality of the schools in the district, and the nature of the neighborhood.

In the city where Gail bought her home, the average house might sell for \$210,000; Gail, however, paid \$245,000 for hers. On average, her ranch-type home on a slab was worth \$30,000 less than the average home that comes with two floors and a full basement, and the size of the kitchen reduced the value by another \$10,000. However, the large backyard she wanted for her kids added \$25,000 to the value of the home, the proximity to public transportation added another \$20,000, and the good reputation of the neighborhood school where Gail will send her two children added still another \$30,000. Calculate these figures and you get the \$245,000 value of Gail’s new home. Just such a hedonic price for Gail’s house suggests that there is only partial truth in the old maxim: “the three things that matter most in real estate are location, location, and location.”

In developing a hedonic price index, researchers usually generate an equation where price is on the left-hand side and all of the relevant characteristics of housing are on the right. This is somewhat analogous to the human capital equation shown in Chapter 7 on urban labor markets. The equation here might look as follows:

$$\text{Price}_i = a_0 + b_1 * \text{Sq. Ft.}_i + b_2 * \text{Year Built}_i + b_3 * \text{Number of Bedrooms}_i + b_4 * \text{Garage}_i + b_5 * \text{Central Air}_i + b_6 * \text{Number of Bathrooms}_i + b_7 * \text{Average High School SAT Score}_j + b_8 * \text{Number of Burglaries per 100,000 in neighborhood}_j$$

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where a_0 refers to the value of an undeveloped piece of land with no house on it, $b_1, b_2 \dots b_8$ refers to the change in price due to each characteristic, and i refers to an individual housing unit and j refers to a particular neighborhood.

For instance, if we ran this equation on a set of 1,000 house sales in a metro area, the coefficient (b_1) on Sq. Ft might be something like 61.0, meaning that a home with 3,000 square feet would sell for \$61,000 more than a 2,000-square-foot home, all other things equal. Similarly, if the coefficient on Year Built was positive, this would show that newer homes were more highly valued than older ones. The value of the coefficient would tell us whether the age of the house contributed a great deal to its price or if it was relatively unimportant. If the coefficient were negative and statistically significant, it would tell us that in this community, *ceteris paribus*, older homes are valued more highly.

Note that other factors—like the perceived quality of the school district j where house $_i$ is located (measured here as the average SAT score of high school students)—also enter the equation. One suspects that this coefficient would be positive, while the coefficient on number of burglaries per 100,000 residents in the neighborhood would be negative.

Just such an analysis was carried out by Kain and Quigley (1975) using real data for St. Louis. In the 1970s when housing was much less expensive, they found that a home with four extra years of roof life was worth \$400 more, a longer commute time was worth \$2,000 less, and being in a neighborhood with relatively low pollution added \$1,200 to the value of a home.

If one had all this information and it was up to date, it could be used for house hunting. One could estimate the value of a particular house based on the equation, check it against the asking price, and conclude that the price was way too high, just about right, or—lucky for you—a real steal. You could counteroffer based on this analysis. Of course, in real life, it is rare that someone has so much information. But each rational home buyer does a mental back-of-the-envelope calculation that mimics this process when deciding whether to purchase a particular home. Gail did such a hedonic calculation, evaluating a whole bundle of housing characteristics, even if she did not fully comprehend the process.

Budget Constraints and Housing Preferences

The reason Gail had to make trade-offs—for example, the smaller kitchen for the backyard—is that she, like everyone else (except for a few billionaires like Bill Gates and Donald Trump), faces a **budget constraint** when it comes to buying a home. We can see how preferences as represented by **indifference curves** and a budget constraint interact to determine what type of home someone will likely buy (see **Appendix A** for a brief explanation of this technique).

Figure 12.1 depicts the trade-off between house size and the quality of the local schools. Essentially, it suggests that if there is a given budget constraint—a fixed amount of money to buy a house—as shown by either of the straight lines in the drawing, you can choose to buy a small home in a high-quality school district or a

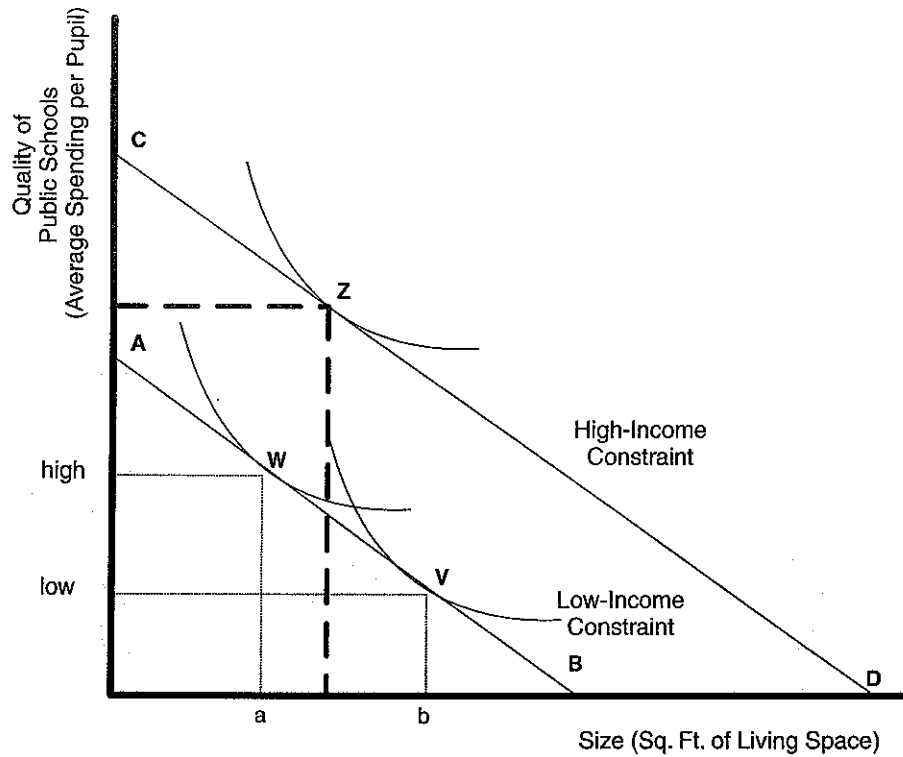


Figure 12.1 Housing Choice: Budget Constraints and Indifference Curves. The lines AB and CD represent the income constraints for low- and high-income households, respectively. Each point on these lines represents a combination of school quality and size of home that can be purchased given the budget constraint, revealing the trade-off between these two housing attributes. The two indifference curves, W and V, show the preferences for two different households, with the former choosing to buy a smaller home in a district with better schools and the latter choosing a larger home in a district where less is spent per pupil. Compared with household W, household Z purchases a larger home in a district that spends more on its students.

larger home in a district where the schools are reputed to be not quite as good. The straight line AB represents the combination of size and school quality that a low-income family can buy—or a family that wishes to spend no more than what a low-income family could afford.

Superimposed on this low-income budget constraint are two indifference curves that represent the preferences of two different families. The family to the left is willing to live in a smaller home (size “a”) in order to be in a district with quality schools. The family to the right chooses to live in a spacious home (size “b”) in a district where homes are larger but the schools are reputed to be of somewhat lower quality. A third family, which has more money to pay for housing plus a strong desire for a good school, is shown in the figure as well. While this family can afford to live in a larger home than family “a,” even with its higher income constraint, it chooses to live in a smaller home than family “b” in order to be located in a school district that is known for its superior schools.

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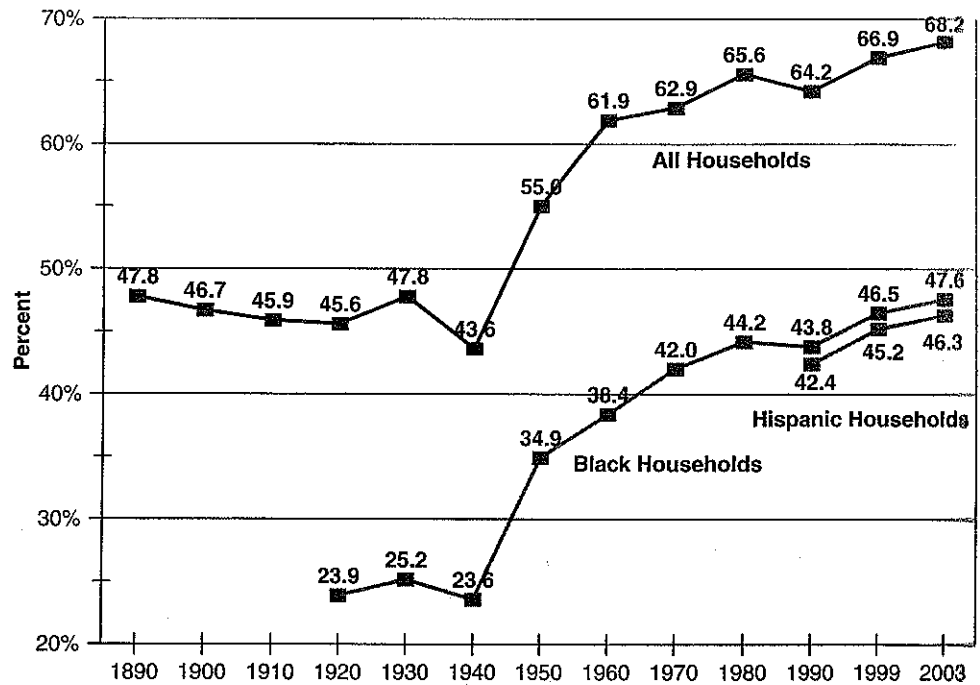


Figure 12.2 U.S. Home Ownership Rate, 1890–2003. Source: U.S. Bureau of the Census, *Statistical Abstract of the United States* (Washington, D.C.: U.S. Government Printing Office, 1950–2005).

Because of the huge number of factors that go into the home buying (or renting) decision, the wide variety of preferences for different housing attributes, and the great variance in household incomes, we can begin to appreciate the diverse pattern of housing one finds in any city or metropolitan area. The distribution of housing—where it is located and its style and size—reflects all of this diversity. As we will see later in this chapter, other factors also play a role, including racial discrimination and the business practices of mortgage companies and real estate agents. These factors also affect the way households are distributed by community and neighborhood across a metropolitan area's stock of housing.

Home Ownership versus Rental Housing

Gail chose to purchase her home rather than rent. But it was not until after World War II that a majority of American households owned their own homes. Indeed, from 1890 through 1940, the home ownership rate remained between 44 and 48 percent (see **Figure 12.2**). A slight long-term decline during this period is partially due to the huge number of immigrants who came to the United States after 1890. Many lived in tenement housing when they first arrived and rented homes until they had built up enough savings to afford a down payment. During the Great Depression, many families were forced to rent after they lost their homes and their farms due to foreclosure. Consequently, by the end of the 1930s, the home ownership rate was

down to 43.6 percent, the lowest rate of the twentieth century (U.S. Bureau of the Census 2007).

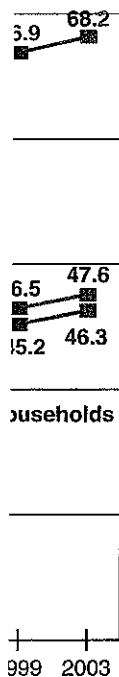
It was during the brief period between 1940 and 1960 that the proportion of households owning their own homes increased by nearly half (from 43.6% to 61.9%). Since then, the ownership rate has increased, but only slowly. Today, about two-thirds (68%) of all occupied housing units are owner-occupied, with the remainder being rental units. The ownership rate among black and Hispanic households has continued to lag behind that of whites. In 2003, 72.2 percent of white households were home owners, compared with just 47.6 percent of black and 46.3 percent of Hispanics.

The Role of Government Incentives for Home Ownership

The great postwar home ownership boom was spurred by several factors. During World War II, families built up large savings accounts. Virtually everyone who wanted to work during the war could find a job and often earned overtime pay. Since there was wartime rationing, there was little to buy, including housing. Thus, at the end of the war, households were flush with savings and had—often for the first time—the wherewithal for a down payment.

Adding to the housing momentum were federal government policies explicitly aimed at encouraging ownership. The Federal Housing Administration (FHA), first established in 1934 as part of President Franklin Roosevelt's New Deal, provided insurance to mortgage lenders that permitted them to lower the down payment for potential home owners and extend home loan repayment for up to thirty years. The longer term allowed lower monthly payments and provided home owners with the ability to pay back some of the principal as well as interest, so they owned their homes outright at the end of the mortgage period. These are fully **amortized** mortgages. When mortgage rates were higher, mortgages were often **nonamortizing**, meaning that only the interest on the loan was paid during the mortgage period. At the end of the mortgage, a family had to secure another mortgage if they wanted to continue to live in their home, or they could pay for the entire cost of the house if they wanted to buy it outright. The Veterans Housing Administration (VHA) also provided mortgage insurance that served the same purpose of substituting amortized mortgages for those that were nonamortized.

Even more important for fostering home ownership was the mortgage deduction under the federal personal income tax. By making the interest charges on a home mortgage deductible on the home owner's federal personal income tax return—thus reducing taxable income—the effective monthly cost of buying a home was often less than the monthly cost of renting. If a household pays \$1,400 per month in mortgage interest payments and is in the 25 percent federal income tax bracket, the household's \$1,400 monthly mortgage interest payment is equal *after-tax* to a monthly payment of only \$1,050. Being able to deduct local residential property taxes in addition to mortgage interest against the federal tax gave an added incentive to buy rather than rent. No other consumer good has been as tax-favored as home ownership.



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Given this circumstance, why would anyone rent? A large part of the answer is that low-income households do not have the means for a down payment, nor possibly a credit rating that permits them to obtain a conventional mortgage. Another part has to do with the competitiveness of the rental market. If there is a sufficiently high vacancy rate to keep landlords' economic profit close to zero, some of the benefits that home owners receive are received by renters as well. Since landlords can also deduct their mortgage interest, this will translate into lower rental rates in a competitive rental market. In addition, landlords can use **accelerated depreciation** to deduct maintenance expenses from their federal income tax. Under the accelerated depreciation provision of the federal income tax, landlords can deduct a large proportion of the cost of maintenance in the early years of such an investment rather than spreading out the deduction in equal shares over the full expected life of the property-improvement investment. This reduces their after-tax costs, which, in a competitive market, will be passed along to renters. Using our example above, this might translate into a rent of \$800 per month, not \$1,050. In this case, for equal amounts of housing, renting can be competitive with buying. This is particularly true if the renter can invest the monthly savings in an asset that is appreciating faster than housing.

Trends in Home Ownership

It is not surprising that ownership rises steadily with age and with income, as **Table 12.2** demonstrates. The decision to buy a home is often made between the ages of 25 and 34. Only about 23 percent of those under age 25 own their own homes, but by the time they reach 30-34, well more than half (57%) are home owners. The ownership rate continues to rise until it peaks among sixty-five- to sixty-nine-year-olds. After that, some elders sell their homes and move into apartments or some form of senior rental housing.

There is a monotonic—continually rising—relationship between household income and home ownership. Fewer than half of households with less than \$15,000 annual incomes are home owners. Many of these are older householders, whose retirement incomes are low but who bought their homes when their income was much higher. By the time a household is making in excess of \$100,000 a year, the probability of owning a home is close to 90 percent.

This is not surprising, since the tax advantages of owning a home rise with income. Referring to our previous example, at the 25 percent federal personal income tax bracket for a family with \$50,000 in adjusted gross income (AGI), \$1,400 spent on monthly mortgage interest payments translates into an after-tax payment of \$1,050, taking into account the tax savings of \$350. But for a higher-income household with \$330,000 in AGI in the 35 percent tax bracket, the tax savings on the same \$1,400 monthly mortgage interest payment are \$490, and the after-tax monthly payment is only \$910. In effect, the federal government assists home owners in paying their mortgage interest, and the higher the tax bracket, the larger the amount of monthly mortgage interest paid by the federal government.

Table 12.2 Home Ownership Rates by Age and Income, 2003

	Home Ownership Rate
Age of Householder	
< 25	22.8
25-29	39.8
30-34	56.5
35-39	65.1
40-44	71.3
45-49	75.4
50-54	77.9
55-59	80.9
60-64	81.9
65-69	82.5
70-74	82.0
75+	78.7
Household Income	
< \$15,000	46.7
\$15,000-\$24,999	56.3
\$25,000-\$34,999	60.3
\$35,000-\$49,999	66.8
\$50,000-\$74,999	76.4
\$75,000-\$99,999	83.4
\$100,000 +	89.4

Source: U.S. Bureau of the Census 2005b, table 951, p. 612 and table 667, p. 444.

Household Income and the Individual's Housing Demand

How much housing a household purchases is also a function of income. Using data from the *American Housing Survey* for 1989, DiPasquale and Wheaton (1996) calculate the average value of homes owned by married couples as a function of their income. **Table 12.3** reproduces part of their results. At every stage in a household's life, there is the expected positive correlation between income and housing consumption as measured by the dollar value of the homes they own. Moreover, generally, as the head of the household ages, there is a modest increase in housing consumption, perhaps reflecting the desire for more housing as children age and are often given their own bedrooms.

Using the data from Table 12.3, it is possible to estimate the **income elasticity** of housing demand. This elasticity measures, in percentage terms, how the consumption of housing varies with income. Mathematically, this is equal to an estimated percentage change in consumption (C) with respect to a 1 percent change in income (Y)—or mathematically (log C/log Y). The "log-log" regression equation that reflects this relationship between two percentage changes and is generated by using the data in Table 12.3 for twenty-five- to thirty-four-year-olds is:

$$\log C = 1.31 + .78 \log (Y)$$

$$R^2 = 0.94, N = 6$$

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Table 12.3 Average Value of Home Owned by Married Couples with Children as a Function of Income 1989

	Age of Household Head		
	25-34	35-44	45-54
Household Income			
Less than \$20,000	\$43,822	\$70,817	\$65,401
\$20,000-\$29,999	51,145	73,206	77,351
\$30,000-\$39,999	61,964	75,588	77,720
\$40,000-\$49,999	93,814	98,544	111,975
\$50,000-\$74,999	109,679	122,282	114,804
\$75,000 +	182,377	190,244	196,848

Source: DiPasquale and Wheaton 1996, table 9.1, p. 218.

Thus, the income elasticity is estimated to be 0.78, which suggests that a doubling of income (+100%) typically leads to a 78 percent increase in housing consumption, measured by the value of a household's primary residence. The R^2 of 0.94 suggests that more than 90 percent of the variance in housing consumption can be explained by the variance in family income.

As a family's income grows, it tends to buy "more" housing—a bigger home or one in a better neighborhood—but as its income continues to grow, its "consumption" of housing slows down relative to the rise in its income. Note from Table 12.3 that the typical household of thirty-five- to forty-four-year-olds with an income of less than \$20,000 lives in a home whose value is more than *triple* their income, while comparably aged households with more than \$75,000 in income will live in a home valued at a little more than *double* their income.

Overall, the demand for housing by individual households is influenced by household income and the age of the householder. Between the ages of 25 and 54, the value of housing consumed tends to increase, as individual earnings (and thus household incomes) tend to rise over time, peaking for most heads of households when they are in their fifties. Perhaps surprisingly, DiPasquale and Wheaton (1996) find that the level of housing expenditures does not change very much with the presence and then departure of children. What changes are the attributes of the house. Families with children may opt for somewhat larger homes in better school districts, but ones in outer suburbs with lower prices. Once they become "empty nesters," couples may opt for smaller homes, but ones in pricier neighborhoods or with greater amenities. Only with retirement do households seem to reduce their housing expenditures, giving up their larger homes for smaller ones, condominiums, or apartments. Total household spending on housing is kept from falling even further in the retirement years because older, wealthier families often have the ability to purchase multiple homes, including a second home or apartment in a warmer clime where they might spend the winter months.

For at least the past fifty years, the demand for housing units has increased faster than population growth—indeed, much faster. This is not so much because families

are buying second homes, but because average household size has fallen so dramatically. In 1950, the average household contained almost 3.6 people. By the 2000 census, the average household size was already down to 2.7. This came about because of the decline in the number of married couples, a growing delay in the age at which families had their first child, and an explosion in the number of people living by themselves. Of all households in 1950, more than three-fourths (78.1%) contained a married couple, compared to only about half (51.7%), fifty years later. One-person households—comprised of larger numbers of young people on the one hand and the elderly on the other—increased from less than one in ten households (9.5%) to more than one in four (25.8%) (Hobbs and Stoops 2002). Thus, even in metro areas such as those in New England, where the total population is growing quite slowly, the demand for housing, given the growing number of households, is still brisk.

The Urban/Metro Housing Market

As we noted in Chapter 2, the cost of living differs significantly across metro areas. The primary driving force behind this phenomenon is the cost of housing. Identical households in terms of income, age, and family composition can afford a lot more house in one region than another. **Figure 12.3** makes this case convincingly. Across the twenty metro regions we have been tracking, the median price of a single-family house in 2005 varied from a staggering \$655,000 in San Francisco to just \$100,000

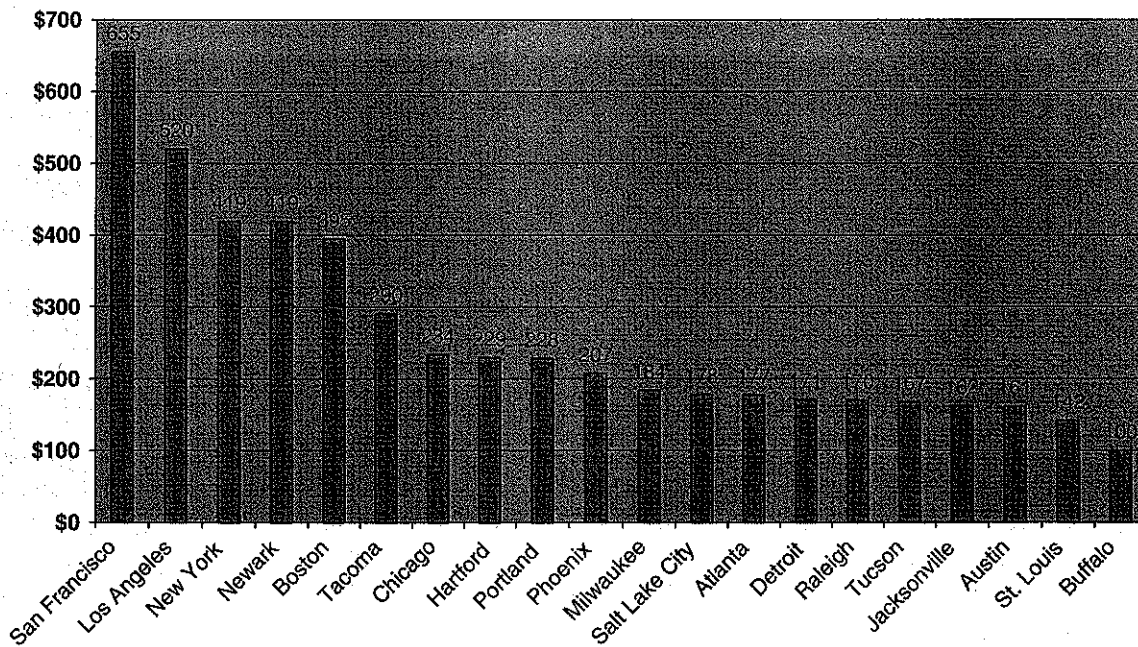


Figure 12.3 Median House Value, Metro Region, 2005 (Thousands of Dollars). *Source:* U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

in Buffalo. Even if we eliminate San Francisco as a special case, the median-priced house in Los Angeles is more than three times the price in Tucson, Jacksonville, or Austin.

In general, one can find the “best” prices for housing in older industrial regions as well as in many of the new southern and southwestern metro areas. Note that all the cities in the lower half of Figure 12.3 are in the Midwest, the South, or the Southwest. As we shall see, this primarily reflects *demand* conditions in the older regions and *supply* conditions in the newer ones.

A first hint at the importance of demand conditions is provided in **Figure 12.4**, which reflects the increase in housing prices between 1970 and 2005 (in inflation-adjusted 2005 dollars). Again, San Francisco leads the pack—this time by an extraordinary margin. Controlling for normal inflation, the cost of the median-priced home in San Francisco increased over this thirty-five-year period by nearly 400 percent. Los Angeles, Boston, New York, and Newark (which includes some prosperous New Jersey suburbs of the Greater New York region) all saw their inflation-adjusted prices rise by more than 200 percent over the same period. On the other hand, after controlling for normal inflation, you would have had to pay only 10 percent more in 2005 than in 1970 for a median-priced home in Buffalo. In addition to Buffalo, the next four metro regions experiencing the slowest growth in home prices were also traditional manufacturing cities—Milwaukee, Detroit, St. Louis, and Hartford. Moreover, the central cities in these metro areas experienced only modest increases in housing values, and Buffalo actually saw the median price for a house fall by 7 percent (see **Figure 12.5**).

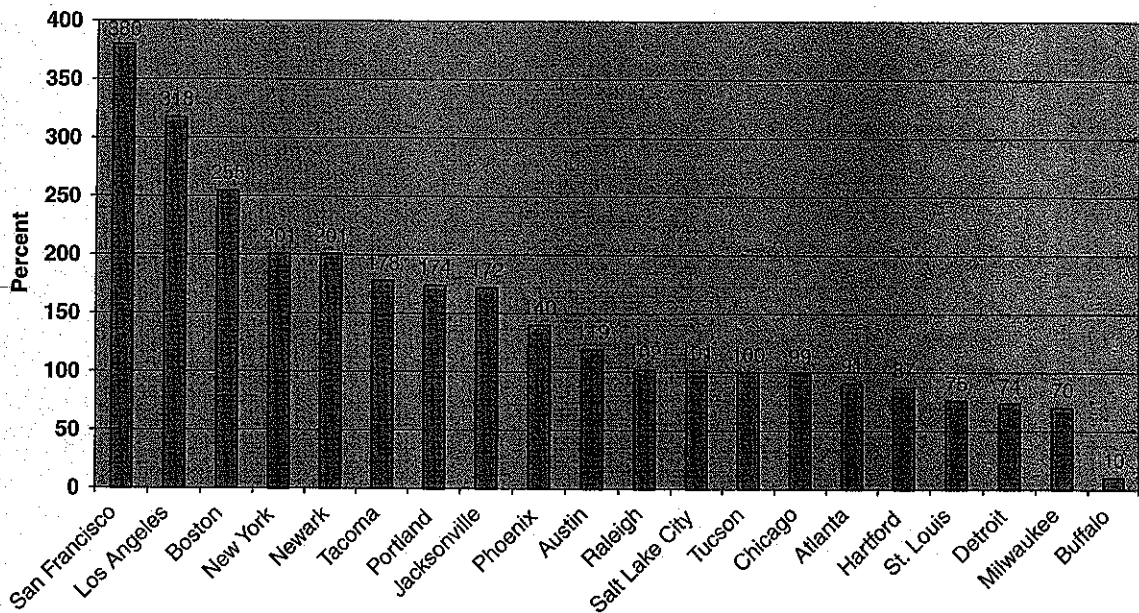


Figure 12.4 Increase in Median House Value, Metro Region, 1970–2005 (2005 Dollars). *Source:* U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

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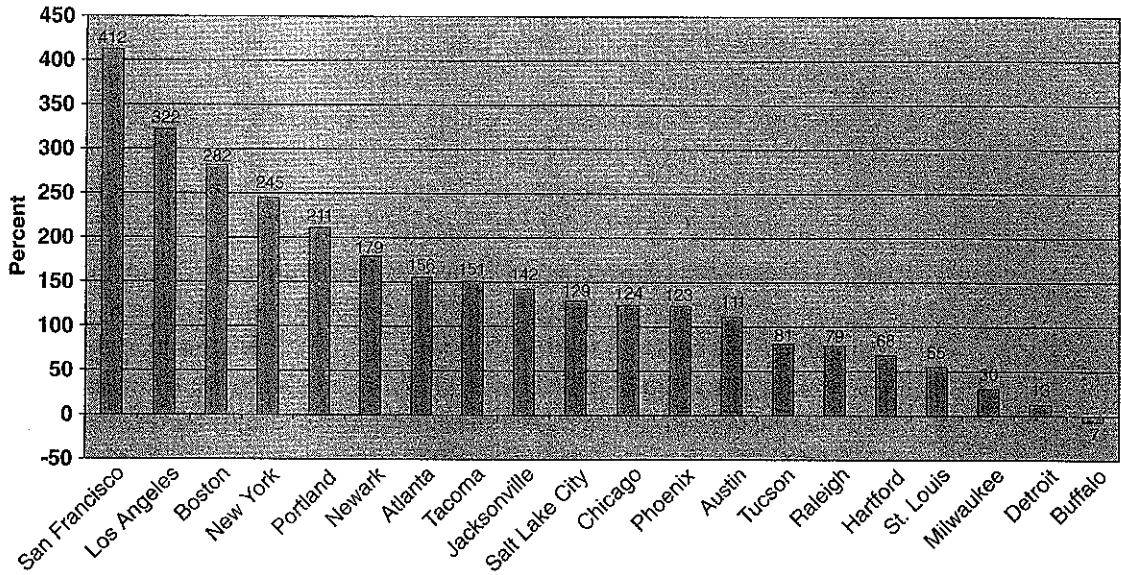


Figure 12.5 Increase in Median House Value, Central City, 1970–2005 (2005 Dollars). *Source:* U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.

One might expect that high-priced housing would translate into higher-priced rents. This is generally true, as shown in **Figure 12.6**, but there are some anomalies. Renting the typical apartment in San Francisco will cost you nearly twice as much as the typical apartment in Buffalo. But rents are also relatively high in Atlanta and Jacksonville, despite the fact that their house prices placed them in the bottom half of the median housing value distribution. What could account for this? In Atlanta,

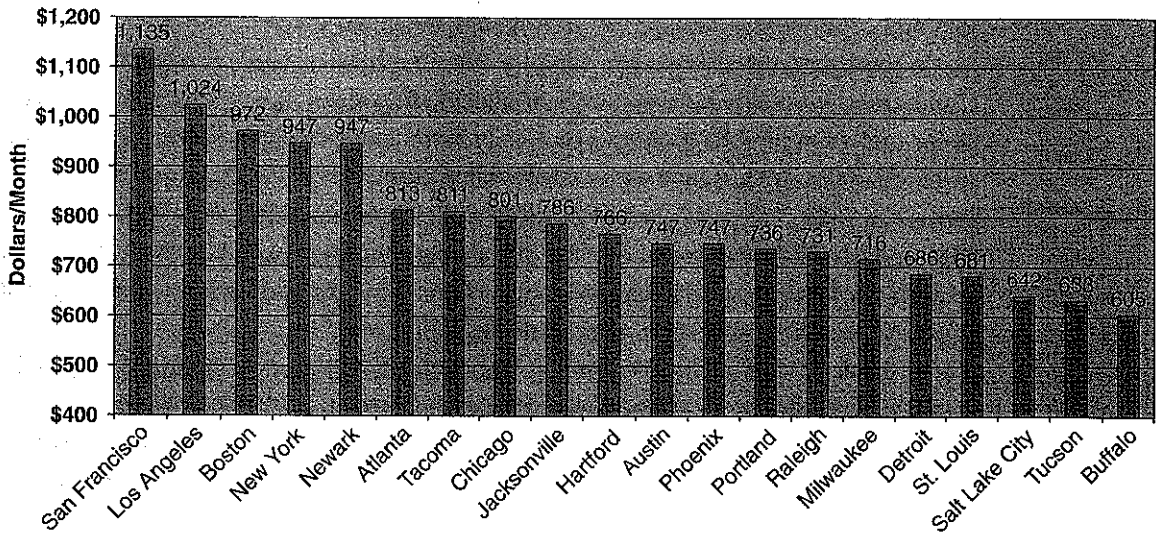
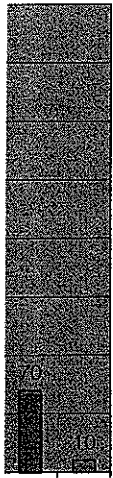


Figure 12.6 Gross Monthly Rent in 2005, Metro Region. *Source:* U.S. Department of Housing and Urban Development, HUD User Policy Development and Research Information Service, SOCDs data set, 2007, <http://socds.huduser.org>.



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the widespread conversion of rental units to owner-occupied condominiums, thus reducing the stock of rental units, may help explain the relatively high rents in the southern city. In Jacksonville, the demand for short-term rentals for northerners trying to escape cold winters may be responsible for this phenomenon.

What Drives Metro Area Housing Prices: Supply and Demand

Demand for housing in a particular city or suburb is determined by many factors. We already mentioned one when we noted that Gail was willing to pay more for a home in a municipality with a reputation for good schools. Communities with many amenities ranging from public parks and museums to a wealth of recreational activities will attract families who have a strong affinity for such things. Cities situated in a warm climate will attract retirees and others who are weary of wintry months of snow and ice.

Of course, perhaps the most important factor that drives housing demand is the state of a region's economy. Metro areas with rapidly growing businesses and strong labor markets will attract workers and their families, naturally increasing the demand for housing. Regions losing large numbers of jobs are likely to see substantial losses in population, and this means a reduction in housing demand. The loss of manufacturing jobs and residents in central cities like Buffalo, Milwaukee, Detroit, St. Louis, and Hartford is clearly the leading cause of the very low appreciation in real median housing values we saw in Figure 12.5.

The supply of housing is also a function of many factors. To be sure, an area that experiences rapid population growth because new jobs are being created or because older households are seeking a retirement home will be a prime location for housing developers who wish to satisfy the increased demand. But the ability of developers to acquire land for housing construction is constrained by the amount of vacant land still available, zoning restrictions imposed by cities and towns to limit the type or amount of new housing, and environmental considerations.

In the short run—which can actually last a number of years if any of the above limitations are in place—the supply of housing in a given city or suburb is relatively fixed and even modest increases in demand can lead to a sharp increase in housing prices and rents. This condition is depicted in **Figure 12.7**. With supply fixed in the short run—equivalent to a **price elasticity of supply** equal to zero—the increase in demand results in the average house price rising sharply from A to B. A zero price elasticity of supply means that an increase in price does not elicit any increase in the quantity supplied, at least in the short run.

In the long run, if developers can produce the housing demanded, supply increases, as in **Figure 12.8**, and housing prices moderate. With the increase in supply, the new price is found at C rather than at B. It turns out that in newer cities and particularly those where there is still a lot of undeveloped land and few zoning restrictions, developers have been able to build housing almost as soon as it is demanded, and sometimes in anticipation of increased demand. In these metro areas, housing prices have risen at a rate not much faster than overall inflation—3 to 4

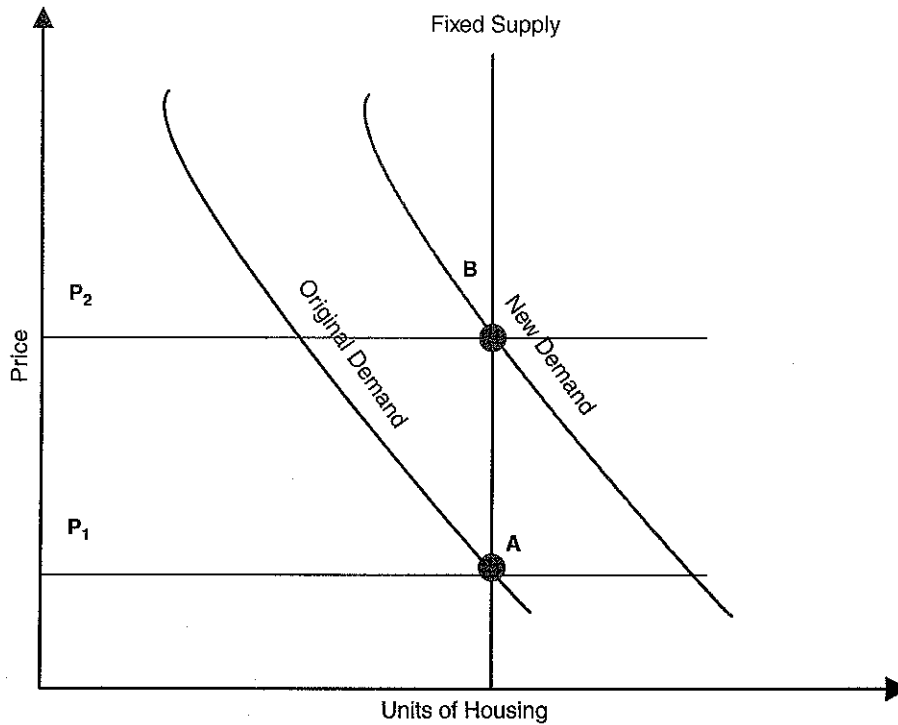


Figure 12.7 Housing Prices with Fixed Housing Supply. Curve A represents the original demand for housing. When the demand increases to curve B, the price of housing rises sharply from P_1 to P_2 due to a fixed housing supply in the short run.

percent a year. But in those metro areas where barriers to new development are high, housing prices have often risen by more than 10 percent a year.

The Greater Boston metropolitan statistical area (MSA) is a good example of a region with high barriers to new development. Recall from Figure 12.4 that between 1970 and 2005 the Greater Boston region experienced a 255 percent increase in the median price of a home—compared to, say, Tucson, where prices rose by only 101 percent. The pace of housing price appreciation in Boston actually accelerated in the late 1990s and continued at a red hot pace for six years running. Between 1998 and 2004, the median price of a single-family home grew from \$186,000 to more than \$375,000—an increase that averaged more than 12 percent a year (Heudorfer and Bluestone 2006). In the face of a strong economy with a substantial increase in employment, there was little new housing construction in the region. Glaeser, Schuetz, and Ward (2006) found the sluggish growth in housing development was due primarily to local land-use regulations, not a lack of land, per se. Minimum lot sizes of one acre or more, strict wetlands regulations, and the ability to use the court system to delay building permits all contributed to forestalling further housing construction in the region. The median lot size for a new single-family home went from an average of .76 acres between 1990 and 1998 to an average of .91 acres between 1998 and 2002, with much of this a response to municipal zoning

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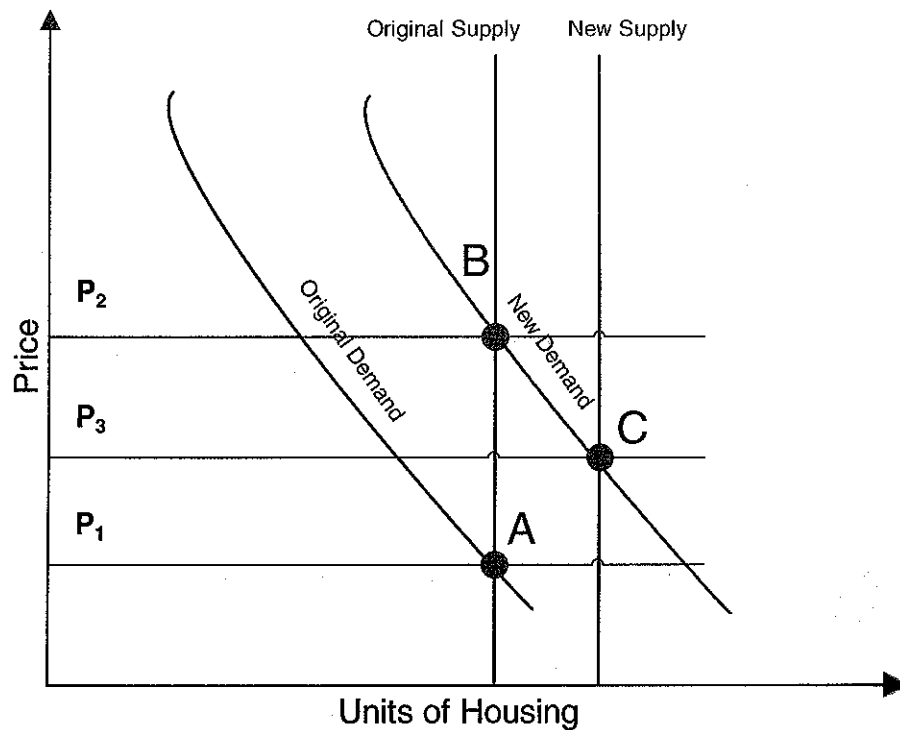


Figure 12.8 Housing Prices with Additional Supply. With additional housing supply, the supply curve shifts to the right. Now, the final price of a housing unit declines from P_2 to P_3 , where the new supply curve intersects the new demand curve (at C).

(Jakabovics 2006). As a result, housing prices increased dramatically—as shown in the movement from A to B in Figure 12.7.

Breaking down these barriers to new housing construction is not easy because existing residents raise many arguments whenever a new development is planned. There is the fear that more housing means more traffic congestion. The possibility of young families with children moving in means the municipality must find the resources to pay for additional schooling. The additional property tax receipts from the new housing may not be sufficient to cover these additional expenditures. Deeper fears, often not expressed, have to do with the value of their homes and possible changes in the “character” of their neighborhoods (Fischel 2001). If sufficient housing is built, a sellers’ market—where the seller has pricing leverage over potential buyers—can turn into a buyers’ market in which sellers must consider whether to reduce their asking price. With more homes available at more affordable prices, some current residents fear that families with lower incomes or from a different racial or ethnic group might move in and change the “middle-class” nature or racial composition of their neighborhood. Politically, those opposed to liberalized zoning and deregulation often have a great deal of power over local municipal leaders, making it difficult for any reform to occur. In this case, existing residents exert the equivalent of monopoly power in the housing market, eliminating much of the

competition that would come from additional housing production. As in any monopoly, this results in higher prices and lower output than would occur in a competitive market.

Housing "Affordability"

Particularly where housing supply is constrained, many families trying to buy into the market will find housing "unaffordable." The U.S. Department of Housing and Urban Development (HUD) considers housing to be affordable if a family need not spend more than 30 percent of its gross annual income to cover its mortgage payments, real estate taxes, and home owners' insurance or to pay their rent and utilities. Families who spend more than this are considered **cost-burdened** in the sense that they need to skimp on other necessities including food, clothing, transportation, and medical care (U.S. Department of Housing and Urban Development 2007a).

Using this definition of affordability, the National Low Income Housing Coalition estimates that at the beginning of 2007, 35 percent of American households were cost-burdened, an increase from the 27 percent who had an affordability problem in 2000 (Favro 2007). The problem is much worse for the 15 percent of all households who are **severely cost-burdened**, those paying 50 percent or more of their pretax household income on housing (Joint Center for Housing Studies 2007). In 2005, it is estimated that more than one in ten home owners (11%) and nearly a quarter of all renters (24%) paid this much or more of their income to cover their housing costs. Among the cities with the highest rates of severe cost burden for home owners were Miami (35.8%), Boston (27.1%), and Los Angeles (26.5%) (Miller 2006).

Housing costs are now so high in many cities that individuals and families cannot afford any housing at all, and they end up homeless. According to the U.S. Department of Housing and Urban Development (2007b), there were more than 750,000 persons homeless on any given night in 2005. The government agency found that 65 percent of the homeless are men, the largest segment are thirty-one to fifty years old, 34 percent are in families with children, and 59 percent are from a racial minority. Three-quarters of the homeless are found in central cities; one-quarter are found on suburban streets.

Housing Prices and Vacancy Rates

In labor economics, there is a well-known relationship between the rate of unemployment and inflation. This relationship is captured in the notion of the **Phillips Curve**, first discovered by the British economist A. W. Phillips (1958) in the late 1950s. Phillips observed that there was a nonlinear inverse relationship between the rate of increase in money wage rates and the unemployment rate in England over the period 1861–1957. He found that, in general, wage inflation increased at an ever faster rate the further unemployment fell below 2.5 percent. Above that rate, money wage rates would decline, but only modestly. In the 1980s and 1990s, those who

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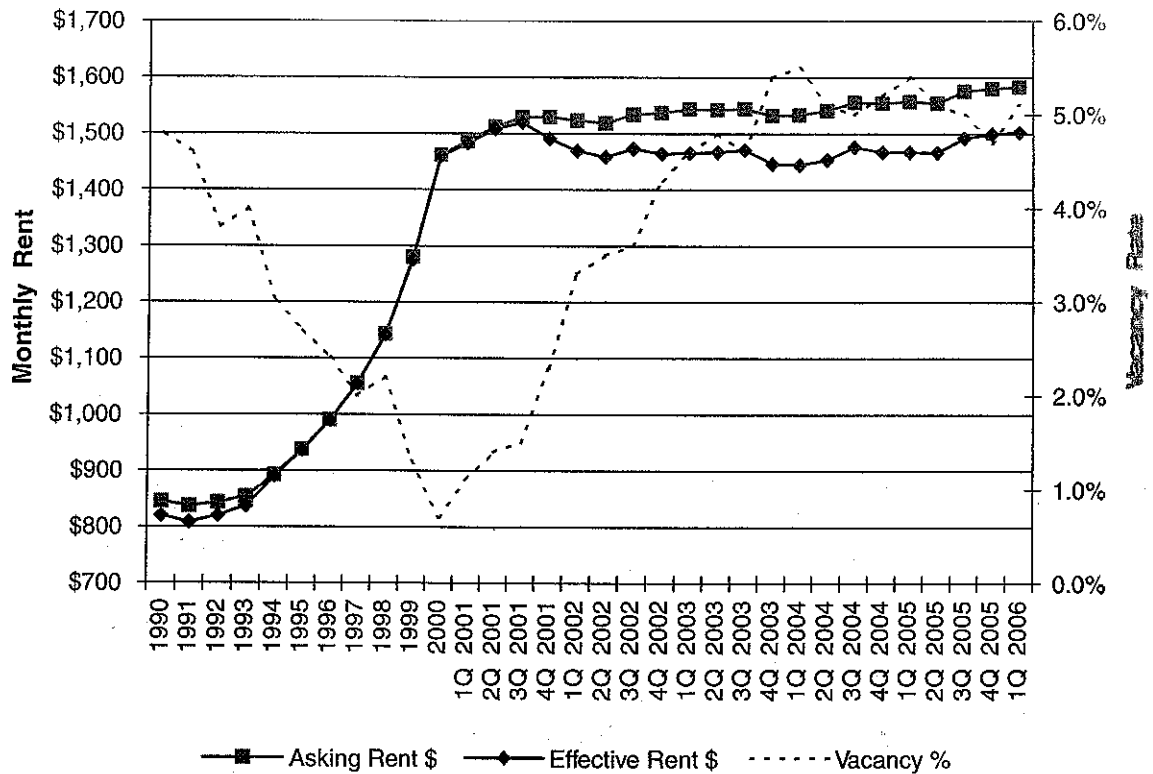


Figure 12.9 Vacancy Rates versus Rental Price Appreciation, Boston MSA. Source: Reis.com, as reported in Heudorfer and Bluestone 2006.

believed the Phillips Curve still held suggested that the noninflationary rate of unemployment was closer to 6 percent. Richard Lipsey, writing in 1960, found that this empirical relationship could be explained by noting that the level of wage inflation was a function of the degree of excess demand in the labor market. When there was a lot of “excess demand,” wages were bid up. When unemployment was high, indicating an absence of excess demand, wages stabilized or even fell.

We can apply this same logic to the housing market, using housing vacancy rates—the percentage of housing stock available to new owners or tenants—as a measure of “excess demand” for homes. Vacancy rates will always be greater than zero because of housing market friction and imperfect information (Belsky 2006). Renters and potential home buyers take time to search for housing that meets their needs and their budget. Landlords and home sellers attempt to maximize the rent or price they receive and therefore often set prices above what the market will absorb immediately. A vacancy exists until a buyer and a seller (or renter and landlord) can come to terms. As Belsky points out, the landlord (or home seller) is in much the

Housing Price Appreciation (1995-2005)

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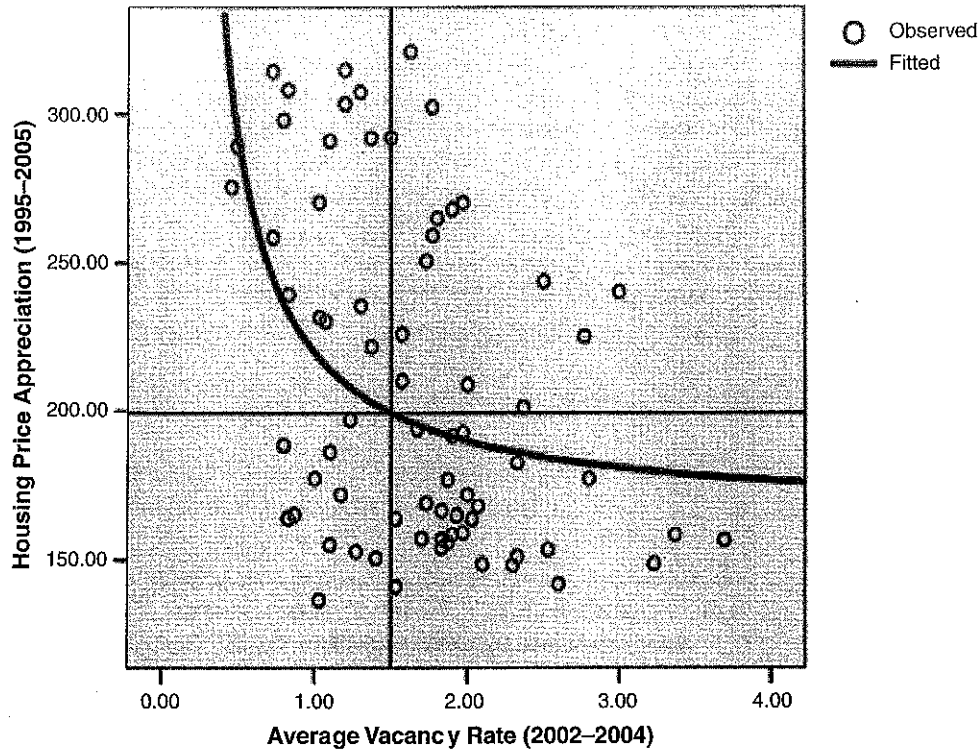


Figure 12.10 Housing Price Appreciation versus Vacancy Rates: Low to Modest Vacancy Rates. At very low vacancy rates, below 1 percent, housing prices rise sharply. At vacancy rates above 1.5 percent, prices fall slowly. Source: Bluestone 2006, figure 24.

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same position as a retailer who receives periodic shipments of goods. It is more profitable for him to maintain an inventory than to set prices so low that the merchandise is sold as soon as it is placed on the shelves. Testing the waters to see “what the market will bear” requires time and therefore creates vacancies in the short run.

We would expect that when vacancy rates are in the normal range for owner-occupied housing—about 1.5 to 2 percent—housing price appreciation will not be much greater than general inflation. The normal range for rental units is considered to be in the 5 to 6 percent range. As vacancy rates rise above the normal range, prices will tend to stabilize and ultimately may decline. In the short run, housing prices will not decline very much, as sellers either hold out for the price they had hoped to get or perhaps take their homes off the market altogether. As vacancy rates fall below the normal rate, housing prices will tend to rise, like the Phillips Curve, at a faster and faster rate the more the vacancy rate falls below normal. The home market becomes a sellers’ market, much like the game of musical chairs with people running ever faster to find an empty chair and bidding prices up in the process. Ultimately, this leads to a housing price spiral.

Figure 12.9 provides a simple picture of how rents are related to vacancy rates. In this case, we have data on both **asking rents** (what is advertised) and **effective rents** (asking rents plus any special charges or discounts) for the Greater Boston metro

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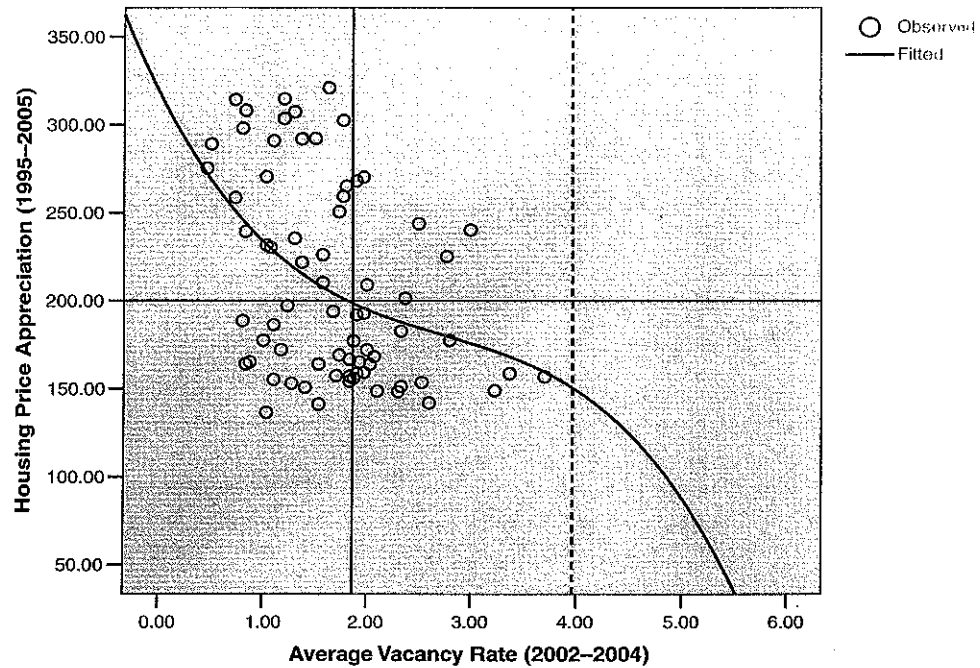


Figure 12.11 Housing Price Appreciation versus Vacancy Rates: Low to High Vacancy Rates. At vacancy rates above 4 percent, housing prices begin to fall sharply. *Source:* Bluestone 2006, figure 24,

area from 1990 through the first quarter of 2006, superimposed on the rental vacancy rate (Heudorfer and Bluestone 2006). Note that in 1990, the vacancy rate was in the normal range (5–6 percent) and rents were stable. As the vacancy rate fell, rents began to rise and the more the rate declined, the higher rents went. By the time the vacancy rate fell to an almost negligible 0.5 percent, the average rent in the region had reached nearly \$1,500, almost double what it had been just six years earlier. As Boston's economy began to weaken in 2000 and employment declined, demand for rental units decreased and the vacancy rate climbed back to near 5 percent over the course of just two years. Rent increases slowed to a crawl and rents remained nearly constant for five years.

We find the same kind of relationship for owner-occupied housing using vacancy data for the seventy-five largest MSAs, averaged over the period 2002 to 2004, and data on housing price appreciation between 1995 and 2005 (see **Figure 12.10**). The fitted curve provides just the kind of Phillips Curve relationship expected. At vacancy rates *above* 1.5 percent, home prices rose on average by less than 100 percent (Index Value = 200). At vacancy rates below 1.5 percent, home prices appreciated at higher and higher rates, depending on how low the vacancy rate declined below "normal." At an average vacancy rate of just 0.5 percent—no more than a third to a quarter of the normal rate—price appreciation was 175 percent (Index Value = 275.35).

Refitting the same data using a more complex statistical function provides some insight as to what happens when vacancy rates rise to even higher levels (see **Figure 12.11**). Note that at vacancy rates above 3.5 percent, price appreciation falls off more rapidly. This suggests that when the number of housing units available far

Table 12.4 Housing Price Depreciation

	Peak Quarter	Housing Price Index	Trough Quarter	Housing Price Index	Percent Change	Years to Recovery
Gary, IN	1981:I	63.42	1984:III	56.68	-10.6	7
Boston, MA	1988:IV	112.95	1992:II	99.2	-12.2	9
Duluth, MN	1988:II	114.18	1991:III	99.27	-13.1	11
Worcester, MA	1989:IV	117.26	1995:I	100	-14.7	9
Springfield, MA	1989:iv	117.43	1995:i	100	-14.8	11
Honolulu, HI	1993:II	101.55	1999:III	84.69	-16.6	9
Detroit, MI	1981:IV	61.29	1982:IV	49.69	-18.9	5
Hartford, CT	1988:III	126.4	1995:I	100	-20.9	13
Los Angeles, CA	1990:III	127.16	1996:III	99.7	-21.6	12
Lafayette, LA	1982:III	115.27	1988:IV	65.53	-43.2	15

Source: Bluestone 2006, table 7.

outstrips the number that households want to buy, there can be a housing bubble effect and prices deflate quickly.

There is ample historical evidence of both overheated housing markets and the bursting of a housing bubble. Between 1995 and 2004, with an owner-occupied housing vacancy rate hovering in the 0.5 percent range, the median price of a house in the Boston metropolitan region increased from \$154,000 to \$395,000—an increase of 156 percent in less than a decade. On the other hand, with vacancy rates rising—in some cases, to double digits—home prices have fallen sharply in some markets and prices have not necessarily recovered very quickly. **Table 12.4** provides a few examples of this phenomenon. Reasonably mild downturns occurred in Gary, Indiana, in the early 1980s, and in Boston from 1988 to 1992. Prices fell between 10 and 12 percent and did not recover to their previous peaks for up to nine years. Much more serious downturns occurred in Detroit, Hartford, Los Angeles, and Lafayette, Louisiana. Prices plummeted by 19 percent to more than 43 percent and did not return to their previous peak for as long as fifteen years. While not as volatile as the stock market, housing prices can become quite unstable when vacancy rates change dramatically. Following the trend in vacancy rates in a given city or metro area can provide a pretty accurate forecast of how prices and rents are likely to move in the local housing market.

The Impact of Housing Prices on Local Employment and Population Growth

While a city or metro area undergoing rapid economic expansion with strong job growth will normally experience appreciating housing prices and rents, it is possible that if housing supply does not expand to match demand, prices and rents can rise high enough to choke off further economic expansion. In this way, at least in theory, an economic boom can lead to an economic bust creating something of a roller-coaster local economy.

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At least circumstantially, there is evidence of such a phenomenon. In a number of metro areas across America, but particularly in the Northeast and on the West Coast, housing prices appreciated during the 1980s and early 1990s and then rose even more sharply from the middle of the 1990s through at least 2005 as demand for housing increased much more than supply. Since 1980, New England as a whole has seen house prices increase more than fivefold (528%), while the Pacific region has witnessed increases almost as large (475%). Just between 2001 and 2006, these regions saw average house prices increase by 66 and 96 percent, respectively. By way of contrast, the farther inland you retreat from the coasts, the less housing prices have appreciated (see **Figure 12.12**). Since 1980, the West South Central region saw housing prices increase only 113 percent, while the East South Central states averaged 172 percent—and both experienced no more than a 26 percent increase in prices over the five years ending in 2006 (Office of Federal Housing Enterprise Oversight 2006).

Data on urban labor markets for the regions experiencing the fastest growth in housing prices reveal that a number of these metro areas suffered net domestic out-migration beginning in 2000 and experienced inordinately slow employment growth or an absolute loss in jobs. In the Boston MSA between 2000 and 2004, the net number of nonforeign residents who moved to other MSAs or states amounted to 5.2 percent of its population. Other high-housing-cost communities that suffered a similar fate of net out-migration include the Pacific region's San Jose (10.4%), San Francisco (8.8%), and Los Angeles-Long Beach (4.2%), while net out-migrants from the mid-Atlantic's New York MSA amounted to 7.1 percent of that metro area's population.

Over the same period of time, Boston lost 4.9 percent of its job base. San Jose did much worse, losing 15.4 percent, while San Francisco experienced a 10 percent drop

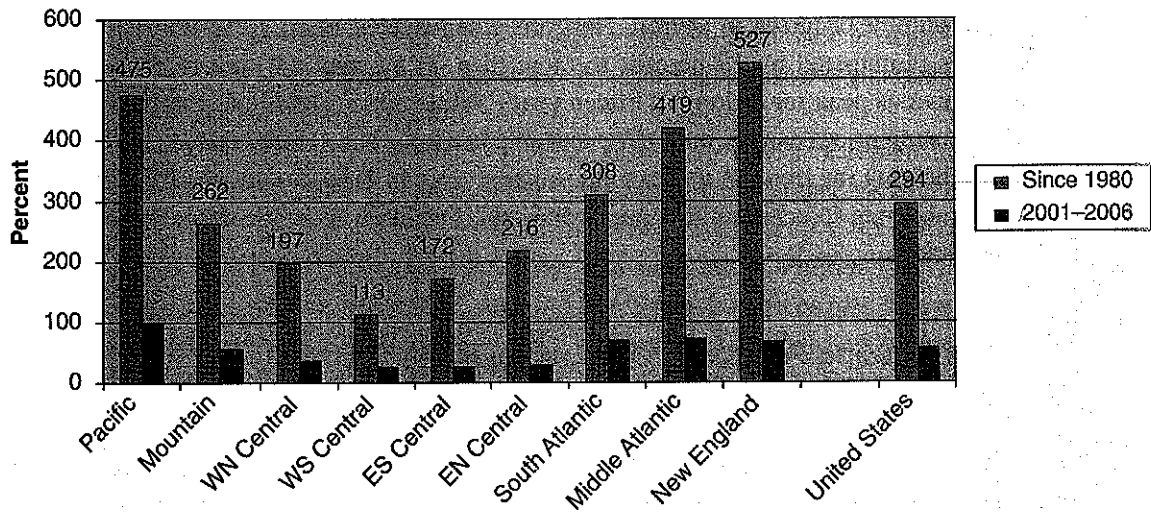


Figure 12.12 Percent Change in Housing Prices, U.S. Census Divisions. *Source:* Based on data from U.S. Department of Housing and Urban Development, Office of Federal Housing Enterprise Oversight, HPI data, http://www.ofheo.gov/media/hpi/3q07_hpi_reg.csv.

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in employment. New York lost 3 percent of its jobs, while Los Angeles-Long Beach lost 1 percent. Presumably, housing prices had risen so high that firms thought twice about locating new facilities in these high-cost-of-living metro areas and older firms considered leaving for other areas where the cost of living (and presumably labor cost) was lower.

Compelling as such statistics might seem to be, it is certainly possible that the recent dearth of new jobs in these high-housing-cost metro areas is attributable to factors other than housing prices and that the loss of population is due to either older residents retiring to sunnier climes or younger residents leaving because of a lack of jobs *unrelated* to the high cost of living. Remember, a correlation between two trends does not necessarily imply causation. In this case, there might be a housing affordability problem in these communities, but not necessarily a concern about placing economic development or continued prosperity at risk. Indeed, the high cost of housing might be an indication of just how good things have become in these cities and suburbs. After all, places like Flint, Michigan, have a great deal of affordable housing, but few businesses and people are moving there.

To test the proposition that housing prices can affect economic development, Bluestone (2006) relied on housing cost data collected by the Economic Policy Institute (EPI) in Washington, D.C., and census data on internal net migration and employment growth for hundreds of metro areas. The EPI data provide a comparable measure of housing costs across MSAs.

Across 304 MSAs, it turns out that housing is particularly expensive in the top decile, as **Figure 12.13** reveals. The average monthly housing cost of \$1,045 among these thirty-one metro areas is 36 percent higher than the second decile average. Typical of this top decile are Boston, San Francisco, San Jose, Washington, D.C.,

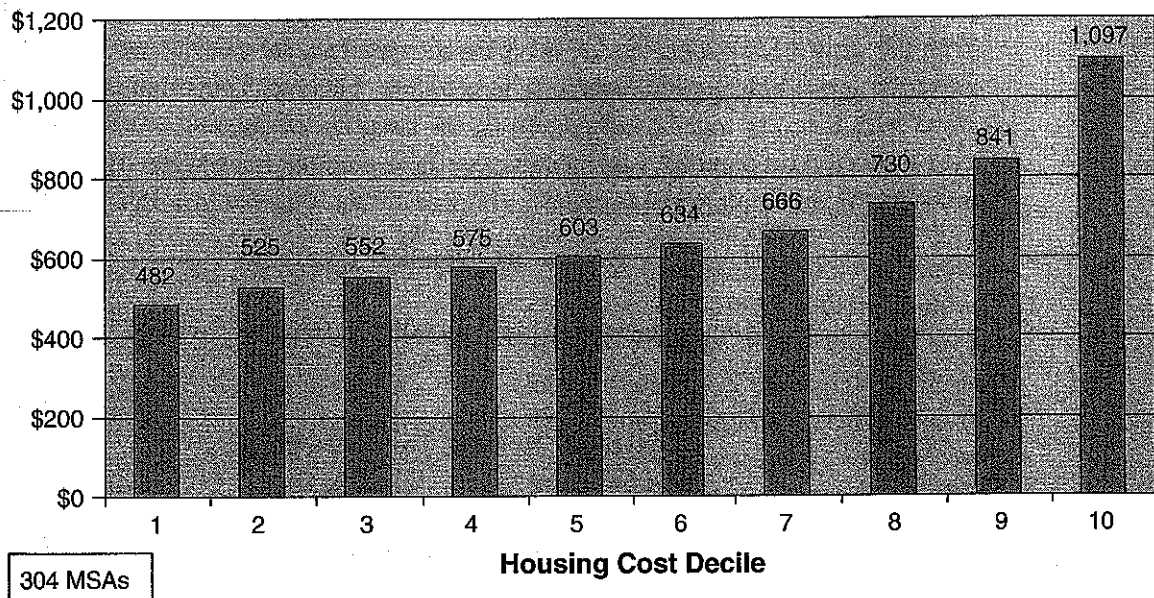


Figure 12.13 Average Monthly Housing Cost by Housing Cost Decile, 2004. *Source:* Economic Policy Institute 2005.

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Fort Lauderdale, and New York. Housing costs in the remaining deciles vary by much less. The mean in the second-highest decile is only 43 percent higher than in the tenth (lowest cost) decile. Hence, the cost gap between the first and second deciles is nearly as large as the gap between the second and the tenth. Typical of MSAs with the lowest-cost housing are Johnstown, Pennsylvania; Decatur, Illinois; Lafayette, Louisiana; and Altoona, Pennsylvania.

Housing Prices and Employment Growth

Bluestone (2006) hypothesizes that the relationship between employment growth and housing prices across metro areas, if one existed at all, would be nonlinear. Those MSAs with the highest housing costs should have slower growth in employment than those with more modest home prices and rents. At the same time, those areas with the lowest housing costs might also experience slow growth or even job loss to the extent that low housing prices and rents reflect a weak economy. In this case, the poor employment outlook induces out-migration, which causes a surplus in housing units and a consequent reduction in housing prices.

Following this logic, Bluestone (2006) uses a **quadratic regression equation** that relies on housing cost and housing cost squared from the 2005 EPI data as the independent variables and the percentage change in employment between 2000 and 2004 as the dependent variable (for the 245 MSAs with U.S. Bureau of Labor Statistics' employment data). A quadratic equation uses a squared term in order to control for nonlinearity (i.e., curvature) in a function.

The results, as shown in **Regression Equation 1**, indicate that while only about 6 percent of the total variance in employment growth can be accounted for by housing costs alone, both independent variables are highly significant with t-statistics in excess of 4.0, which suggests that housing costs do indeed have something to do with job growth. The signs on the independent variables are as expected, with the linear term positive and the squared term negative. This means that in those metro areas with the very highest housing costs, the negative coefficient on the housing cost squared term dominates the positive coefficient on the linear term—indicating slower growth in employment in these cities or an outright loss of jobs.

Regression Equation 1

$$\% \Delta \text{ Employment}_i = -.1466 + .0000396 \text{ Housing Cost}_i$$

(4.07)

$$- 2.291\text{E-}007 \text{ Housing Cost Squared}_i$$

(4.04)

$$R^2 = .056, N = 245 \text{ MSAs}$$

A graph for this equation is found in **Figure 12.14**. One notes that despite the broad scatter plot (reflecting the low R^2), which indicates a great deal of "unexplained"

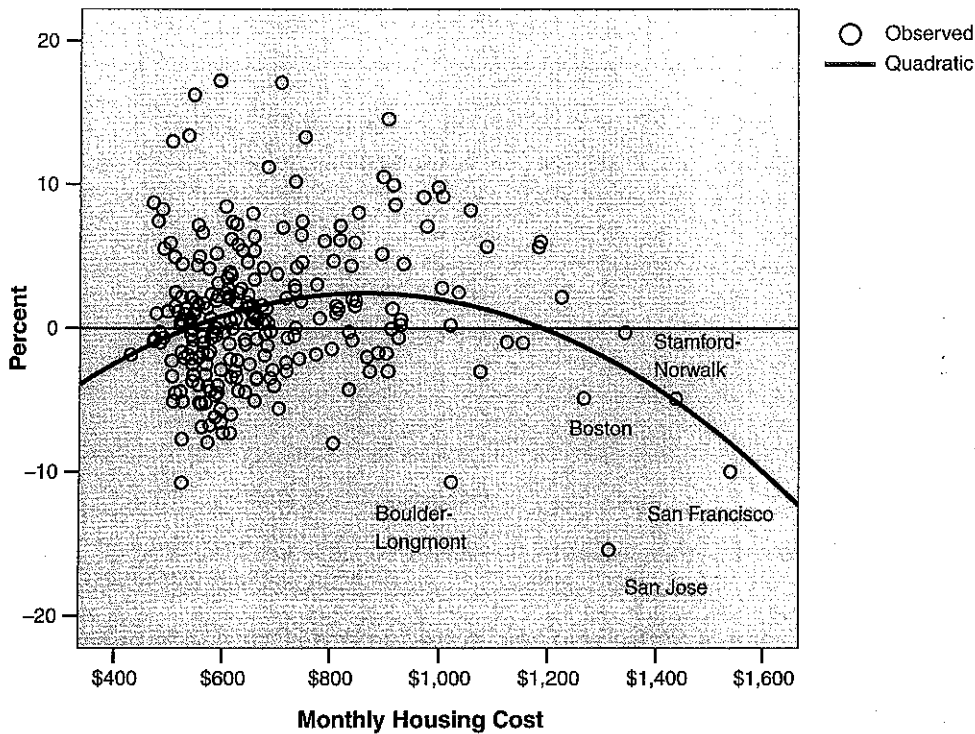


Figure 12.14 Employment Change, 2000–2004 (Percent). This quadratic regression line suggests that employment growth is negative in metro areas with extremely low housing costs, but also negative for metro areas with very high housing costs. The negative employment growth in the low-housing-cost regions reflects the fact that housing costs have fallen as jobs and workers have left the region, increasing the gap between housing demand and housing supply. The negative employment growth in the high-housing-cost regions presumably reflects the adverse impact of high housing costs on business investment and net domestic out-migration of workers and their families. *Source:* Bluestone 2006.

variance in employment growth across metro areas, the regression line reveals that employment actually declines almost universally for the MSAs with the very highest-priced housing (\$1,200 per month and above). There is also job loss in the lowest-cost regions.

Something that resembles these findings can be depicted by simply dividing the 245 MSAs into housing cost deciles and plotting the average employment growth in each of them. This can be seen in **Figure 12.15**. Note that 2000–2004 employment growth in the top (tenth) decile representing the twenty-five MSAs with the highest housing costs is less than 1 percent. Dropping back to the ninth housing cost decile more than triples the job growth rate, while job growth in the eighth decile is more than twice as strong. In the lower housing cost deciles, employment growth is close to zero or negative, with the anomalous exception of the very lowest cost decile. The metro areas in the lowest cost of living decile include places like Provo, Utah; Texarkana, Texas; Fort Smith, Arkansas; Biloxi, Mississippi; and Brownsville, Texas. It is possible that the higher employment growth in such MSAs is partially due to the influx of migrant labor. Otherwise, the decile chart follows the curve of the quadratic regression equation.

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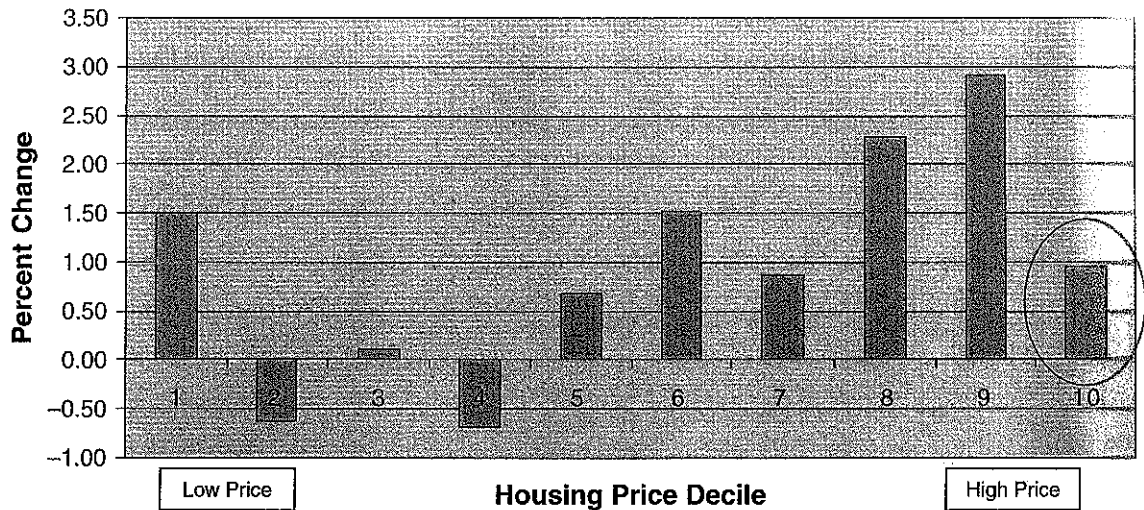


Figure 12.15 Employment Growth, 2000–2004 (Percent). *Source:* Bluestone 2006, figure 19.

It is worthwhile to note that of the top fifteen MSAs in terms of housing costs, nine (60%) experienced actual job loss between 2000 and 2004. Only twenty-eight (33%) of the next eighty-five MSAs suffered a similar fate.

At the other end of the housing cost continuum, a good number of MSAs lost jobs as well. Decatur, Illinois, led in this department, losing 10.7 percent of its jobs, followed by Youngstown, Ohio (–7.7%), Flint, Michigan (–7.3%), Ft. Wayne, Indiana (–5.2%), and Binghamton, New York (–5.1%). Each of these old manufacturing cities has suffered significant “deindustrialization” over the past three decades, which has led to employment loss and out-migration of business and population. The result has been a surplus of housing units that has extended over a long period of time and forced housing prices down.

Housing Prices and Population Migration

Bluestone (2006) performed a similar analysis on internal net population migration in 304 MSAs. Once again, the regression equation fit the data with the expected signs and explained nearly three times as much variance.

Regression Equation 2

$$\% \Delta \text{ Internal Migration}_i = -.1541 + .000430 \text{ Housing Cost}_i \quad (7.03)$$

$$- 2.6580\text{E-}007 \text{ Housing Cost Squared}_i \quad (7.39)$$

$$R^2 = .153, N = 304 \text{ MSAs}$$

Figure 12.16 provides a graph of the regression results. With fifty-nine more observations in the regression, we have a number of additional high-housing-price

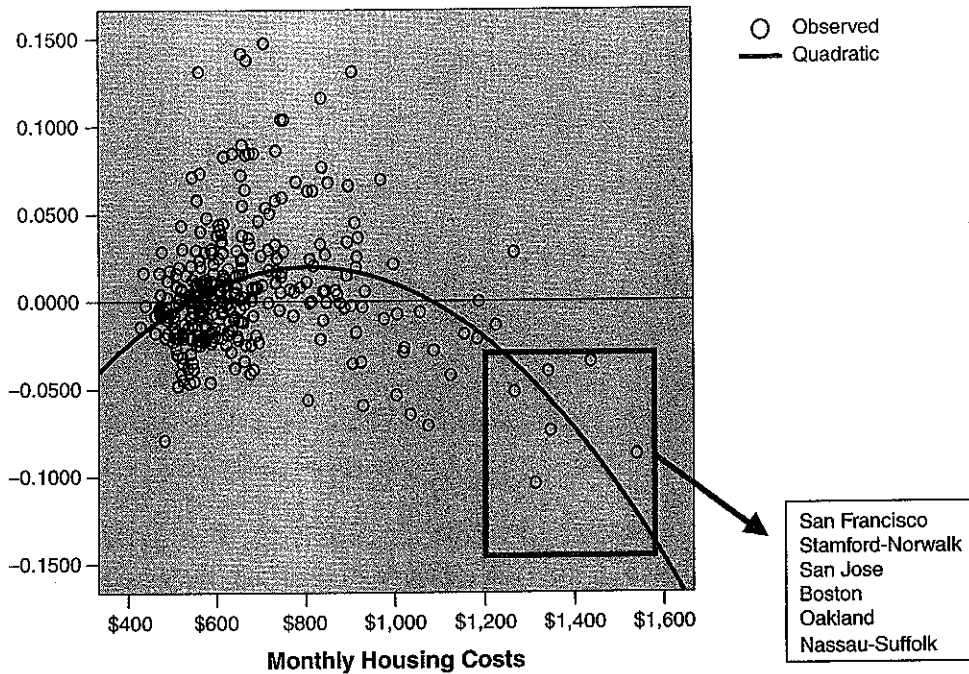


Figure 12.16 Internal Migration (Percent Change). The quadratic regression equation reveals that net out-migration is especially severe in the highest housing cost regions. *Source:* Bluestone 2006, figure 22.

MSAs and nearly all of them have experienced net out-migration. The curve is somewhat more bowed upward than that for employment growth, which suggests that housing costs have a greater impact on migration than on employment levels when those costs are very high.

The big migration losers in addition to Boston are San Francisco, Stamford-Norwalk, San Jose, Oakland, and Nassau-Suffolk, New York. These are generally the same communities that lost jobs.

When the MSAs are divided into housing-cost deciles, as shown in Figure 12.17, we find that the top decile lost population between 2000 and 2004 due to net internal out-migration. The top decile has an average negative migration rate of -2.25 percent; deciles 9 through 3 all have a positive in-migration rate, with the highest being in decile 8 (+3.05%), decile 7 (+2.72%), and decile 9 (+2.45%); and the two lowest cost deciles have average net out-migration rates like the top decile. This U-shaped pattern is so strong and consistent that it suggests a highly robust relationship between housing costs and migration rates, with both the highest-cost and lowest-cost regions losing population to migration.

Further analysis of the data, using more sophisticated regressions, demonstrated that this phenomenon is independent of other forces responsible for job trends and population dynamics. Even after controlling for job growth in an MSA, the highest housing cost regions lost population to out-migration, which indicates that households move to lower-cost regions, even when jobs are available in the cities or suburbs they are leaving.

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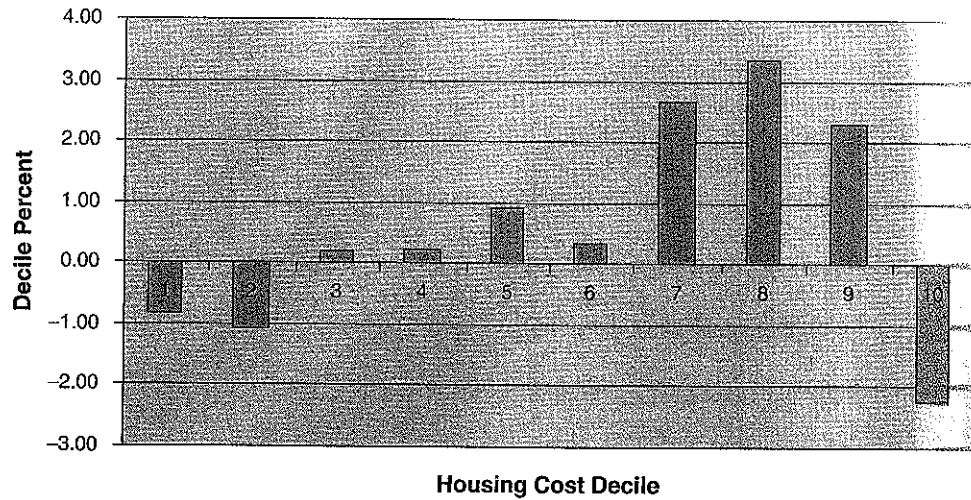


Figure 12.17 Internal Net Migration, 2000–2004. *Source:* Bluestone 2006, figure 23.

In a powerful way, this analysis underscores the more general economic notion of how prices affect both consumer and business behavior. Responding to high housing prices, households tend to move to regions with somewhat lower costs and plenty of job opportunities. In response to the difficulty of retaining and attracting workers in high-housing-cost regions, businesses move to metro areas with lower costs expecting to find a ready supply of labor at wage rates not inflated by the need to cover high living costs. Not surprisingly, both firms and people seem to be moving from high-cost areas like Boston to lower-cost areas like Raleigh-Durham-Chapel Hill. Hence, the economic development of individual metro areas is tied not only to the success of their industries but also to the price of their housing.

Post-World War II Suburbanization and Residential Segregation

When most households in metropolitan areas still lived inside the central city, racial and ethnic segregation was not as extreme. Black families and white families might not have lived on the same block or even in the same neighborhood, but they still lived in the same municipality. With the growth of suburbs after World War II, residential segregation became more prevalent.

Clearly, part of the reason for residential segregation by race was related to social class and income. White families could more easily afford to move to the suburbs where housing prices were higher, while black families remained economically segregated in the denser central city, where rents and home prices were lower—and perhaps falling as a result of whites leaving the central city and thereby creating a surplus in the housing stock. White flight to the suburbs was reinforced as central cities lost population and therefore municipal revenue, making it more difficult for them to support good public services—including public schools and well-equipped police forces—that could reduce crime. In a matter of decades, many American

metro areas became “chocolate cities with vanilla suburbs,” to use the phrase coined by demographer Reynolds Farley and his colleagues (1978).

Measuring Segregation

Residential or housing segregation is normally measured using the **dissimilarity index**, which reflects the proportion of one racial or ethnic group that must relocate to achieve a spatial configuration where each census tract or neighborhood replicates the racial composition of the metropolitan region as a whole. There are actually as many as twenty different indicators of segregation as identified by Massey and Denton (1988) that measure the evenness of a distribution; exposure or isolation from other groups; or the concentration, centralization, or clustering of a particular subgroup of a population. Nonetheless, the dissimilarity index is the measure most widely used.

According to the U.S. Bureau of the Census (2005), across 300 metropolitan areas, the average dissimilarity index in 1980 for African Americans was 0.727. In the “average” MSA, nearly 73 percent of African Americans would have had to relocate to census tracts where other racial and ethnic groups dominated—particularly white neighborhoods—in order to achieve full racial integration. Slow progress occurred over the next two decades, but still by 2000, almost two-thirds (64%) of African Americans would have to have moved to nonblack areas for racial parity. Contrary to some conventional wisdom, the highest degree of housing segregation was in the Northeast metro areas, where the dissimilarity index in 2000 was 0.739; the lowest was in the West (0.559) followed by the South (0.581). In that year, the most segregated MSA among the forty-three metro areas with at least 3 percent black population and 1 million or more in total population was Detroit, with a dissimilarity index of 0.846. Detroit was followed by Milwaukee, New York City, and Newark, New Jersey. African Americans in the least segregated MSAs were living in Orange County, California; San Jose, California; Phoenix; Riverside, California; and Norfolk-Virginia Beach, Virginia.

In general, Hispanics and Asians are much less segregated. The average dissimilarity index in 2000 across all MSAs was 0.509 for Latinos and 0.411 for Asians and Pacific Islanders. Of the largest MSAs with 20,000 or more Hispanics, St. Louis, Missouri, had the lowest degree of dissimilarity (0.273) while Providence, Rhode Island was the most segregated for this ethnic group (0.676). The most segregated large cities for Asians were New York (0.505) and San Francisco (0.484), both famous for their large and ethnically concentrated Chinatowns.

The Causes of Housing Segregation

Housing segregation has many causes. As noted above, social class as measured by income is one, but it is surprisingly less important than one might think. Using data from Los Angeles County for 1990, Camille Charles (2000) calculates the predicted index of dissimilarity for blacks, Latinos, and Asians and compares it with the actual index. The predicted index controls for household income and household structure



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including family type, age of head, and number of household members. The predicted index for blacks was 0.110, more than five and half times lower than the actual index. For Latinos, the predicted index was 0.191, less than half the actual 0.458. For Asians, the predicted dissimilarity index was only 0.087, one-fourth the actual 0.344.

This suggests that other factors besides income and family structure must be responsible for much of the segregation we find in major metro areas. One factor, of course, is racial preferences. In Los Angeles, more than 70 percent of whites express comfort with a neighborhood that is one-third black. However, when asked to consider living in a neighborhood that is 53 percent black and 47 percent white, the percentage of whites expressing comfort drops to just 46 percent. Using a similar technique for assessing preferences, Bluestone and Stevenson (2000) find that in the Boston metro area, whites felt the "ideal" neighborhood was one in which they represented 62 percent of the households, blacks represented 15 percent, Hispanics 10 percent, and Asians 13 percent. This would make for a fairly integrated neighborhood. When blacks were asked the same set of questions about their preferences, their "ideal" neighborhood turned out to be 41 percent black, 23 percent white, 19 percent Hispanic, and 17 percent Asian. Again, this is a fairly integrated neighborhood. The same was true for Hispanics, whose ideal community was 40 percent Latino, 25 percent white, 19 percent black, and 16 percent Asian. This sounds like nearly everyone is in favor of living in a racially and ethnically diverse neighborhood.

But there is one problem. The math simply does not add up. Combining the three "ideals" from the perspective of each racial/ethnic group, the perfect community is 62 percent white, 41 percent black, and 40 percent Hispanic. Unfortunately, a community cannot have more than 100 percent population! Therefore, part of the reason segregation persists is that few whites, blacks, Hispanics, and Asians want to live in a community where they are a distinct minority. As a result, there appears to be a good deal of self-segregation, as well as segregation due to income differentials.

Beyond income and personal preferences is the role of government policy in encouraging residential segregation. In 1938, the Federal Housing Administration (FHA) explicitly asserted in its underwriting manual that "if a neighborhood is to retain stability, it is necessary that properties shall continue to be occupied by the same social and racial classes. A change in social or racial occupancy generally contributes to instability or a decline in values" (Squires 1994). The agency encouraged the use of racially restrictive covenants in sales contracts and deeds. While the Supreme Court ruled that such covenants were unenforceable in 1948, the FHA continued to redline or refuse mortgage insurance to minority-dominated inner-city areas until 1965 (Colman 1975). By building public housing almost exclusively in central cities, the federal and state governments concentrated poorer families—many of them racial and ethnic minorities—into central city locations.

Even after the civil rights laws of the 1960s barred the federal government from racial discrimination, real estate brokers and banks contributed to racial and ethnic segregation by deliberate racial "steering"—showing white families housing only in white areas and blacks only in black. Commercial banks and mortgage companies discriminated against black families who were trying to obtain mortgages, as shown

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in matched-pair studies where a black borrower in the same financial position as a white borrower both approached the same bank for a housing loan. In many cases, the white borrower was more likely to obtain the mortgage.

The combination of unequal incomes, racial and ethnic preferences, and the legacy of implicit as well as explicit government policies is powerful enough to have kept segregation indices at well over 50 percent for most U.S. metropolitan areas. Adding to this problem is that it has proven difficult to maintain integrated neighborhoods once they achieve a low dissimilarity index. As a racial or ethnic minority begins to move into a neighborhood that was previously nearly all-white, there is normally only a small change in the racial or ethnic composition of the community. But in many cities, as more minority members move in, there appears to be a **tipping point** when the pace of white flight suddenly accelerates and a neighborhood becomes a majority minority in just a few years. This is consistent with the residential preferences mentioned earlier, which revealed that white residents, on average, are satisfied with having some minority neighbors, but prefer not to live in a neighborhood where they no longer comprise at least three-fifths of the residents.

Segregation and Social-Class Structure

In some cities, as the racial or ethnic composition of a particular neighborhood changed, there was also a change in the social-class structure of the community. The first African Americans who moved into the northwest section of Detroit in the 1960s—an area that had been comprised overwhelmingly of middle-class whites—were solidly middle class themselves and often had incomes equal to or greater than the whites who sold them their homes. Over time, however, as both middle-class white and middle-class black families moved to the suburbs, lower-income black families moved in behind them. The result was **downward filtering**, with the housing stock moving from medium quality to lower quality because the new families had less money to maintain these properties.

The opposite can occur as well. As we saw in Chapter 5, in a number of metro areas, central city neighborhoods have been rejuvenated as middle-class “pioneers” choose to move back to the city to take advantage of short commutes to downtown office jobs and the cultural and social amenities offered in dense communities. When these upper-income households begin to move into a dilapidated inner-city neighborhood, they help to improve the community. But as more middle-class households choose to buy into the community, they bid up rents and home prices, which leads to the displacement of the original residents. Such **gentrification** leads to **upward filtering**, and the consequent loss of affordable housing units is difficult to stop once a neighborhood’s property values begin to rise.

The passing of the tipping point in previously white neighborhoods that transition toward a majority or almost exclusive minority presence and gentrification of formerly rundown inner-city locations to white middle-class enclaves helps explain why the dissimilarity index in most metro areas declined only slightly between 1980 and 2000.

Concentrated Poverty in the Inner City

The combination of upward and downward filtering combined with racial segregation has intensified the spatial dimension of poverty in most metro areas. By the 1960s, social scientists were using the term **urban ghetto** to refer to sections of the city that contained high proportions of desperately poor households, most of them people of color. The term **urban slum** was also used to describe these neighborhoods, where the concentration of poor people leads to a concentration of social ills that cause or are caused by poverty. Just between 1970 and 1990, the number of people living in high-poverty areas doubled, as we noted in Chapter 2. The probability that a poor black child would be trapped in a high-poverty neighborhood increased from one in four to one in three (Jargowsky 2003). This occurred during a time when the poverty rate—the proportion of families living under the official U.S. poverty threshold—did not increase at all. What changed was the growing physical isolation of the poor in America. The social distance between the poor inner city and the more prosperous suburbs grew dramatically.

Such a concentration of disadvantaged households, especially in the inner city, tends to make poverty even more difficult to eradicate. As we noted in Chapter 7, with jobs moving to the suburbs, there is a tendency for **spatial mismatch** to occur where those trapped in the city are unable to reach the jobs that are increasingly located in more distant suburbs. The lack of good public transportation to the suburbs makes this problem even worse. In studying Atlanta, Katz and Allen (2001) find that three-fourths of new entry-level jobs are located at least 10 miles away from the inner city, where many poor unemployed workers live. Ihlanfeldt and Sjoquist (1990) estimate that about a quarter of the gap between black and white youth employment rates can be explained simply by the lack of access to employment opportunities afforded those living in inner-city poor neighborhoods.

Areas of concentrated poverty are also places where you will often find a proliferation of abandoned and boarded-up housing—even where there may be a shortage of housing units. In 2000, more than 16 percent of all the housing units in the central city of St. Louis were vacant. More than 10 percent were vacant in Buffalo, Hartford, and Detroit (U.S. Department of Housing and Urban Development 2007c). Low-income families can only afford to pay minimal rent. Landlords may find that the rent they can charge is insufficient to maintain their properties and still make the profit they expect. In general, the older the building, the greater the maintenance cost. If maintenance costs rise faster than revenue from rent, landlords will have little incentive to take care of their properties (unless they believe maintenance will permit them to sell these units at a sufficiently high price to compensate for the improvements, or unless local building inspectors or public health authorities insist on such investment). If the cost of maintaining the property is prohibitive—where total revenue minus total cost is less than required profit—landlords will allow their property to deteriorate to the point that it becomes uninhabitable and, ultimately, abandoned. This will happen particularly in areas where housing demand

has dropped so much that the highest rent a landlord can charge is below the cost of maintaining the property.

For those who have studied concentrated poverty, a high-poverty neighborhood is considered one in which 40 percent or more of its residents fall below the official poverty line (Danziger and Gottschalk 1987; Jargowsky and Bane 1991; and Kasarda 1993). Between 1970 and 1990, the number of concentrated poverty census tracts more than doubled across the country so that by the end of this period, 10.4 million people were living in concentrated poverty neighborhoods, most in inner cities.

One might have expected this trend toward concentrated poverty to continue beyond 1990. But, indeed, just the opposite occurred. The combination of rapid economic growth during the late 1990s, the growing ability of poorer families to seek housing in close-in suburbs, and the reemergence of the central city as a prime location for young urban professionals led to a dramatic reduction of concentrated poverty in many metro areas. According to Jargowsky (2003), of the 331 metro areas in the United States, 227 of them (69%) saw a decrease in concentrated poverty between 1990 and 2000; only 55 (17%) experienced an increase.

Overall, the population of high-poverty neighborhoods declined from 10.4 million in 1990 to 7.9 million in 2000. Almost all of this decline took place in central cities and in rural areas. In contrast, there was virtually no decline in concentrated poverty in the suburbs—mostly those close to the central city—where at least some of the poor had moved. By the beginning of the twenty-first century, there was growing concern that the inner-ring suburbs were becoming the new locus of concentrated poverty, with more affluent households concentrated in the new gentrified central city areas and in the outer suburbs. As such, the spatial deconcentration of poverty is leading to a new, doughnut-shaped geography of metro areas. Upward filtering is removing the poor from the inner city, while the outer suburbs remain blocked to low-income families through high housing prices and/or outright discrimination.

The result is a tendency toward an inner ring of growing poverty at the fringes of the central city and in the close-in suburbs. Yonkers, a close-in suburb of New York City, has seen its poverty rate increase from 9.8 to 15.5 percent—as its minority population increased from 21 percent in 1980 to 49 percent in 2000. Similarly, the poverty rate in Oak Park, Michigan, a close-in suburb of Detroit, increased from just 3.9 percent in 1970 to 9.4 percent in 2000. Over the same thirty years, the poverty rate in Brockton, Massachusetts—just south of Boston—rose from 8.5 to 14.5 percent. Although the poverty rate rose in each of these inner-ring suburbs, the increase in each case has been less severe than it might otherwise have been, presumably as a result of being closer to suburban jobs.

Federal Housing Policy

While housing would seem to be the quintessential local good, an array of national policies dictated by the federal government has an enormous influence on the supply of housing, the type of housing demanded, and the price households pay to live

where they do. The reason why government is involved at all in housing is that shelter is considered a **merit good**, whose consumption is deemed to be intrinsically beneficial and therefore worth encouraging. Decent shelter is seen as important to a household's well-being, not only for keeping its members warm and dry during inclement weather but because it also contributes to better health, very likely improves the chances of education success for young children, and provides a place for families to have some quiet refuge from the rest of the community. Just as they are encouraged to pay attention to proper nutrition and health care, families are also encouraged to live in decent homes.

Subsidizing Housing Demand

In fiscal year (FY) 2006, the U.S. Department of Housing and Urban Development (2006) provided a total of \$25.5 billion in housing assistance through a variety of rental assistance programs and funds for public housing. The vast majority of these funds went to low-income tenants. The federal government provided even more housing assistance—more than four times as much—through **tax expenditures**, most of which went to middle- and upper-income home owners. Tax expenditures are defined by the government as “revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability” (U.S. Congress Committee on Ways and Means and the Committee on Finance 2003). In FY 2006, tax expenditures for housing amounted to \$114 billion—including \$76 billion for the tax deductibility of home mortgage interest, \$15 billion for the residential property tax deduction, and \$18 billion for the exclusion of capital gains on the sale of a home owner's principal residence. As we saw earlier in this chapter, these tax policies encourage home ownership by reducing the cost of owning versus renting. The higher the tax bracket of the home owner and the greater the value of the home, the more valuable the deduction.

As we also noted earlier in this chapter, the creation of the Federal Housing Administration (FHA) in 1934 has played a critical role in increasing the home ownership rate in the United States. Under FHA, the Federal National Mortgage Association, better known as Fannie Mae, was created to help reduce mortgage risk by assisting financial institutions to diversify their portfolios. Fannie Mae runs a **secondary mortgage market** so that private banks can sell a portion of their primary mortgages sold to home owners for other types of securities. Fannie Mae and its newer federal mortgage cousin, Freddie Mac, aid the home owner by providing funds for mortgage lending and permitting local banks to limit their default risk and, therefore, offer lower interest rates. Freddie Mac claims that it saves the typical home owner \$18,000 in interest charges over the thirty-year life of a \$150,000 mortgage (Freddie Mac 2007).

Tax expenditures and the expanded availability of mortgage money increase the consumption of housing by augmenting the demand side of the housing market. The same has been true of a number of federal mortgage and rent subsidy programs.

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The Section 221(d)(3) program, introduced in 1961 under President John F. Kennedy, provided a mortgage subsidy for low-income home buyers, increasing their demand for housing. The Housing Act of 1974 was famous for creating the Section 8 **housing allowance** or voucher, which is equivalent to a cash grant to a low-income household that can only be used to help pay rent. Under Section 8, a qualifying household receives a monthly grant for the difference between the “fair market rent” for a particular housing unit (as determined by a hedonic index similar to one discussed earlier in this chapter) and the amount that the low-income renter can “afford.” In this case, a household is assumed to be able to afford a contribution toward rent equal to 30 percent of its monthly income, with the remaining 70 percent needed for other necessities. Hence, if a household has a monthly income of \$1,500, its expected contribution is \$450 ($.30 \times \$1,500$). If the household finds an approved Section 8 apartment with a fair market value of \$800 per month, the Section 8 allowance will equal \$350, the difference between the \$800 rent and the household’s \$450 expected contribution.

Only households with incomes of less than 80 percent of the “area median income” are eligible for Section 8. Since this housing subsidy is not an **entitlement** that is available automatically to all qualifying households, only a fraction of those eligible for Section 8 actually receive allowances—based on the amount of funds committed by Congress. In some communities, the Section 8 program is so over-subscribed that a household can wait for years to become eligible for assistance.

Subsidizing Housing Supply

If we are concerned about improving housing conditions for low-income families, the irony of federal government intervention on the demand side is that, as we have just seen, more than 80 percent of the demand-side subsidies go to better-off families through the tax expenditures that result from the deductibility of mortgage interest. What about the federal government’s interventions on the supply side of the housing market? There is an irony here as well. As we demonstrated in Figure 12.8, increasing the supply of housing is one way to reduce its price. Therefore, the logic of a supply-side intervention to improve housing conditions for low-income families would require that we increase the number of housing units. However, neither of the two major federal supply-side interventions of the mid-twentieth century actually resulted in an expansion of the housing stock. How can that be?

The Public Housing Act of 1937 provided federal subsidies to local housing authorities that wanted to clear out slums. It is the program under which many of the large-scale high-rise projects were constructed—including the notorious and since-demolished Pruitt-Igoe Houses in St. Louis and the Cabrini Green Houses in Chicago. These projects tended to exacerbate the social isolation of the poor. This proved to be a disastrous social experiment, where the concentration of poverty in these “projects” often led to dilapidation and high crime rates. Based on this adverse experience, very few new units of public housing have been built since the 1970s. What is left of public housing provision by the federal government is the HOPE VI (Housing Opportunities for People Everywhere) program, which provides government funds to rehabilitate

existing housing projects that are badly in need of renovation and repair. Under this program that began in the early 1990s, older high-rise buildings have been razed and, in their place, the government has constructed low-rise units and town houses. Public housing tenants are given temporary housing while the new units are being built and then have an opportunity to establish residency in the new units.

According to the noted urban historian Kenneth Jackson (1985), the purpose of the 1937 law was primarily to create construction jobs as a way of stimulating economic activity during the Great Depression of the 1930s. In order to protect real estate interests at a time when private housing markets were already weak, the law required that one housing unit—presumably a unit of low-quality slum housing—be destroyed for every new housing unit created by the program. Thus, on net, this intervention left the total supply of housing units unchanged.

The next major federal intervention on the supply side occurred with passage of the Housing Act of 1949. The preamble of this law stated that every American family deserves a “decent home and a suitable living environment” (Lang and Sohmer 2000). This act established the urban renewal program that cleared large swaths through many low-income urban neighborhoods and often used the cleared land to house a smaller number of higher-income households (as in the development of the upscale Charles River Park in the old working-class West End of Boston) or converted it to a nonresidential use (as in the Lincoln Center Performing Arts complex that replaced a Hispanic neighborhood on Manhattan’s West Side). As Rothenberg (1972) points out, the many goals of the urban renewal program were often incompatible with each other. Efforts to revitalize cities and bring back middle- and higher-income residents often played a greater role than improving housing standards for the poor. The program destroyed more housing units than it created, and many of those who were displaced wound up paying higher rents for poorer-quality units—the outcome we would expect, knowing that the program actually reduced the number of housing units available.

A more recent federal housing supply program, begun in 1986, is the Low Income Housing Tax Credit (LIHTC) targeted at encouraging affordable housing construction by private developers. By 2000, nearly 1 million housing units had been built under this program, which offers federally tax-exempt bonds to lower interest rates plus tax credits equal to 70 percent of the construction costs for privately developed housing projects that include a proportion of units reserved for low-income households. Developers can use the tax credits to offset losses to their after-tax profit that occurs as a result of offering housing to low-income households at below-market prices or rents. Today, the LIHTC is used to build more low-income housing than any other single federal program.

State and Local Housing Policy

While the federal government has played a substantial role—albeit one that has its paradoxes—on both the supply and demand sides of the housing market, states and

local communities are still responsible for most housing policies. As we noted above, the zoning decisions of local municipalities can reduce the supply of land available for housing, which increases the cost of producing new housing units. Without spending a penny, local jurisdictions can exert a powerful influence on both the rental and the home-ownership markets through such land regulation. Glaeser et al. (2006) estimate that increasing minimum lot size by one acre results in anywhere from an 11.5 to 13.8 percent increase in median home prices, after controlling for the size, age, and number of rooms in the house.

As state governments begin to better understand the impact of high housing prices on their own economic development, a number of states have begun to develop policies to influence local land regulations and to provide incentives for housing construction, particularly aimed at building housing for low- and moderate-income households. A number of states have created **housing trust funds**, which provide developers with low-cost loans if they agree to set aside a minimum number of units in their projects that can be rented or sold at below-market prices.

Some cities, including Boston and Cambridge, Massachusetts, have passed **inclusionary zoning laws**, which encourage builders to include a number of affordable housing units in their developments in return for the municipality permitting them to construct more units per acre and therefore lower their land costs. Alternatively, the developer of such a dense housing project can pay into a municipal fund that is then used to underwrite the housing trust fund, which can encourage the building of affordable units in other locations within the community.

Other municipalities have instituted **linkage programs**, which require developers of commercial and industrial property to pay into a housing fund in order to offset pressure on the housing market caused by the hiring of new employees in the businesses that occupy these properties and who presumably need housing themselves.

In a unique program, Massachusetts passed a Smart Growth Overlay Zoning law in 2005 that provides its cities and towns with monetary incentives if they rezone land around town centers, transit stops, and where abandoned industrial property is located so that denser, more affordable housing can be built (Carman, Bluestone, and White 2004). The new law complements older legislation passed in 1969, which required cities and towns to assure that 10 percent of their housing stock is affordable to low- and moderate-income households. If municipalities under the 10 percent threshold balk at permitting developers to build new housing in their communities, the developer can bypass local zoning and obtain a "comprehensive permit" from the state. In Massachusetts, where local home rule is so powerful in terms of zoning, this state law has been the single most potent instrument for assuring the production of low- and moderate-income housing. Even so, more than thirty-five years after passage of the law, only forty-seven of the state's 351 cities and towns are in full compliance with its requirements.

The Massachusetts law enacted in 1969, providing sanctions on municipalities that do not move aggressively to assure a minimum of 10 percent affordable housing, spawned action in other states. In 1975, the New Jersey Supreme Court held that every city and town in the state has the constitutional obligation to provide

for the "regional general welfare" by, in part, helping to meet the region's affordable housing needs (Haar 1996; Kirp, Dwyer, and Rosenthal 1996). The state court's now famous *Mt. Laurel* decision came in response to a group of low-income black residents in that New Jersey town, who tried to replace a local slum with thirty-six units of modestly priced garden apartments. The town refused to permit the small development, by maintaining zoning only for single-family houses. The court struck down the use of zoning to exclude low-income housing, but in the ensuing years, Mt. Laurel and virtually all other suburbs in the state found ways to evade the court's intent by establishing other barriers to development that included minimum lot sizes, building setback rules, and extraordinarily rigid environmental regulations.

Angered by the municipal response to its original ruling, the state supreme court came back in 1983 in *Mt. Laurel II* with a much more powerful set of sanctions like those in Massachusetts, which permitted a "builder's remedy" such that developers could circumvent local town regulations. While the state legislature in New Jersey, under great pressure from suburban voters, weakened the impact of *Mt. Laurel II* by permitting municipalities to meet their obligations through age-restricted housing for the elderly and through regional contribution agreements, the court's rulings have brought some positive results. In the town of Mt. Laurel itself, 140 town houses for low- and moderate-income renters were constructed and, throughout the state, more than 15,000 units of affordable housing were produced in the decade following the court's reaffirmation of the original *Mt. Laurel* decision.

Rent Control

In the face of escalating housing prices and rents, increasing the supply of housing should eventually bring the cost down and make decent shelter affordable to more families. But because of the range of barriers to producing more housing units, some advocates for low-income families have suggested the need to go back to some form of price control on rents. During World War II, as factory after factory switched from the production of civilian goods to military products, the U.S. Office of Price Administration established wage and price controls to combat inflationary pressure in the civilian sector. At the same time, to prevent landlords from gouging renters on what were now fixed incomes, it instituted a national system of rent control. After the war, New York City retained the controls and, during the 1970s, a number of cities—including Boston and Cambridge in Massachusetts and Los Angeles, Berkeley, and Santa Monica in California—reinstated various forms of rent stabilization.

The Unintended Short-Run Consequences of Rent Control

On the surface, such controls seem warranted and low-income households who find rent-controlled apartments benefit from them. Nonetheless, there is considerable evidence that while rent control may provide some price relief in the short run, there are consequences that build up over time and prove counterproductive to prospective

tenants, perhaps even more so than to landlords. There are at least six reasons for this:

1. By reducing the profitability of rental housing and increasing the possibility of expensive, time-consuming litigation over rent increases or evictions, the supply of rental housing tends to shrink in the long run.
2. Owners of existing rental housing are less likely and, in some cases, unable to afford to maintain their properties, which accelerates the *deterioration* of existing rental stock.
3. If not explicitly prohibited from doing so, landlords will *convert* their rental units to condominiums or other land uses, further reducing the supply of rental property to those who cannot afford to buy.
4. The existence of rent controls *discourages* developers from building new housing, even if the new housing is initially exempt from the rent-control statute. Possible future control of these properties is factored into the calculation of the rate of return, which reduces the expected value of the development.
5. Where only one municipality passes rent control, there is every inducement for developers to go elsewhere if they wish to remain in the housing production business.
6. In the long run, deterioration of the existing housing stock and the discouragement of new production lead to lower property tax revenue for the city and greater difficulty in funding city services—including those for low-income households.

These unintended consequences are not simply theoretical. An early study of rent control in New York City conducted by the RAND Corporation found that between 1960 and 1967, the inventory of "sound" housing increased by only 2.4 percent, while the inventory of "dilapidated" housing increased by 44 percent and the inventory of "deteriorating" housing increased by 37 percent. The same RAND study found that between 1965 and 1967, 111,400 units in the city were simply retired from the housing stock by landlords, converting them to other uses or abandoning them (Lowry et. al. 1971). A more recent study in Cambridge, Massachusetts, found that maintenance expenditure per rental unit declined by \$50 per year as the result of rent control, which led to growing deterioration over time (Navarro 1985).

The impact of rent control on the monthly rent that tenants pay and on the supply of rental housing is summarized diagrammatically in **Figure 12.18**. Point A represents the monthly rent that a tenant pays before rent control is instituted. With the supply of housing fixed in the short run (given the time it takes to build more housing or to have existing housing deteriorate in quality), the monthly rent drops to B—the price set under the rent-control statute. The tenant benefits by the difference between A and B, which is exactly what the landlord is forced to sacrifice. This short-run effect is what the advocates of rent control desire.

The Unintended Long-Run Consequences of Rent Control

The problem is that over the longer run—defined as the time when new housing can actually be built or existing housing can deteriorate—developers who expect lower

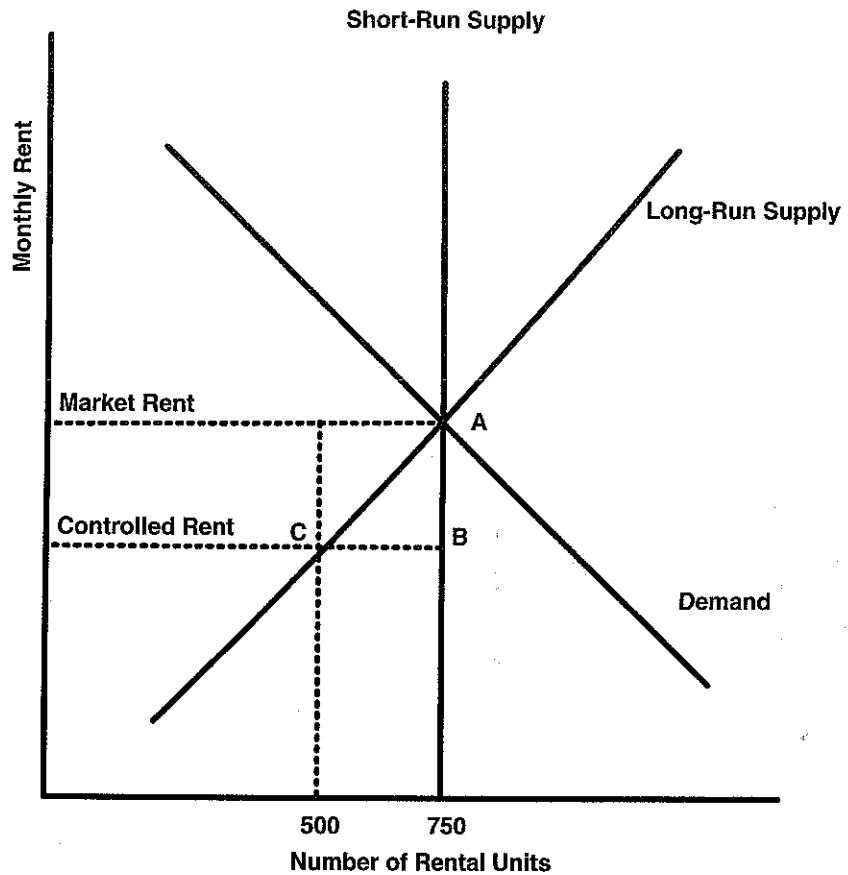


Figure 12.18 Short-Run and Long-Run Effects of Rent Control. In the absence of rent control, the market rent will be at point A, where housing supply and demand are equal. If rent control sets rent at B, landlords will begin to reduce the supply of rental units. This can occur as landlords convert existing rental units into owner-occupied condominiums, reduce the value of rental units by failing to maintain their properties, or as developers refuse to build new housing units in rent-controlled municipalities.

rents refuse to build as much housing as they might otherwise, and landlords either convert their units to condominiums for sale or allow existing units to deteriorate to the point where the real supply of decent housing declines. In the hypothetical example illustrated in Figure 12.18, the number of units declines from 750 to 500. In the long run, existing tenants continue to benefit from rent control, but low-income households looking for housing now find it even more difficult to find.

In practice, because of these unintended consequences, municipalities with rent control were often forced to consider "vacancy decontrol" in order to maintain some incentive for developers to build new units and for existing landlords to maintain their properties. Rent-control statutes were amended so that rents remained fixed only as long as the current tenant lived in the unit. When the tenant moved out of the apartment, the landlord was allowed to seek the market rate rent for the next tenant,

where the rent would be fixed again. This, however, created a strong incentive for landlords to evict tenants in order to hike the rent periodically. To counter this response, rent control needed further tinkering, which created rent-control boards where tenants could appeal their evictions. In order to evict a tenant, the landlord would have to prove that the tenant violated the lease in some way.

As rent control became increasingly burdensome with more and more rules to follow, landlords sought other ways to avoid it. By turning their rental units into condominiums and selling these units to home buyers, the supply of rental property declined even faster. In a number of municipalities, this led—in a continuing series of legal gambits and countergambits—to the inclusion of anticondominium conversion amendments in the rent-control statutes. In trying to deal with the landlords' ability to circumvent rent control, the entire rent-control machinery became more and more complex and more difficult to implement.

Beyond the deleterious effect on housing supply, rent control often ended up with unintended "distribution" effects. Those who are most in need of affordable rental housing are not the ones who always obtain it when rent control is instituted. Landlords have every incentive to select higher-income tenants who have the means to maintain their properties and do the routine upkeep that normally would be the responsibility of the owner. This means that landlords are less likely under rent control to lease units to low-income families, especially those with children. Also, once in a rent-controlled unit, renters are less likely to move even when "overhoused," so that one- and two-person households end up living in units that would be much better suited to larger families.

Essentially, rent control or "stabilization" creates a form of rationing that benefits those already in controlled housing yet harms those who need it most, exacerbating inequity in the housing market. In addition, if rent control lasts very long, it is common for a "black market" to be established in which landlords may ask for—or be urged to accept from potential tenants who are desperate for a rent-controlled apartment—illegal or quasi-legal, under-the-table payments. Without a great deal of monitoring, this activity will take place along with renter subletting that allows the renter to charge a fee in excess of the rent-controlled price. The longer rent control is in force, the greater the certainty that all of these unintended consequences will arise, undermining the stated objective of rent control. Not surprisingly, by the late 1990s, rent control had disappeared in most cities.

Indeed, there are only a few rare circumstances when economists conclude that the benefits of rent control can outweigh its adverse consequences. During World War II, when nearly everything was rationed or subject to price controls, it made sense to impose temporary limits on rent increases as well. It probably also made sense during the oil boom in Alaska, but only as a short-term measure, where it was expected that after construction of the pipeline there would no longer be the need for a large permanent housing stock. In these cases, there was no concern about the impact of rent control on discouraging future supply or of displacing low-income families in favor of richer ones.

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Intervening in Housing Markets: A Word of Caution

Given the importance of housing to social well-being, only those who hold the strongest free market conservative philosophy are against any and all interventions in the housing market. For those who favor deliberate policy, it is critical to understand that the variety of interventions confer a range of benefits and costs and produce both winners and losers. The federal tax deductions for mortgage interest and local property taxes cost the federal government more than \$100 billion a year in forgone tax revenue that could be used for all manner of other public goods and services. These tax expenditures benefit home owners while conferring little advantage to renters and almost surely lead to the "overconsumption" of housing in the form of bigger and plusher accommodations than would be the case if such tax forgiveness did not exist.

Public subsidies to developers of affordable housing increase the supply of housing, particularly for lower-income households, making it possible for such families to afford better housing than they would otherwise. But, once again, these housing subsidies have an opportunity cost because the revenue for such publicly provided subsidies could have been used for other public goods and services or returned to the taxpayers for their own use. Public subsidies that are provided to renters—and, in some cases, home owners—such as Section 8 vouchers, permit low-income households to purchase more and better housing than they would otherwise (and often benefit landlords), but in expanding the demand for housing, these vouchers most likely raise the rents for those who do not qualify for them.

Rent control, as we have seen, provides immediate relief for low-income renters—and others who somehow can take advantage of rent-controlled units—but the long-term implications for housing supply and prices are adverse.

Programs to limit zoning restrictions or to provide incentives for zoning reform that favors more housing probably have the fewest unintended consequences, but even here there are winners and losers. Increasing the supply of housing reduces the rate of housing price appreciation, which benefits those entering the housing market but reduces the price premium that existing home owners can charge.

There is a simple lesson here. As long as we believe that a particular good is a merit good, there can be a case for subsidizing its production and consumption. However, care must be taken to assure that both efficiency and equity are served by intervention in the market. This takes a thorough examination of various policies and even more careful implementation.

Appendix A

Indifference Curves and Budget Constraints

Many students who have taken introductory microeconomics will be familiar with the basic model and assumptions used to understand an individual's choices among various goods and services. In the basic model, the individual chooses a bundle of goods from the combinations permitted within his or her budget (including any available credit). Assuming unencumbered choice and availability, it can be inferred that this individual will choose the combination of items that maximizes his well-being. No other combination within his budget would make him any better off.

This type of behavior is normally depicted in a diagram that incorporates a **budget constraint** and a set of **indifference curves**. **Figure A12.1** shows a simple diagram with two goods (ice cream and beer) and a set of indifference curves for a single individual. The budget constraint is depicted by the straight line AB, which shows that this particular consumer has sufficient funds after all other consumer goods are purchased to buy fifteen ice cream cones a month if he buys no beer, or eighteen bottles of beer if he buys no ice cream. If the individual is willing to give up some beer, he can buy some more ice cream and if he is willing to give up some ice cream, he can buy some more beer.

This particular consumer likes both. The trade-off between his desire for ice cream and beer is shown in the set of indifference curves in the diagram. The points along each individual indifference curve show each of the combinations of ice cream and beer that leaves the individual absolutely "indifferent" in terms of utility or satisfaction. Thus, on the lowest indifference curve, our consumer is equally satisfied with six ice cream cones and two beers a month OR with three ice cream cones and three beers. The shape of the indifference curve suggests that when you have a large amount of one good and a small amount of another, you would normally be willing to give up a lot of the first good in order to get just a little more of the second.

To find out where this consumer ends up, you keep plotting individual indifference curves until you find the highest one that is just tangent to the budget constraint. At this point, X, the consumer with the budget constraint AB, is purchasing a monthly ration of ice cream and beer that provides maximum satisfaction. At any other point along the budget constraint, the consumer would be less satisfied—he or she would be on a lower indifference curve.

The key point is that the decision over the purchase of any combination of goods and services is based on two factors: the consumer's budget constraint and the

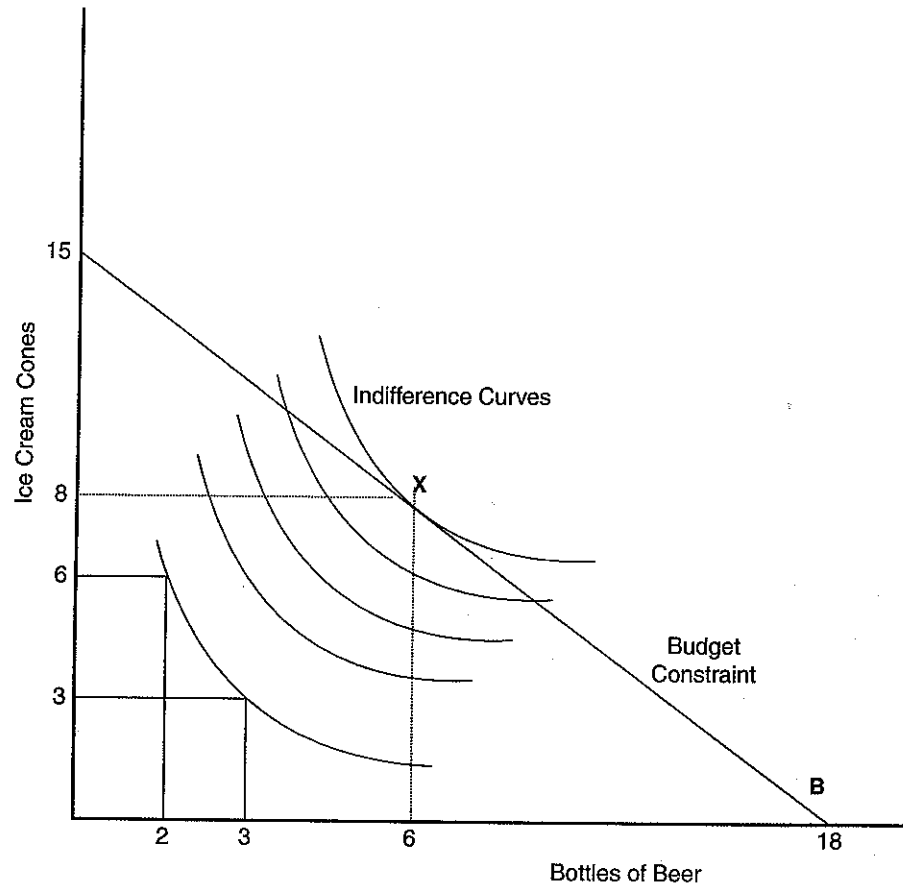


Figure A12.1 Budget Constraints and Indifference Curves.

consumer's preference function. By considering both of these, we can begin to understand what consumers purchase and why.

References

- Belsky, Eric S. 2006. "Rental Vacancy Rates: A Policy Primer." *Housing Policy Debate* 3, no. 3: 793–813.
- Bluestone, Barry. 2006. "Sustaining the Mass Economy: Housing Costs, Population Dynamics, and Employment." Paper prepared for the Federal Reserve Bank of Boston and the Rappaport Institute for Greater Boston at Harvard University, May.
- Bluestone, Barry, and Mary Huff Stevenson. 2000. *The Boston Renaissance: Race, Space, and Economic Change in an American Metropolis*. New York: Russell Sage.
- Carman, Ted, Barry Bluestone, and Eleanor White. 2004. *Building on Our Heritage: A Housing Strategy for Smart Growth and Economic Development*. Boston: The Boston Foundation.
- Charles, Camille Z. 2000. "Residential Segregation in Los Angeles." In Lawrence Bobo, Melvin Oliver, James Johnson, and Abel Valenzuela Jr., eds., *Prismatic Metropolis: Inequality in Los Angeles*. New York: Russell Sage, pp. 167–219.

- Cisneros, Henry G., Jack F. Kemp, Nicolas P. Retsinas, and Kent W. Colton. 2004. *Opportunity and Progress: A Bipartisan Platform for National Housing Policy*. Cambridge, Mass.: Joint Center for Housing Studies of Harvard University.
- Colman, William G. 1975. *Cities, Suburbs and States: Governing and Financing Urban America*. New York: Free Press.
- Danziger, Sheldon, and Peter Gottschalk. 1987. "Earnings Inequality, the Spatial Concentration of Poverty, and the Underclass." *American Economic Review Papers and Proceedings* 77, no. 2 (May): 211-215.
- DiPasquale, Denise, and William C. Wheaton. 1996. *Urban Economics and Real Estate Markets*. Englewood Cliffs, N.J.: Prentice Hall.
- Economic Policy Institute. 2005. "Family Budget Calculator." <http://www.epinet.org>.
- Farley, Reynolds, Howard Shuman, Suzanne Bianchi, Diane Colasanto, and Shirley Hatchett. 1978. "Chocolate City, Vanilla Suburbs: Will the Trend toward Racially Separate Communities Continue?" *Social Science Research* 7 (December): 319-344.
- Favro, Tony. 2007. "Affordable Housing Crisis Casts a Shadow over the American Dream." January 20. http://www.citymayors.com/society/housing_usa.html.
- Fischel, William A. 2001. *The Homevoter Hypothesis: How Home Values Influence Local Government Taxation, School Finance, and Land-Use Policies*. Cambridge, Mass.: Harvard University Press.
- Freddie Mac. 2007. "Just the Facts: How We Make Home Possible." Pamphlet. McLean, Va.: Freddie Mac, September.
- Glaeser, Edward L., Jenny Schuetz, and Bryce Ward. 2006. "Regulation and the Rise of Housing Prices in Greater Boston: A Study Based on New Data from 187 Communities in Eastern Massachusetts." Rappaport Institute for Greater Boston at Harvard University, January.
- Harr, Charles M. 1996. *Suburbs under Siege*. Princeton, N.J.: Princeton University Press.
- Heilbrun, James. 1987. *Urban Economics and Public Policy*. New York: St. Martin's Press.
- Heudorfer, Bonnie, and Barry Bluestone. 2006. *The Greater Boston Housing Report Card*. Boston: The Boston Foundation, September.
- Hobbs, Frank, and Nicole Stoops. 2002. *Demographic Trends in the 20th Century*. Washington, D.C.: U.S. Bureau of the Census, November.
- Ihlanfeldt, Keith, and David Sjoquist. 1990. "Job Accessibility and Racial Differences in Youth Employment Rates." *American Economic Review* 80, no. 1: 266-276.
- Jackson, Kenneth. 1985. *Crabgrass Frontier: The Suburbanization of the United States*. New York: Oxford University Press.
- Jakobovics, Andrew. 2006. "Housing Affordability Initiative: Land Use Research Findings." <http://web.mit.edu/cre/research/hai/land-use.html>.
- Jargowsky, Paul. 2003. "Stunning Progress, Hidden Problems: The Dramatic Decline of Concentrated Poverty in the 1990s." *Center for Urban and Metropolitan Policy*. Washington, D.C.: Brookings Institution, May.
- Jargowsky, Paul, and Mary Jo Bane. 1991. "Ghetto Poverty: Basic Questions." In L. E. Lynn and M. G. H. McGeary, eds., *Inner-City Poverty in the United States*. Washington, D.C.: National Academy Press.
- Joint Center for Housing Studies. 2007. *The State of the Nation's Housing*. Cambridge, Mass.: Harvard University Press.
- Kain, John, and John Quigley. 1975. *Housing Markets and Racial Discrimination: A Microeconomic Analysis*. Cambridge, Mass.: National Bureau of Economic Research.
- Kasarda, John. 1993. "Inner City Poverty and Economic Access." In J. Sommer and D. A. Hicks, eds., *Rediscovering Urban America: Perspectives on the 1980s*. Washington, D.C.: U.S. Department of Housing and Economic Development.
- Katz, Bruce, and Katherine Allen. 2001. "Cities Matter: Shifting the Focus of Welfare Reform." *Brookings Review* 19, no. 3 (Summer): 30-33.
- Kirp, David L., John P. Dwyer, and Larry Rosenthal. 1996. *Our Town: Race, Housing, and the Soul of Suburbia*. New Brunswick, N.J.: Rutgers University Press.
- Lancaster, Kevin. 1972. *Consumer Demand: A New Approach*. New York: Columbia University Press.

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- Lang, Robert E., and Rebecca R. Sohmer. 2000. "Legacy of the Housing Act of 1949: The Past, Present, and Future of Housing and Urban Policy." *Housing Policy Debate* 11, no. 2: 291–298.
- Levenson, Michael. 2006. "Most Who Left State Don't Plan to Return: Jobs, Housing Inspired Moves, Survey Finds." *Boston Sunday Globe*, May 14, p. 1.
- Lipsey, Richard. 1960. "The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1862–1957: A Further Analysis." *Economica* 26, no. 105 (February): 1–31.
- Lowrey, Ira S., Joseph S. De Salvo, and Barbara M. Woodfill. 1971. *Rental Housing in New York City*. Publication No. RM-6190. Santa Monica, Calif.: RAND Corporation.
- Massey, Douglas S., and Nancy A. Denton. 1988. "The Dimensions of Residential Segregation." *Social Forces* 67, no. 2: 281–315.
- Miller, Sara L. 2006. "Homeowners Stretched Perilously." March. <http://www.csmonitor.com>.
- Navarro, Peter. 1985. "Rent Control in Cambridge, Massachusetts." *Public Interest* 91 (Spring): 83–100.
- Office of Federal Housing Enterprise Oversight (OFHEO). 2006. "House Price Increases Continue; Some Deceleration Evident." Washington, D.C.: OFHEO, June.
- Phillips, A. W. 1958. "The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957." *Economica* 25, no. 100 (November): 283–299.
- Rothenberg, Jerome. 1972. "The Nature of Redevelopment Benefits." In Matthew Edell and Jerome Rothenberg, eds., *Readings in Urban Economics*. New York: Macmillan.
- Squires, Gregory. 1994. *Capital and Communities in Black and White: The Intersection of Race, Class and Uneven Development*. Albany: State University of New York Press.
- U.S. Bureau of the Census. 2003. *Statistical Abstract of the United States, 2003*. Washington, D.C.: U.S. Government Printing Office.
- . 2005a. *Racial and Ethnic Segregation in the United States: 1980–2000*. Washington, D.C.: U.S. Government Printing Office.
- . 2005b. *Statistical Abstract of the United States, 2004–5*. Washington, D.C.: U.S. Government Printing Office.
- . 2007. "Homeownership 1900–2000." <http://www.census.gov/hhes/www/housing/census/historic/owner.html>.
- U.S. Congress. Committee on Ways and Means and the Committee on Finance. 2003. "Estimates of Federal Tax Expenditures for Fiscal Years 2004–2008." Report. Washington, D.C.: U.S. Government Printing Office, December 22.
- U.S. Department of Housing and Urban Development. 2006. *Fiscal Year 2006 Budget Summary*. Appendix A. Washington, D.C.: U.S. Government Printing Office.
- . 2007a. "Affordable Housing." <http://www.hud.gov/offices/cpd/affordablehousing>.
- . 2007b. *Annual Homeless Assessment Report to Congress*. Washington, D.C.: U.S. Government Printing Office, February 28.
- . 2007c. HUD User Policy Development and Research Information Service. SOCDs (State of the Cities Data Systems) data set. <http://socds.huduser.org>.

Chapter 12 Questions and Exercises

1. As Chapter 12 discusses, the housing market is a key aspect of the metropolitan economic and social environment. What is the housing market like in the metropolitan (or micropolitan) areas of interest to you? To explore this question, let's look first at how housing in those areas is divided among owner-occupied housing, renter-occupied housing, and vacancies in three CBSAs of your choice and in one principal city within each of those three CBSAs. To obtain these data in the *Urban Experience CD*, go to the "Get Data" screen and follow these directions:

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- In the “Choose Data Items” section, click on the arrow immediately to the right and choose “Percentages.”
 - Check the box next to “Percentages” when it appears under “Choose Data Items” and a drop-down list of data categories will appear.
 - Check the box next to “Housing.” Another drop-down list will appear; check the boxes next to “Vacant Units” and “Occupied Units.”
 - Move on to the “Choose Locations” section of the screen. Double-click on “By CBSA Name” and a drop-down list of all CBSAs will appear. Scroll down until you locate the first of the three CBSAs you have decided upon. Double-click on the name of the CBSA and a drop-down list will appear underneath the name of the CBSA. Note that the first item in this list is the sum for all principal cities of the CBSA (the identifying name ends with (“CBSA-Prin Cities”). The second item in the list is the sum for all suburbs in the CBSA (the identifying name ends with “CBSA-suburbs”). The next items in the list are each of the individual principal cities in alphabetical order (there may be one or more than one). After all principal cities have been listed, the list continues with each of the individual suburbs in alphabetical order. For this exercise, check the box for the CBSA (the top box that is offset to the left) and then check a box next to any one of your choices among the principal cities. Proceed to the next two CBSAs you have chosen (one at a time) and repeat checking the boxes for the overall CBSA and for a principal city in the CBSA.
 - Finally, in the “Choose Years” section of the screen, check the box for 2005.
 - Click on “Go,” and then, on the far left side of the screen, click on “Chart” (or if you prefer seeing the results in a table, click on “Table”).
 - ✦ Among the areas you chose, which have the highest vacancy rates?
 - ✦ Which factors might account for the variation in the vacancy rates?
2. Cities and metropolitan areas may vary a great deal in the proportions of their occupied housing that are owner occupied and renter occupied. This aspect constitutes the next inquiry we will make into the housing market in the CBSAs you have chosen.
- To obtain these data in the *Urban Experience* CD, follow these steps:
- Click on “Get Data” to return to the main screen.
 - Remove the checks in the boxes next to “Vacant Units” and “Occupied Units” and check the boxes next to “Owner Occupied” and “Renter Occupied.” Leave everything else the same as in the previous exercise.
 - Click on “Go,” and then, on the far left side of the screen, click on “Chart” (or if you prefer seeing the results in a table, click on “Table”).
 - ✦ Among the CBSAs you selected, which have the highest proportion of owner-occupied housing?
 - ✦ Among the principal cities you selected, which have the highest proportion of owner-occupied housing?
 - ✦ Within each CBSA, how does the proportion of owner-occupied housing differ between the CBSA as a whole and the principal city you selected?

3. Cities and metropolitan areas also may vary considerably in the cost of housing. Investigate this aspect of the market in the areas you selected by considering the median cost of rental housing.

To get these data in the *Urban Experience CD*, follow these steps:

- Click on “Get Data” to return to the main screen.
- In the “Choose Data Items” section, click on the arrow immediately to the right and choose “Counts.” Check the box next to “Counts” when it appears under “Choose Data Items” and a drop-down list of data categories will appear.
- Check the box next to “Household Rent/Owner’s Value.” Another drop-down list will appear.
- Check the box next to “Median Household Gross Rent.” Leave everything else the same as in the previous two exercises.
- Click on “Go,” and then, on the far left side of the screen, click on “Table.”
 - ✦ In 2005, among the CBSAs you selected, which have the highest median household gross rent and which have the lowest?
 - ✦ Among the principal cities you selected, which have the highest and lowest median household gross rent?
 - ✦ Within each CBSA, how does the median household gross rent differ between the CBSA as a whole and the principal city you selected?
 - ✦ Which factors might account for the variation in the median rent levels?

4. As Chapter 12 discusses, the cost of housing changes in response to conditions affecting demand and supply. As the next step in your investigation of the housing markets in the CBSAs you selected, take a look at how median household gross rent has changed between 1970 and 2005. (Note that the dollar amounts used for this exercise are “real dollars”—they have been adjusted to take inflation into account.)

To get these data in the *Urban Experience CD*, follow these steps:

- Click on “Get Data” to return to the main screen. Make sure that the screen has “Counts” immediately to the right of “Choose Data Items” and that the box next to “Median Household Gross Rent” is checked.
- In the “Choose Years” segment of the screen, check the boxes for all of the available years. Leave everything else the same as in the previous two exercises.
- Click on “Go,” and then, on the far left side of the screen, click on “Table.”
 - ✦ Among the CBSAs you selected, which one has the largest change in dollar value between 1970 and 2005?
 - ✦ Which CBSA has the largest percentage change? Calculate the percentage change for each CBSA by dividing the 2005 dollar amount by the 1970 dollar amount.
 - ✦ Among the principal cities you selected, which one has the largest change in dollar value and which has the largest percentage change?

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- ✦ Which factors might account for the variation (if any) in the change of the median gross rent that you found?

5. Housing affordability depends upon the size of the housing unit, which depends in turn upon the size of the household seeking housing. You can investigate the expected housing costs for various sizes of families in different metropolitan areas through the Economic Policy Institute's (EPI) "Family Budget Calculator" (micropolitan areas are not included in the EPI's calculator). To access this calculator, go to

http://www.epi.org/content.cfm/datazone_fambud_budget

Click on "One parent, two children," and then enter the state and one metro area of your choice.

- ✦ What is the expected cost of monthly housing for a family of that size in that metro area?
- ✦ Return to the Family Budget Calculator Web page (refreshing the screen if necessary) and this time click on "Two parents, three children." What is the expected cost of monthly housing for a family of this size?
- ✦ Repeat this investigation for two other metro areas of your choice. In which metro areas are the expected housing costs for each of these two sizes of family the highest and the lowest?

6. As Chapter 12 discusses, residential segregation is an important socioeconomic issue in metropolitan areas. The U.S. Bureau of the Census publishes a report, "Racial and Ethnic Residential Segregation in the United States: 1980–2000," available on the Web at

http://www.census.gov/hhes/www/housing/housing_patterns/pdfdoc.html

The report contains dissimilarity indexes for a number of metropolitan areas, calculated from U.S. Census data in 1980, 1990, and 2000. Go to this Web site and click on the link for "Residential Segregation of Blacks or African Americans: 1980–2000" to access the chapter on dissimilarity indexes for black/white (non-Hispanic) metro area residents. Advance to Table 5-4.

- ✦ Among the metropolitan areas listed, which five had the highest black/white dissimilarity indexes in 2000? Which five had the lowest indexes?
- ✦ Pick any three of the metro areas listed. Referring back to the discussion of dissimilarity indexes in Chapter 12, how would you interpret the dissimilarity indexes in 2000 for each of these metro areas?
- ✦ For each of these three metro areas, how did their dissimilarity indexes change between 1980 and 2000?

Return to the main Web page of the aforementioned report and click on the link for "Residential Segregation of Hispanics or Latinos: 1980–2000" to access the chapter on dissimilarity indexes for Hispanic/white (non-Hispanic) metro area residents. Advance to Table 6.4.

- ✦ Among the metro areas listed, which five had the highest Hispanic/white dissimilarity indexes? Which had the lowest?

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- ✦ Picking three of the metro areas, how did their dissimilarity indexes change between 1980 and 2000?

Repeat these questions, if you so desire, for the chapters on “Residential Segregation of Asians and Pacific-Islanders” and “Residential Segregation of Native Americans and Alaska Natives” by returning to the main Web page and choosing the relevant chapters of the report.