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Land Rent and Housing Policy: A Case Study of the San Francisco Bay Area Rental Housing Market

By STEPHEN E. BARTON*

ABSTRACT. In the San Francisco Bay Area, where residential rent is among the highest in the United States, an analysis of data from several sources demonstrates that high rent cannot be accounted for by higher quality, higher operating costs, or higher construction costs. At least one-third of the total rent paid is land rent. Despite increases in real incomes, very-low-income tenants in the Bay Area today have less income remaining after payment of rent than tenants did in 1960. High land rent is a long-term feature of the Bay Area rental market that results mostly from its geography, the density of its urban centers, and a strong economy, rather than from regulatory barriers to new multifamily construction. Deregulation is not a sufficient response to the effects of land rent on low-income tenants. Government should subsidize non-profit housing organizations, particularly land trusts that remove residential land from the market. Taxes on land rent would be a particularly appropriate funding source.

Land Rent

The people who live and work together in urban areas collectively generate economic, cultural, and social benefits. This is partly done through the government, the institution we use to provide public

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safety, transportation, education, and other systems that sustain urban life. It is partly through the simple fact that urban areas generate dense networks of human interaction that advance knowledge and creativity in every field and endeavor, whether it is the arts, the sciences, business, government, or ways of life. Locations within and near these areas become valuable because space is limited. Land for development is most easily available away from the central area, and in the areas that are closely connected to the urban core by transportation systems. More housing can be built within or nearby the central area only by building up (vertically), which increases construction costs, especially when it involves the demolition and replacement of lower-density buildings that are already in place.

The investors who own the land in which there are high concentrations of desirable human interactions and activities profit from this increased value even when they have contributed little or nothing to that increase. This disconnect between creation of land value and profit from land value results in a cruel irony for people who do not own real estate. They contribute to making the city they live in a better and more interesting place, and in doing so, they increase land values, which increase the rent they have to pay to continue to live there. A well-known example of this is the common pattern in which artists who live in a low-rent neighborhood are forced out by rising rent when the neighborhood is “discovered” by higher-income people.

Residential real estate is a form of property that combines buildings and the land that the buildings sit on. When people buy a home, part of what they pay for is the building, and a part is for the land it sits on. When people rent an apartment, part of their rent payment supports construction, operation, and maintenance of the building (building rent), and part of the payment is for access to that location (land rent). When people cannot afford to pay enough rent to cover the costs of operating and maintaining a decent apartment building, they have an income problem. But when people have enough money to cover those costs and still cannot find affordable decent quality housing, then housing affordability is not just an income problem, it is a problem of land rent. The presence of land rent has important implications for housing policies intended to assist low-income tenants. In the following pages, this essay will present evidence that

land rent is a major and long-term aspect of the San Francisco Bay Area rental housing market. This article will then briefly discuss its implications for housing policy.

Land Rent in the San Francisco Bay Area Rental Housing Market

After the Hurricane Katrina disaster in New Orleans in 2005, thousands of newly homeless families spread out across the United States. Some came to a Bay Area city where a non-profit housing developer had nearly completed renovation of an apartment building and had several vacant units that could be made available to displaced families at rent far below market. The staff worked overtime to finish the job quickly, private citizens donated household furnishings and goods, and the Executive Director of the housing group proudly showed the first available apartment to a family from New Orleans. The head of the family walked through the unit and said: "This is a dump. For the same rent in New Orleans we had our own house with a yard and a swimming pool." Just prior to the hurricane, in 2004, the median contract rent in New Orleans was \$473, less than half of the \$1,052 median rent for an apartment in the San Francisco Bay Area that year. (U.S. Census Bureau, American Community Survey 2004.)

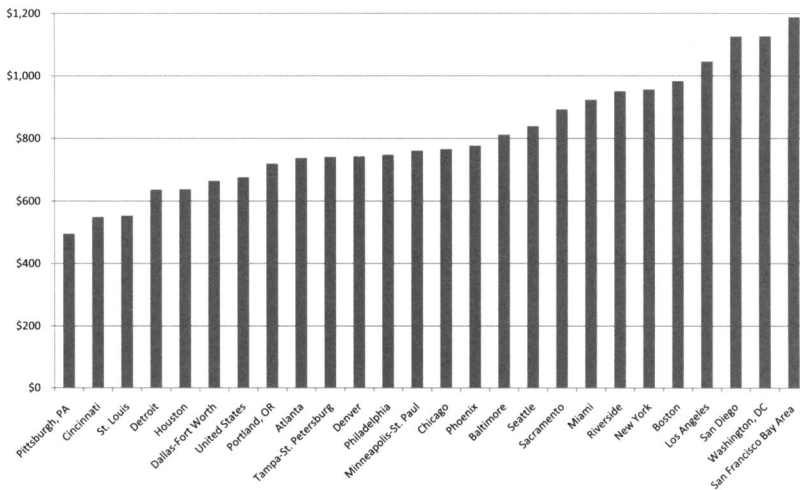
Figure 1 shows the 2008 median monthly rent for the 25 largest U.S. metropolitan areas, plus the median for all U.S. cities (U.S. Census Bureau, American Community Survey 2006–2008). The median rent for all U.S. cities is towards the lower end because the U.S. cities' average includes all the smaller metropolitan areas, which tend to have lower densities and lower housing costs.

The San Francisco Bay Area has the highest rent of any major metropolitan area in the U.S. The median rent in all of the U.S. metropolitan areas is 43 percent lower than the Bay Area rent. Even the 25th percentile monthly rent in the Bay Area of \$882 is higher than the median rent in most other major metropolitan areas (Table 1 in the Appendix shows rent by quartile). The other metropolitan areas of coastal California, San Diego, and Los Angeles are not far behind, surpassed only by the Washington D.C. area.

The sources of land rent in the Bay Area rental housing market are a combination of the demand factors that make the Bay Area a

Figure 1

Median Monthly Contract Rent, 25 Largest Metropolitan Areas and All U.S. Cities



desirable place to live, and the supply factors that severely constrain the availability of land that can be developed with multifamily housing. The Bay Area has a strong economy led by Silicon Valley and biotechnology firms, high-quality infrastructure created by public investment in world-class universities, highways, mass transit, and parks. The Bay Area also has a beautiful environment featuring the Bay and the California coast, and an open, diverse regional culture that is highly attractive to creative people. At the same time, it features extraordinary barriers to housing development, including difficult geography, with a coast, a bay, and hilly areas with steep slopes, highly developed local government land use regulations, and a central area that is already relatively dense by U.S. standards, which makes increases in density more costly because they often require redevelopment of sites already built on and more costly forms of high-rise construction.

There are excellent estimates of the magnitude of land values in the single-family housing market. Davis and Palumbo (2006) used data on

single-family home prices to separate the value of buildings and land in the homeownership market in the 46 largest metropolitan areas of the United States. They found that in the largest 46 metropolitan areas in 1984 the land value averaged 32 percent of the value of a single-family home, a figure that ranged from 11 percent in the Midwest to 55 percent on the West Coast, with the value in land reaching 61 percent in the Oakland area and 75 percent in the San Francisco area. By 2004, near the high point of the 1998–2007 “housing bubble,” a nationwide average of 51 percent of the value of a single-family home in the 46 largest metropolitan areas could be attributed to the land, and the proportion ranged from 36 percent of total value in the Midwest to 74 percent in the West Coast states. In the Oakland and San Francisco areas, 78 percent and 89 percent of the value (respectively) of the average single-family home was in the land by 2004, the highest ratio among the major metropolitan areas. While the collapse of the housing bubble may return the U.S. to something closer to the 1984 price structure, land values clearly constitute a major component of ownership housing prices in many metropolitan areas, and are particularly high in the San Francisco Bay Area.

Similar studies of rental housing are not available, and far less data is available on rental housing. I will use some readily available data sources to produce rough estimates of the magnitude of land rent in the Bay Area rental housing market. In order to do so, this study needs to correct for three possible alternative explanations for the Bay Area’s higher rent: (1) higher housing quality, (2) higher operating costs, and (3) higher construction costs.

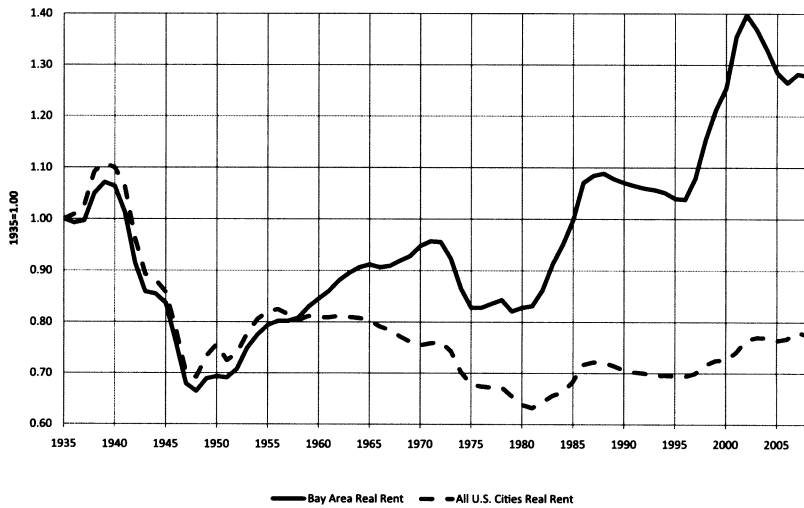
This article will examine these possibilities and provide estimates of the extent to which each of these may explain the Bay Area’s higher rent. The remaining unexplained differential provides a rough measure of the extent of land rent in the Bay Area’s rental housing market.

Alternative Explanation: Housing Quality

There is an excellent source of data on residential rent that corrects for changes in quality—the Bureau of Labor Statistics’ Consumer Price Index (CPI) residential rent component. The CPI housing sample takes into account changes in the quality of the housing stock, making

Figure 2

Bay Area & U.S. Real Rents, 1935–2008 (CPI-R/CPI-Less Shelter)

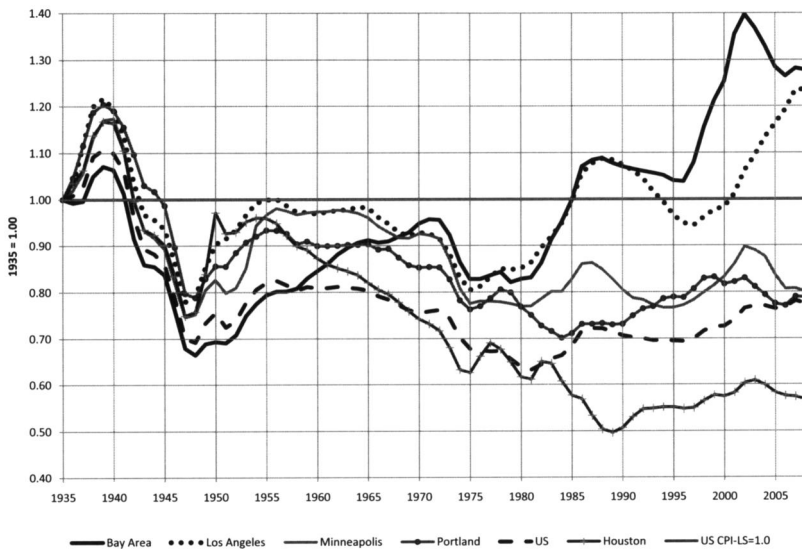


adjustments for changes in size and amenities such as the number of bedrooms, bathrooms, and other rooms. This ensures that the increases measured by the rent component of the CPI reflect actual price increases for goods of the same quality (Henderson and Berenson 1990). CPI data is available nationally, for all U.S. cities, and separately for the largest metropolitan areas, including the San Francisco Bay Area. This CPI data allows comparisons between changes in quality-adjusted rent over time.

Figure 2 shows the trend in Bay Area and U.S. rent measured against the change in the CPI-all items less shelter since 1935, which is when the less shelter index first became available.¹ The U.S. and Bay Area real rent follow each other closely until the late 1950s. After that point the U.S. rent remains largely stable, while the Bay Area rent increases. Taking the 10-year post-war period of 1946 to 1955 as a base-line, by 2008 the Bay Area rent was 69 percent higher than it would have been if it had changed in the same proportion as the U.S. average rent. In other words, if the Bay Area rent had followed the trend of the average U.S. cities' rent, it would have been 41 percent

Figure 3

Change in Real Rent, Selected Metropolitan Areas, 1935–2008



lower and it would be comparable to rent in the Portland, Oregon area. (There is reason to believe that the historical CPI data underestimates increases in rent, with the result indicating that the quality-adjusted gap between the Bay Area and the rest of the U.S. could be even greater than it appears.²⁾)

Figure 3 compares changes in real rent since 1935 for the Bay Area and Los Angeles area, as well as several major metropolitan areas with more balanced housing markets including: Portland, Oregon, Minneapolis-St. Paul, and Houston, Texas. The trend for Los Angeles has been somewhat different from the Bay Area's, but they have diverged nearly as much from the trend for the U.S. as a whole.

Portland is a successful, growing West Coast metropolitan area well known for the high quality of its urban life. Minneapolis-St. Paul is a Midwestern area also known for its high quality of life. These metropolitan areas, along with San Francisco, San Jose, and Oakland, are among the top 10 in Richard Florida's urban "creativity index," metro-

politan areas that score highly on “technology, talent, and tolerance” (2005: 283–284). Florida comments that “The greater Minneapolis region combines a strong creative economy with low rates of poverty, affordable housing and a balanced income distribution” (2005: 262). In the Houston area, land values and land rent are at a minimum. Houston is widely known as the only major city in America without zoning and weaker land use regulations (Saiz 2010; Siegan 1972).

The comparison between the Bay Area and the U.S. as a whole is a conservative way to estimate land rent. There is an element of land rent in virtually every local housing market, so any comparison of the Bay Area with other cities will simply show how much more land rent is to be found in the Bay Area rather than the total amount of land rent throughout the U.S. For example, even in the Portland area, with a much more balanced housing market and much lower rent, a study found that between 1992 to 2002 “increased population, coupled with an essentially fixed supply of land” caused real increases in apartment rent in the center and at major transportation nodes, and “resulted in a wealth transfer from renters to owners” (Wilson and Frew 2007: 214). The comparison with Houston also suggests that the average U.S. rent already includes a significant amount of land rent.

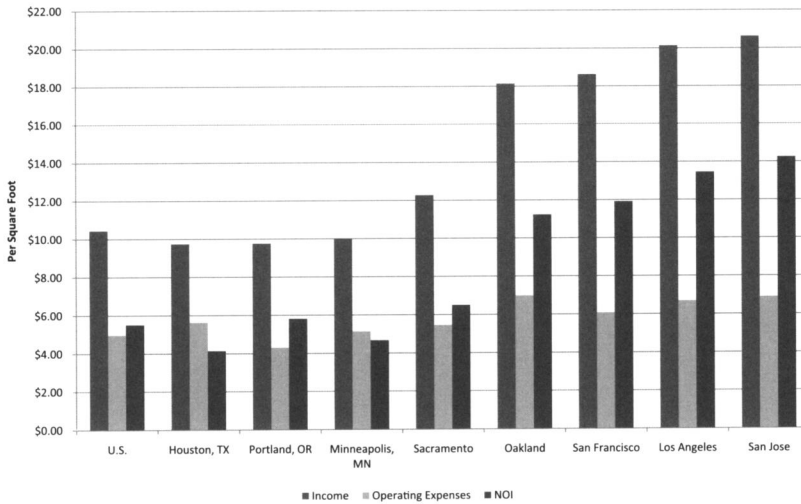
Alternative Explanation: Operating Expenses

We can look at whether the Bay Area’s higher rent can be explained by higher operating and maintenance expenses by using data from the Institute for Real Estate Management (IREM). The Institute publishes an annual “Income/Expense Analysis” with data on operating expenses, rent collections, and net operating income from a survey of its membership broken down by metropolitan areas, so it is possible to make the necessary comparisons. Operating expenses, as tracked in the survey and commonly understood in the industry, include taxes but do not include mortgage and other financing expenses. Debt service is considered to be an investment expense that is paid out of the net operating income, rather than as an operating expense.

Figure 4 shows the median rental income, operating expenses, and net operating income per square foot for the U.S., the Bay Area, and other selected cities as reported to IREM for garden apartment build-

Figure 4

Rental Income, Operating Expenses, NOI for Selected Metropolitan Areas, 2007



ings for 2007.³ (Garden apartment buildings are low-rise rentals with associated green space, the largest group in the IREM sample and the only type that can provide a comparison with all areas.) The comparison cities are those previously shown in the section that examined the changes in the CPI rent component.

The median rent for garden apartments in the central Bay Area, which includes the metropolitan areas of Oakland (Alameda and Contra Costa Counties), San Jose (Santa Clara County), and San Francisco (Marin, San Francisco, and San Mateo Counties), are from 74 percent to 98 percent higher than the median rent nationwide. The variation in net operating income (NOI) is substantially greater than the variation in operating expenses. The median operating expenses in the Bay Area are from 22 percent to 40 percent above the U.S. median, while the NOI in the Bay Area is from 104 percent to 158 percent higher than the U.S. median. The higher expenses in both the Bay Area and the Los Angeles area average out to 9 percent of the U.S. average rent (see Table 2 in Appendix).

With the median NOI in the Bay Area so much higher than the nationwide average, a typical rental property in the central Bay Area will have more than twice the value per square foot of similar rental properties in many other parts of the U.S. The result of higher property values is that, even with California's property tax limitation, over half of the difference between average operating expenses in the U.S. and the Bay Area and the Los Angeles area is the result of higher property taxes (see Table 3 in Appendix). In effect, this creates a small tax on land rent in the Bay Area and the actual adjustment for higher operating expenses drops to about 4 percent of the rent in the Bay Area. However, if we include the public services paid for through real estate taxes as an essential aspect of housing, then the higher operating cost differential is the appropriate comparison. Higher operating expenses appear to explain from 4 to 9 percent of the 40 percent gap between the Bay Area and the average U.S. rent.

Alternative Explanation: Construction Costs

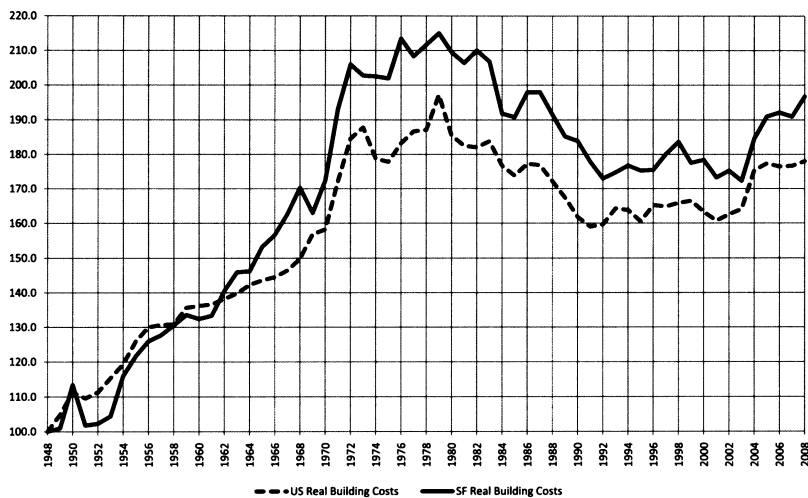
The San Francisco Bay Area has among the highest construction costs in the United States, but this has been true for quite a long time. In order to compare Bay Area construction costs with other cities, we can refer to ENR, the former Engineering News Record, which maintains a general purpose building cost index based on the cost of a fixed quantity of skilled and unskilled labor and materials from 22 different urban areas.⁴

Figure 5 shows the change in the ENR building cost index from 1948 to 2008 adjusted by the change in the CPI-Less Shelter.

Figure 5 shows that both the U.S. and Bay Area building costs increased rapidly from 1948 to 1972 and then flattened out for a decade, and have declined since 1979. Bay Area building costs increased faster than the U.S. average costs from 1962 to 1976, but have actually declined slightly more than average U.S. costs since then. On average, since 1962 the Bay Area's real costs have been 9.5 percent higher than U.S. real costs. Construction costs are paid for out of the NOI, which often reaches two-thirds of the rent in newly constructed buildings, so a 9.5 percent increase in NOI would increase rent by 6.4 percent in buildings built since 1962. The 2008 American

Figure 5

Change in Real Building Costs, 1948–2008 (Adjust by CPI-Less Shelter)



Community Survey indicates that 60 percent of Bay Area rental housing was built after 1960 so that would mean higher construction costs potentially increased Bay Area rent by 3.8 percent.

Furthermore, while housing is a good that requires a major initial capital investment, the subsequent cost of operation, maintenance, and periodic renovations is much lower. Indeed, if newer construction is higher quality it may be less costly to operate and maintain over the life of the building, with lower utility costs due to better insulation, for example. If there is sufficient continuing production of new housing, which is usually directed towards higher-income tenants, then as time passes there will be a continuous stream of additional older housing that will compete for tenants with existing older housing and this competition will reduce rent to an amount that is closer to the actual ongoing costs.⁵ Since construction costs are amortized over time, a reasonable argument can be made that the effects of higher construction costs should only apply to buildings still in their amortization period. The standard depreciation period of 27.5 years would take us back to 1980. The American Community Survey (2006–2008)

indicates that 27 percent of Bay Area rental housing was built since 1980, which would mean that higher construction costs are responsible for only 1.7 percent of the Bay Area rent.

Construction costs are substantially lower in the Los Angeles and San Diego areas, even though rent is nearly as high, which further casts doubt on the idea that construction costs are the driving force behind high rent in coastal California.⁶

Estimate of Land Rent in the Bay Area

Drawing together this analysis of data on rent adjusted by quality, operating costs, and construction costs, we arrive at the following rough estimate of the proportion of land rent in the Bay Area rental housing market.

Difference between Bay Area and U.S. median rent, 2008	43%	
Quality-adjusted gap between Bay Area and U.S. rent: Based on change in CPI-R/CPI-LS, 1946/1955–2008	41%	
Correction for higher operating expenses (OE):	–9%	
Alternative OE correction excepting real estate taxes: Based on IREM 2007 data	–4%	
Correction for higher construction costs: Based on ENR index, 1948–2008	–2%	
Estimated land rent:	30%	35%

This estimate is necessarily very approximate given the limitations of the data used. It serves to give a general sense of how much tenants in the Bay Area pay in pure land rent, over and above the rent that is actually necessary to support their rental housing.

The Impact of Land Rent on Bay Area Tenants

Based on the ideal of a fully open and competitive rental housing market in which land rent is held to a minimum, rent in the Bay Area should be at least 30 percent below current levels, with a median rent

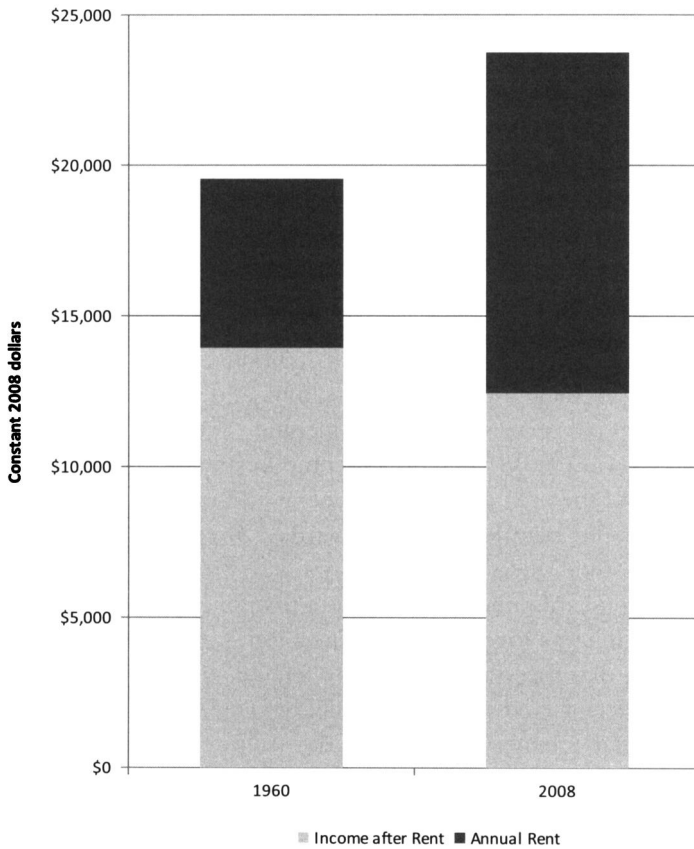
around \$832 (close to the median for the Seattle area), and likely as much as 35 percent lower, with a median rent of around \$772 (close to the median for the Minneapolis-St. Paul area). According to the Census Bureau American Community Survey for 2008 there were 1,064,000 tenant households in the 11-county San Jose-San Francisco-Oakland Consolidated Metropolitan Statistical Area, with a median contract rent of \$1,188 and together they paid an aggregate monthly contract rent of \$1.3 billion, for a total of \$15.6 billion annually.⁷ If the land rent is 30 to 35 percent of the current rent, then it amounts to \$4.5 to \$5.5 billion annually in the Bay Area. In sum, Bay Area tenants are paying around \$5 billion more annually than is necessary in order to profitably operate and maintain the housing they live in.

One-third of Bay Area tenants (340,000 households) pay more than 40 percent of their income in gross rent and one-quarter (250,000 households) pay over half of their income. These tenants with high rent burdens are mostly very-low-income tenants with incomes below 50 percent of the area median. All federal and state housing subsidies for low-income people living in the Bay Area together add up to between \$1.0 billion to \$1.25 billion annually.⁸ Total subsidies to very-low-income tenants amount to no more than one-fourth of the amount that all the tenants together pay in land rent, and are likely less than the amount that the very-low-income tenants alone pay in land rent.

The impact of land rent is particularly clear when we look at the lowest income tenants. In 1960, the Bay Area rent was just beginning to increase faster than rent nationwide. Bay Area tenants with incomes at the 25th percentile in 1960 had incomes of \$19,550 a year (adjusted to 2008 dollars using the CPI-Less Shelter). The 1960 Census data shows that in the Bay Area the ratio of the 25th percentile gross rent to the 25th percentile tenant income was 29 percent, while for the median rent and tenant income, the ratio was 20 percent. In other words, the supply of rental units was such that three-quarters of all tenants could probably find housing that would cost them less than 30 percent of their income and half of all tenants could spend only 20 percent of income for housing.

As Figure 6 shows, by 2008 the picture was very different. Bay Area tenants with incomes at the 25th percentile in 2008 had incomes of

Figure 6

Bay Area Tenant Income & Rent at the 25th Percentile, 1960 & 2008

\$23,750 a year, 21 percent higher than in 1960, but now they need to spend 48 percent of their income for the unit with a gross rent at the 25th percentile. Rent even at the low end increased so much that despite a somewhat higher real income, the 2008 very-low-income tenant had less buying power remaining after paying housing costs than the 1960 tenant. The median Bay Area tenant income has increased substantially since 1960, but the majority of that increase is required to pay the increased median rent (see Table 4 in Appendix).

It is often argued that housing affordability is really an income problem, not a housing problem, but land rent makes these difficulties more severe for very-low-income tenants, and many more tenants have difficulty affording their housing because land rent increases their housing costs. If the Bay Area's lower quartile gross rent was similar to the gross rent in the Minneapolis and Portland areas, in the range of \$650 to \$675 a month, then the gross rent would be only 34 percent of the lower quartile tenant income, and many more tenants could afford housing without a subsidy. Even for those who need additional income or ongoing rental assistance of some kind, the cost of providing this assistance would be much lower if it did not include payment of land rent in addition to the payment necessary to provide the unit itself.

In addition, the lowest-income tenants have little bargaining power in constrained markets that give rise to high levels of land rent. As a result, they are often forced to take substandard housing with health and safety risks. Standard economic models portray substandard housing as an income problem, the result of incomes so low that tenants cannot afford to pay rent high enough to properly maintain the housing. In the Bay Area and other parts of coastal California, however, tenants in substandard units are often paying rent that is higher than the median rent in many other American cities.⁹ This rent is quite sufficient to maintain the property, but when landlords that serve low-income tenants can earn nearly as much money for poorly maintained units as they would for well-maintained units there is little economic incentive to invest in maintenance (Mayer 1984: 320–321). The Bay Area's constrained rental housing market generates a high level of land rent that exacerbates housing affordability by increasing the cost of housing far beyond what is necessary to produce and maintain it, and it exacerbates housing maintenance problems by weakening the bargaining power of lower-income tenants.

When land rent rises so does the value of rental properties. As a result, no matter how high rent gets, the next buyer or the owner who refinances to take out accumulated equity will likely use most of the net operating income to make debt service payments. This creates a situation that can lead to under-maintenance and deterioration of rental housing if their expectations for future rent increases are not met. Debt service payments may be so high that there is not enough

cash flow left to make needed repairs. Or the investor may simply desire to lower maintenance in order to get the net operating income up to what was expected.

Figure 3 shows that the Los Angeles area has had among the largest rent increases in the U.S. during the previous 10 years. In the City of Los Angeles, the median contract rent went from \$612 in 2000 to \$933 in 2008 according to the U.S. Census Bureau. Yet in a major survey of rental property owners in the City of Los Angeles, conducted in early 2008 before the financial crisis had fully developed, less than one-third reported that they were making a profit on their property (Economic Roundtable 2009: 196). It is not surprising, then, that nearly half of L.A. rental property owners reported that they were postponing needed maintenance, and nearly one-quarter reported that they had postponed dealing with major problems (Economic Roundtable 2009: 192). This neglect is taking place with rent and NOI that are among the highest in major American cities, and it reflects the role of land rent as a volatile and speculative element in the investment market for rental housing.

Land Rent and Affordable Housing Policy

Of the three sources of constraint on the production of rental housing in the Bay Area—the environment, central area density, and regulation—most analysts focus entirely on land use regulation as the cause of high housing costs (Dowall 1984; Friedan 1981). Many suburban communities have extensive restrictions on development of multifamily housing that can only be considered discriminatory. Indeed, a growth cap established by the City of Pleasanton was recently overturned on the grounds that it was contrary to state law requiring each city to provide for its “fair share” of projected growth.¹⁰ However, the effect of restrictive land use regulations is typically limited to scattered suburban cities, allowing development to spill over to nearby substitutes, and it results in little effect at a regional level (Landis 1992: 498). Furthermore, many forms of land use regulation have little or no effect on housing supply, as when an urban growth boundary, such as the one surrounding Portland, is accompanied by increases in density limits within the boundary (Nelson et al. 2002; Pendall 2000).

Saiz (2010) has argued for the importance of geography and pointed out that San Francisco is one of the most geographically constrained housing markets in the U.S. Nearly three-quarters of the area within a 50-mile radius around downtown San Francisco is undevelopable due to water and steep slopes. There was a serious proposal in the 1950s to fill in most of the San Francisco Bay for development, adding hundreds of square miles of new land in the heart of the Bay Area. This would have held down land values and land rent both by increasing the supply of land and by reducing the attractiveness of the surrounding land when the Bay was removed as an aesthetic and recreational amenity. It was precisely this dystopian vision that led to the creation of the Save the Bay movement in the 1960s, and then the establishment of the Bay Conservation and Development Commission, to protect the Bay and regulate shoreline development.

The standard response to high housing costs due to a constrained market is to call for the elimination of regulatory barriers to new construction (Quigley and Raphael 2004).¹¹ It is certainly true that a reduction of regulatory barriers to housing development at higher densities will increase supply and lower land values and land rent to some degree, but as we saw in Figure 2, rent in the Bay Area has increased at a rate surpassing the U.S. average for over 50 years. At least within the densely developed central Bay Area, it seems unlikely that regulatory barriers are the sole, or perhaps even the major, source of land rent. The removal of suburban land use regulations that discriminate against the lower-income people who need multifamily housing is extremely important; if people are good enough to work in a community, they should be able to live there as well. But even if the removal of regulatory barriers might eventually be sufficient to greatly reduce land rent in the Bay Area at some point in the distant future—until land rent is actually reduced, the tenants of the Bay Area are paying the price, and it is clear that they will continue to do so for many years to come.

If we accept that land rent is a long-term and even permanent feature of the rental housing market in the Bay Area and much of coastal California, a realistic public policy must take it into account. This may take surprising directions. For example, rent control is widely disapproved of by economists on the grounds that price

regulations will reduce the quality and quantity of the controlled housing stock. However, Friedman (2002:537) has demonstrated that in the presence of substantial land rent, the economic models of the effects of rent controls become indeterminate, and “perfect rent control could, in theory, affect only economic rents and cause no supply inefficiency even in the long run.” Olsen (1988) and Mayer (1984) have argued that well-designed rent controls could improve maintenance.

The most widely supported affordable housing program for renters is the Section 8 Housing Choice Voucher program, which largely replaced supply-oriented housing subsidies. Susin (2002) has argued that this program increases rent for those low-income tenants who do not receive assistance by as much as it reduces housing costs for those in the program, a finding that seems especially likely in highly constrained housing markets. In such areas, investment in development of additional non-profit housing may be a better use of housing subsidies. Rental housing subsidies are essential for the many people whose incomes are so low they cannot afford to pay enough rent to cover the costs of properly operating and maintaining the housing they live in. Subsidies beyond that level, however, are simply paying land rent. Vouchers, a demand subsidy, have largely replaced supply subsidies, but even some of their strongest proponents agree that there is an important place for supply subsidies in areas with tight housing markets and a severe shortage of units affordable to low-income tenants (Winnick 1995: 117).

Supply-side efforts to increase the quantity of new rental housing will not be enough in areas where high land rent is a structural feature of the housing market. Subsidies to for-profit developers in the 1960s and 1970s were given with provisions to maintain certain levels of affordability for 20 to 40 years. As the period of affordability restrictions expired, owners in high rent areas began to opt out of the program. In such areas, supply subsidies need to be accompanied by creation of forms of ownership that permanently remove the subsidized housing from the market. “Social” housing can take such different forms as ownership by non-profit housing corporations or by individuals who buy a house or apartment but lease the underlying land from a land trust, or by a resident-owned corporation as a

limited-equity cooperative. In high-cost areas that remain high cost over a long period of time, such housing can be a more cost-effective means of assisting low-income people than the apparently lower cost voucher program, as Barton (1996) demonstrated for Berkeley and Deng (2005) for San Jose, California.

Taxing Land Rent

In addition to consideration of how the presence of constrained markets with high levels of land rent may affect the debate over existing housing policies, we should revisit the Henry George tradition and consider the value of taxing land rent as an affordable housing policy. The potential value of a shift in property taxes to the land value is well known. Taxes on land do not discourage production of housing or distort the market (Gaffney 1982). They do encourage denser and more compact development, reduce sprawl, and reduce holding land vacant or under-utilized over long periods of time, which is likely to increase the production of multifamily housing (Gaffney 1964). We should also look at ways to tax land rent and use all or part of the revenue to mitigate the harm that it does to low-income tenants.

Discussions of affordable housing policies largely neglect land taxes. Calavita and Mallach (2009) discuss the use of inclusionary zoning and density bonuses as forms of "land value recapture," an implicit tax on the increase in the value of land that is being developed to higher intensity uses. Valuable as these programs are, they miss the extraordinary unearned increases in land value and land rent that are generated in the already-existing rental housing stock, not only in the Bay Area but throughout coastal California.

Taxes on land rent in residential rental property would serve multiple purposes. The revenue could be used to fund development of below-market rate housing under various forms of alternative ownership, such as land trusts and non-profit housing corporations that remove land from the market. It could be used to assist individual tenants, especially those whose incomes are too low to pay rent equal to the necessary operating and maintenance costs of their housing. The tax would help reduce investors' willingness to speculate on continued increases in land rent and help focus the rental housing

market on its actual purpose, operation and maintenance of rental housing. Such a tax might slightly increase the incentive to switch housing from rental to home ownership, but most major California cities already restrict conversion of rental properties to condominiums in response to home prices that are even more inflated by rising land values than rent, so it seems unlikely that a tax on land rent would have such an effect.

Currently the total annual rent paid in the State of California is approximately \$66 billion (American Community Survey 2006–2008). Three-quarters of this is paid by tenants in the high rent areas of coastal California; the Bay Area (\$15.6 billion), the Los Angeles area (\$26.6 billion), and the San Diego area (\$6.3 billion). At least one-quarter and probably one-third of this amount is land rent, a “private tax” of \$12 to \$15 billion a year on the tenants of coastal California.

California’s land rent is a resource that is hard to tap because under the California constitution, increases in property taxes and “special taxes,” meaning taxes with a specified purpose, all require a vote of the people by a two-thirds super-majority. The voters recently approved an amendment to reduce the requirement to 55 percent for taxes for bond measures supporting education. Further amendments may open the way to greater use of taxes on land as long as they do not affect the majority of voters who are homeowners. Taxes on the unearned revenue from land rent would provide an equitable and economically efficient means for the state and local governments to support housing programs to assist low-income tenants. One such tax that should be considered for an increase is the business license tax on gross rent that many local governments charge at a minimal level.¹²

A system that allocates urban housing entirely based on who can afford to pay the most money creates severe hardships for many of the diverse people who make cities into centers of creativity. Perhaps we can find ways of managing the urban economy that more fully value the contributions of the writers, researchers, artists, craftspeople, teachers, nurses, attendants to the disabled and elderly, gardeners, people who work in neighborhood restaurants and shops, and the many others who are only sometimes “successful” in

monetary terms but who together make cities great. One of the ways to do this is to find ways to recapture land rent, which is a privatized form of our socially created wealth, and reinvest those resources in making housing decent and affordable for all the diverse people of urban America. As Henry George wrote in *Progress and Poverty* in 1879, "(land) rent, the creation of the whole community, necessarily belongs to the whole community" (George [1879] (1992): 366).

Notes

1. The use of the CPI-All Items to measure increases in rent in the Bay Area would run into a problem of circularity. When rent goes up faster than the cost of other consumer goods, as it has in the Bay Area, this increases the CPI-All Items. Using a measure that includes rent increases to measure the rent increases will mask part of the increase. The use of the CPI index for all items less shelter allows us to measure changes in rent without this source of distortion.

The CPI- Less Shelter index is available from 1935 to the present for all U.S. cities, but only from 1976 to the present for the San Francisco Bay Area, so for changes in Bay Area rent in relation to CPI-LS, this study used the national index. The CPI-Less Shelter index increased at virtually the same rate in the Bay Area and in all U.S. cities between 1976 and 2008, which suggests that the Bay Area's larger increase in the CPI-All Items is mostly the result of the Bay Area's more rapidly increasing housing costs.

2. Between 1953 and 1994 the Bureau of Labor Statistics made a number of improvements in the way it gathers data on rent. Crone, Nakamura, and Voith (2008) have closely analyzed these changes and generated estimates of what the CPI-Rent data would have shown if the changes had applied all along. Dr. Leonard Nakamura generously provided me with the spreadsheet they used to calculate correction factors for the U.S. as a whole, and applying it to both U.S. and Bay Area rent suggests that if Bay Area rent had followed the same pattern as U.S. rent, it would have been as much as 47 percent lower in 2008.

3. IREM Institute of Real Estate Management, "Income/Expense Analysis: Conventional Apartments," 2008.

4. McGraw-Hill, *ENR.com*, <http://enr.construction.com>. The cost index is for all forms of construction, not specifically for residential construction.

5. Land rent can result from regulatory or inherent limitations on new construction and from insufficient competition among older buildings where rental income only needs to cover operating, maintenance, and renovation costs.

6. Alex Carrick, "RSMeans' Dollars-per-Square Foot Construction Costs: Four Accommodation Type Structures," July 6, 2009. Apartment building, 4–7 stories, S.F. \$197; L.A. \$173; San Diego \$168.

7. The SJ-SF-O Consolidated Statistical Area is made up of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Sonoma, Napa, Solano, Santa Cruz, and San Benito Counties.

8. Housing Authorities in the Bay Area assist approximately 72,000 households through the Section 8 voucher, certificate and mod rehab programs, or public housing. Assuming an average annual subsidy amount of \$10,000 per household, this is a total annual subsidy of \$720,000,000. In addition, affordable housing projects in the Bay Area receive 10-year allocations of federal and state Low Income Housing Tax Credits. In 2008, the Bay Area received its highest total of annual tax credit commitments, about \$340,000,000, but the 2008 financial crisis greatly reduced the market for tax credits and not all of that is being used. The Bay Area also benefits from other sources of subsidy, such as state housing bond money, but these amounts vary depending on whether the voters have recently approved such a bond measure.

9. This is based on comments from knowledgeable people from Los Angeles, Sacramento, and Alameda County at the April 28, 2009 Housing California Conference session on "Advancing Effective Strategies to Reduce the Health Burden of Substandard Housing."

10. *Urban Habitat v. City of Pleasanton*, March 12, 2010.

11. Quigley and Raphael's excellent article also notes that part of rising housing costs "surely reflects urbanization and increased competition for land" (2004: 207).

12. The City of Berkeley charges the highest rate in the state of California at 1.08 percent.

References

- Barton, S. E. (1996). "Social Housing Versus Housing Allowances: Choosing Between Two Forms of Housing Subsidy at the Local Level." *Journal of the American Planning Association* 62: 108–119.
- Calavita, N., and A. Mallach. (2009). "Inclusionary Housing, Incentives and Land Value Recapture." *Land Lines* 21: 15–21.
- Carrick, A. (2009). "RSMeans' Dollars-per-Square Foot Construction Costs: Four Accommodation Type Structures," July 6, 2009, RS Means.
- Crone, T., L. Nakamura, and R. Voith. (2008). "Rents Have Been Rising, Not Falling, in the Post-War Period," Working Paper 08–28, Federal Reserve Bank of Philadelphia.
- Davis, M. A., and M. G. Palumbo. (2006). "The Price of Residential Land in Large U.S. Cities," Federal Reserve Board Finance and Economics Discussion Series, No. 2006–25.

- Deng, L. (2005). "The Cost-Effectiveness of the Low-Income Housing Tax Credit Relative to Vouchers: Evidence from Six Metropolitan Areas." *Housing Policy Debate* 16: 469–511.
- Dowall, D. (1984). *The Suburban Squeeze: Land Conversion and Regulation in the San Francisco Bay Area*. Berkeley: University of California Press.
- Economic Roundtable. (2009). *Economic Study of the Rent Stabilization Ordinance and the Los Angeles Housing Market*. Los Angeles.
- Florida, R. (2005). *The Flight of the Creative Class*. New York: HarperCollins.
- Friedan, Bernard. (1981). *The Environmental Protection Hustle*. MIT Press.
- Friedman, L. S. (2002). "The Control of Prices to Achieve Equity in Specific Markets." In *The Microeconomics of Public Policy Analysis*. Princeton University Press, 507–549.
- Gaffney, M. (1964). "Containment Policies for Urban Sprawl." In *Approaches to the Study of Urbanization*. Ed. Richard Stauber. Governmental Research Center, The University of Kansas, 115–133
- . (1982). "Two Centuries of Economic Thought on Taxation of Land Rents." In *Land Value Taxation: The Progress and Poverty Centenary*. Eds. Richard Lindholm and Arthur Lynn. University of Wisconsin Press, 151–195.
- George, H. ([1879] 1992). *Progress and Poverty*. New York: Robert Schalkenbach Foundation.
- Henderson, S. W., and S. A. Berenson. (1990). "Quality Adjustments for Structural Changes in the CPI Housing Sample." *Monthly Labor Review* November: 40–42.
- Institute of Real Estate Management. (2008). *Income/Expense Analysis: Conventional Apartments*. Chicago: IREM.
- Landis, J. D. (1992). "Do Growth Controls Work? A New Assessment." *Journal of the American Planning Association* 58: 489–508.
- Mayer, N. S. (1984). "Conserving Rental Housing: A Policy Analysis." *Journal of the American Planning Association* 50: 311–325.
- Nelson, A. C., R. Pendall, C. Dawkins, and G. Knaap. (2002). "The Link Between Growth Management and Housing Affordability: The Academic Evidence." A Discussion Paper Prepared for the Brookings Institution Center on Urban and Metropolitan Policy.
- Olsen, E. O. (1988). "What Do Economists Know About the Effect of Rent Control on Housing Maintenance." *Journal of Real Estate Finance and Economics* 1: 295–307.
- Pendall, R. (2000). "Local Land Use Regulation and the Chain of Exclusion." *Journal of the American Planning Association* 66: 125–142.
- Quigley, J., and S. Raphael. (2004). "Is Housing Unaffordable? Why Isn't It More Affordable?" *Journal of Economic Perspectives* 18: 191–214.

- Saiz, A. (2010). "The Geographical Determinants of Housing Supply." *Quarterly Journal of Economics* 125: 1253–1296
- Scott Susin, S. (2002). "Rent Vouchers and the Price of Low-Income Housing." *Journal of Public Economics* 83: 109–152
- Siegan, B. (1972). *Land Use Without Zoning*. Lexington.
- U.S. Census Bureau, American Community Survey (2004 and 2006–2008) at http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ACS&_submenuId=datasets_2&_lang=en.
- Wilson, B., and J. Frew. (2007). "Apartment Rents and Locations in Portland, Oregon: 1992–2002." *Journal of Real Estate Research* 29: 201–217.
- Winnick, L. (1995). "The Triumph of Housing Allowance Programs: How a Fundamental Policy Conflict Was Resolved." *Cityscape: A Journal of Policy Development and Research* 1: 95–121.

Appendix: Supporting Tables

Table 1

Contract Rent in the 25 Largest Metropolitan Areas and All U.S. Cities, 2008

	Lower quartile	Median	Upper quartile
San Jose-San Francisco-Oakland, CA (CSA)	\$882	\$1,188	\$1,623
Washington DC-Arlington, VA-MD-WV	\$850	\$1,127	\$1,484
San Diego-Carlsbad-San Marcos, CA	\$861	\$1,126	\$1,524
Los Angeles-Long Beach-Santa Ana, CA	\$790	\$1,046	\$1,420
Boston-Cambridge-Quincy, MA-NH	\$653	\$983	\$1,323
New York-N. New Jersey-Long Is., NY-NJ-PA	\$678	\$956	\$1,295
Riverside-San Bernardino-Ontario, CA	\$709	\$950	\$1,247
Miami-Fort Lauderdale-Pompano Beach, FL	\$702	\$923	\$1,219
Sacramento-Arden-Arcade-Roseville, CA	\$707	\$892	\$1,184
Seattle-Tacoma-Bellevue, WA	\$656	\$839	\$1,125
Baltimore-Towson, MD	\$601	\$812	\$1,094
Phoenix-Mesa-Scottsdale, AZ	\$607	\$777	\$1,015
Chicago-Naperville-Joliet, IL-IN-WI	\$602	\$766	\$978
Minneapolis-St. Paul-Bloomington, MN-WI	\$606	\$761	\$969
Philadelphia-Camden-Wilm., PA-NJ-DE-MD	\$561	\$748	\$960
Denver-Aurora, CO	\$578	\$743	\$979

Table 1 *Continued*

	Lower quartile	Median	Upper quartile
Tampa-St. Petersburg-Clearwater, FL	\$588	\$741	\$948
Atlanta-Sandy Springs-Marietta, GA	\$588	\$738	\$905
Portland-Vancouver-Beaverton, OR-WA	\$596	\$720	\$913
New Orleans-Metairie-Kenner, LA (46 th)	\$546	\$719	\$930
Fresno, CA (54 th)	\$512	\$679	\$882
United States	\$466	\$676	\$965
Dallas-Fort Worth-Arlington, TX	\$531	\$665	\$848
Houston-Sugar Land-Baytown, TX	\$507	\$638	\$827
Detroit-Warren-Livonia, MI	\$497	\$637	\$810
Cincinnati-Middletown, OH-KY-IN	\$423	\$549	\$708
Pittsburgh, PA	\$362	\$495	\$643

Source: U.S. Census Bureau, American Community Survey 2006–2008.

Note: All areas are standard Metropolitan Statistical Areas (MSA) except the San Francisco Bay Area, an 11-county Consolidated Statistical Area (CSA) that includes six MSAs: San Francisco-Oakland, San Jose, Santa Rosa, Vallejo, Napa, and Santa Cruz-Watsonville. MSAs not in the top 25 have their rank in parentheses.

Table 2
2007 Median Rental Income and Expenses per Square Foot for Garden Apartment Buildings in Selected Metropolitan Areas

	Income	Operating Expenses	OE as % Income	NOI	NOI as % Income
U.S.	\$10.44	\$4.97	48%	\$5.51	53%
Houston, TX	\$9.74	\$5.63	58%	\$4.14	43%
Portland, OR	\$9.76	\$4.30	44%	\$5.81	60%
Minneapolis, MN	\$10.00	\$5.14	51%	\$4.67	47%
Sacramento	\$12.28	\$5.45	44%	\$6.50	53%
Oakland	\$18.14	\$6.99	39%	\$11.23	62%
San Francisco	\$18.63	\$6.07	33%	\$11.91	64%
Los Angeles	\$20.13	\$6.69	33%	\$13.45	67%
San Jose	\$20.63	\$6.89	33%	\$14.24	69%

Source: IREM Institute of Real Estate Management, "Income/Expense Analysis: Conventional Apartments," 2008, and author's calculations.
Note: Note that due to use of medians, expenses and NOI will not add up to exact rental income.

Table 3
U.S. and Bay Area Operating Expenses per Square Foot, 2007

	Income	Operating Expenses	OE-US OE	Difference as % of Income	Real Estate Taxes
U.S.	\$10.44	\$4.97	\$0.00	\$0.00	\$0.89
Houston, TX	\$9.74	\$5.63	\$0.66	6.78%	\$1.03
Portland, OR	\$9.76	\$4.30	-\$0.67	-6.86%	\$0.82
Minneapolis, MN	\$10.00	\$5.14	\$0.17	1.70%	\$0.89
Sacramento	\$12.28	\$5.45	\$0.48	3.91%	\$0.85
Los Angeles	\$20.13	\$6.69	\$1.72	8.54%	\$1.54
Oakland	\$18.14	\$6.99	\$2.02	11.14%	\$1.46
San Francisco	\$18.63	\$6.07	\$1.10	5.90%	\$2.31
San Jose	\$20.63	\$6.89	\$1.92	9.31%	\$1.76

Source: IREM Institute of Real Estate Management, "Income/Expense Analysis: Conventional Apartments," 2008, and author's calculations.
Note: The 2007 IREM data is based on 3,100 units in the Oakland area, 2,297 units in the San Francisco area, and 3,782 units in the San Jose area. Note that due to use of medians, expenses and NOI will not add up to exact rental income.

Table 4
Incomes and Gross Rent, 1960 and 2008 (Constant 2008 Dollars)

	1960		2008		1960		2008	
Bay Area	25 th percentile	50 th percentile	25 th percentile	50 th percentile	Median (50 th percentile)	Median (50 th percentile)	Median (50 th percentile)	Median (50 th percentile)
Tenant Income	\$19,550	\$23,750	\$36,840	\$50,090				
Rent	\$467	\$943	\$623	\$1,273				
Rent/Income	29%	48%	20%	31%				
Income-Rent	\$13,940	\$12,434	\$29,365	\$34,815				
% of BA households	10.8%	10.20%	21.5%	20.3%				

Source: 1960 Census, 2006–2008 American Community Survey, Bureau of Labor Statistics, author's calculations.
 Note: In the Bay Area tenant households in the 25th percentile and the 50th percentile income levels made up nearly the same proportion of the same percentile households in 2008 (41 percent) as they did in 1960 (43 percent), so these results are not caused by a substantial decline in the proportion of tenants.