Does rent control reduce segregation?

Edward L. Glaeser*

Summary

■ Advocates of rent control often argue that rent control aids the mixing of rich and poor, and perhaps of the races as well. Economic theory does not necessarily predict that rent control will reduce segregation. The best case for rent control as an aid to integration is that it creates pockets of low rent (and low quality) apartments in expensive cities. However, by creating an excess of demand over supply, rent control ensures that apartments will be allocated on the basis of landlord preferences, which may in fact be segregationist. Furthermore, when rent control induces poor renters to live in rich cities, those poor renters are generally older, long term renters, who are less likely to have young children living at home and are less likely to benefit most from integration. Empirically, rent control seems to have allowed some poorer (and older) tenants to live in expensive Manhattan, but rent control in the declining cities of New Jersey seems to have increased the isolation of the poor. Rent control is a very socially costly means of occasionally getting integration, and housing vouchers or supply-side policies seem likely to be much more effective.

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Does rent control reduce segregation?

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What housing policies create socially integrated cities? Segregation, based on income, race and other attributes, is a common phenomenon throughout the world. While segregation is not a surprise and it is not always inefficient, a growing body of evidence now documents that the segregation of the poor and minorities has an impact on their outcomes. The spatial mismatch literature stemming from Kain (1968) argues that blacks who live in highly black neighborhoods end up having worse job market outcomes than blacks who live in integrated neighborhoods. Cutler and Glaeser (1997) show that across metropolitan areas, those blacks who live in more segregated areas end up being more likely to drop out of school, have children out of wedlock and be idle. Most convincingly, Katz, Kling and Leibman (2001) and Ludwig, Hirschfeld and Duncan (2001) examine the Moving to Opportunity experiment and find that disadvantaged individuals who are randomly given vouchers that allow them to exist outside poor neighborhoods, end up with better health and better school outcomes.

This paper assumes a desire to increase integration, at least relative to a free market benchmark, either for efficiency or egalitarian reasons, and asks whether rent control is a useful tool for fighting segregation. In Section II of the paper, I discuss the theory of the rent control-segregation connection. Rent control has four potential effects which might impact the level of segregation. First, rent control reduces rents for tenants as long as they remain in their apartment. This creates a tendency of poorer people to remain in their residences even if a city is getting more expensive. This is likely to be the most important way in which rent control can induce poor people to live in an expensive place. One downside of this effect is that it is likely to be concentrated among long-term, older tenants, rather than on the parents with young children who are likely to gain most from integration.

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The second downside is that there are social welfare losses coming from the fact that the people who live in these apartments tend to value them less than potential alternative renters (as in Glaeser and Luttmer, 1997).

The second way that rent control interacts with segregation is that it may lower prices for new prospective renters. In this case, these lower prices may lead to increased integration if the people who are allocated rent control apartments are particularly poor in rich places or particularly rich in poor places. However, there is no reason to suspect that the allocation systems that are in place will act in this direction. Just because apartments are renting for below market rents, there is no reason to believe that they will be given to the poor.

The third way that rent control interacts with segregation is that it may reduce the quality of the housing stock for rent controlled units. By creating some low quality units in an expensive city, rent control may help integration. Of course, even if it increases integration, the city may still be worse off from having this deteriorated housing. Also, if rent control reduces housing quality in poorer places, then it is likely to make the place even poorer and thereby increase segregation.

Finally, rent control may also interact with segregation by limiting new supply of apartments. If rent control means that apartments are converted in condominiums or not built at all, then this may end up making segregation worse. In hot markets, drying up supply is likely to increase the shadow price of housing and may very well increase, not decrease segregation.

After this discussion, I then turn to some evidence on rent control and its effects. Looking at data on renters in New York, I do find that tenants in the rent controlled sector pay much lower rents (for bigger apartments) and are much poorer. However, they are also much older. It is also clear that rent stabilized apartments appear to be disproportionately white which suggests that in a market with shortages, apartments may not be allocated to the needlest applicants.

I also look at cities in New Jersey and California both with and without rent control. In both states, rent control is weakly associated with lower level of growth in housing supply. In both states, rent control is more strongly associated with lower levels of growth in median rents. However, the impact of rent control on segregation is murkier.

In California, rent controlled cities became relatively richer when rent control was established. It may be that in those cities, rent control has made it possible for some lower income residents to live. In New Jersey, rent controlled cities have become much poorer. Indeed, rent controlled cities in New Jersey are particularly likely to have become pockets of poverty. Far from ensuring integration, in New Jersey rent control has helped make poorer places even poorer.

I conclude by arguing that rent control is a poor instrument for fighting segregation. It is badly targeted and creates a whole host of other distortions. Supply side policies which reduce the regulatory barriers that block new construction in expensive areas are one better policy. Most effective of all would be housing vouchers that are specifically targeted to the poor that encourage them to move to richer communities.

1. Rent control and segregation: Theory

What does economic theory predict about the impact of rent control on the degree of segregation? In fact, rent control policies, which vary greatly from place-to-place, have many different effects, which should influence segregation in different ways. In all rent control regimes, rent controlled apartments create an incentive for incumbents to remain in their current apartments instead of moving. This is likely to be a primary channel through which rent control impacts the distribution of population in a changing city. In many rent control regimes, rent control eliminates the incentive to improve apartment quality. Lower quality levels are also likely to influence the composition of a city. In most rent control regimes, rent control also pushes prices for prospective tenants below free market rates and as such apartments must be allocated through some non-market mechanism. The use of alternative non-market allocation mechanisms is likely to have yet another impact on who lives in a city. Finally, some rent control regimes (very few in the US) impact new construction, and this reduction in new building is likely to have yet a fourth impact on composition of the city.

I now turn to each of these different aspects of rent control and try to understand how they will interact with the income distribution and segregation of a city. It is worthwhile distinguishing two different aspects of what is commonly meant by integration. Advocates of rent control often limit themselves to arguing that rent control keeps poor people in expensive cities. Certainly, if segregation is defined at the city level, then keeping poor people in expensive (or rich) cities will increase integration. However, the segregation literature more often thinks about segregation at the census tract (a unit of between 2,000 and 4,000 households) level. This neighborhood segregation is quite different from city-level segregation and in my discussion I will attempt to distinguish between city-level segregation and neighborhood-level segregation.

2. Rent control and the incentive for immobility

Rent control is never simple and rarely a simple price cap on rental units. The one common feature of almost all rent control ordinances is that they limit the extent to which rents can be increased for existing tenants. The extent of this limitation differs in its severity from jurisdiction to jurisdiction and over time. Thus, for example, San Francisco allowed four percent rent increases throughout much of the 1980s, but between 1992 and 2000, annual rent increases ranged from 1.2 percent to 2.2 percent. Often these increases are linked in some way to the consumer price index. Washington, D.C. allows increases that are equal to the Consumer Price Index; San Francisco allows increases that are .6 times the CPI. Obviously, more stringent rent control measures create a greater wedge between free market rents and the rents paid by existing tenants.

The one clear impact that all rent control regulations will have is to reduce rents for some group of existing tenants and create a wedge between their housing costs, if they stay in their existing unit, and their housing costs if they move. This wedge has been found to severely reduce mobility. Linneman (1987), for example, finds that the average tenure in rent-controlled apartments in New York is no less than twelve years longer than those of non-rent-controlled apartments. Rapaport (1992) corrects for an obvious endogeneity bias in this calculation (units that have been vacated will lose their rent-controlled status), and still finds significant impacts of rent control on turnover (an eight to fifteen percent reduction over a short time period).

While this immobility may be inefficient, it may also decrease segregation. In particular, if a community is getting richer over time, then rent control ensures that the original residents of the community may continue to reside in the area. A few poor people will continue to reside in the community because they are getting cheap housing by do-

ing so.¹ This is the best-case scenario for rent control increasing integration and rent control advocates often point to this integration through affordability element of rent control as a major advantage of this policy.

This impact of rent control is likely to have less of an effect on a city that is not getting richer. Consider rent-controlled apartments in a declining city. The only apartments that are likely to be impacted by rent control in such a city are the relatively attractive apartments within the city that are likely to attract richer inhabitants. Rent control ensures that these apartments remain in the hands of poorer residents. If the city is getting poorer, then rent control may tend to exacerbate poverty and stop rich people from renting the more desirable apartments.

Furthermore, even if rent control does increase the degree of integration at the city level, i.e. to increase the number of poor people within rich cities, it may not increase the degree of integration within the city. In some richer communities, it will surely be the case that poorer residents remain as the community gets rich. But in poorer communities, rent control may stand as a barrier to gentrification. Richer residents who may desire to move into poorer communities, because of attractive locations near the downtown, may be stopped because of rent control. This may deter integration.

Are the poor people who are kept in rich cities by rent control are actually the poor people that we care most about integrating. The essence of rent control's incumbency advantage is that long-term residents will continue to live in communities that are getting progressively more expensive. This force is strongly biased towards older persons, and biased against young families with children who are just moving into the city. Thus, rent control in New York City has often meant that retired individuals remain in attractive communities which they would not be willing to pay for. The incumbency advantage does not help starting families with small children who would like to move into expensive areas. Thus, if we think that integration is desirable because it helps the children of the poor, then it seems likely that the incumbency advantage of rent control is a weak tool to achieve that aim.

¹ In principle, rent control can also keep rich people in areas that are getting poorer. However, this case is likely to be much rarer since rent control is unlikely to bind in areas with declining incomes and even if it does, I suspect that the rich will often be willing to pay the higher rents to escape the poor community.

Finally, I should emphasize that there are real welfare costs from keeping the poor in place: apartments in expensive neighborhoods are being allocated to people who generally would not be willing (or able) to pay market rents to keep those locations. A pareto-improving trade where a rich prospective tenant compensates the rent-controlled tenant for moving out generally exists. Indeed, if the rent-controlled tenants actually owned their apartments then these trades would actually take place as new residents would pay for the privilege of replacing the older residents. As such, even if it is true that rent control increases the presence of the poor in communities that are getting richer, then we must still ask whether this desirable integration fully offsets the misallocation of apartments to residents who value them less.

3. Rent control and reduced prices for new tenants

A second key feature of rent control is that it sometimes reduces rents below market rates for new tenants. This feature is not ubiquitous. Rent control regimes differ in the extent to which rents can be increased when a vacancy occurs. The most extreme rule is the 2 9 total decontrol of the unit with vacancy. If this rule is in effect, then we must conclude that ultimately the rent control is being phased out and ultimately the entire city will be free market. More commonly, landlords are allowed some significant increase when there is vacancy, but the unit remains within the rent control system. For example, in Washington, D.C., the rents of vacant units can be increased by at least 12 percent when they become vacant.² San Francisco is the most extreme example and it does not allow rent to be increased (above the usual mandated annual increase) with a vacancy.

In this section, I discuss the implications of rent control for integration, if rent control reduces rent levels, below market rents for prospective tenants. As such, I am considering the case of San Francisco rather than Washington, D.C. If the price of a good is brought below its market price, then there will be an excess of demand over supply. The good must then be rationed, by some mechanism, among the people who want it. The impact of rent control on segregation depends critically on the mechanism that is used to allocate apartments when rent control creates a supply-demand mismatch. When

² Technically, the rent can either be increased by 12 percent or to the maximum rent of a comparable rent controlled unit in the apartment building.

prices are held below free market rents, then there will be a glut of renters willing to occupy the apartment and the impact of rent control on segregation depends on the rules used to allocate apartments.

If apartments are allocated randomly, then the impact of rent control on segregation depends on the identity of the marginal renters in the city. Since rent control pushes prices below equilibrium prices, it attracts new renters who hope to get lucky and receive an apartment. In some cases, these marginal renters may be poorer than the average urban resident. In this case, the level of mixing within the city may well be increased. Of course, this need not be the case.

If apartments are allocated through something like a standard queue, i.e. waiting in line, then the people with the lowest opportunity cost of time will be predicted to get the apartments. In some cases, the allocation mechanism will resemble such a queue and apartments will be based on a willingness to expend shoe leather and time in racing to every new vacancy. This will tend to ensure that poorer residents continue to move into rent-controlled apartments, just as they continue to remain in the rent-controlled apartments that they already own. As such, this will help integrate richer neighborhoods and help ensure concentrations of poverty in poorer neighborhoods.

However, in many cases rent controlled apartments will not be allocated on the basis of time spent searching or a random lottery. In most cases the landlord or superintendent may allocate apartments on the basis of the tenant characteristics or a tenant bribe. If landlords get to choose among prospective renters, then it seems quite possible that the reduced rents from rent control may actually end up increasing segregation. After all, what will landlords look for? Tenants who make the building more attractive to other tenants. In general, this will mean tenants who resemble the existing stock of tenants, or just richer tenants. This will tend to exacerbate segregation, at least in richer communities.

One way of thinking about this claim is that in the free market, an apartment is allocated to an individual if his desire for the apartment exceeds the price of the apartment. This means that poorer residents who are willing to sacrifice enough financially can in principle choose to live in a richer community in order to get more successful peers for themselves or their children. In a shortage economy, the allocation of apartments gets far less straightforward. Desire for the apartment plays some role, but since there are more people who want apartments (at that price) than get them, other variables come in, including

nepotism, favoritism and so forth. The theoretical impact on segregation of this aspect of rent control is clearly ambiguous, and needs to be sorted out with empirical work.

4. Rent control and housing quality

A third impact of rent control is that it eliminates the incentives to improve housing quality, as argued particularly forcefully by Frankena (1975). In the most extreme forms of rent control, a fixed price below market price that is independent of quality, the distortions created by rent control are obvious. The landlord will let unit quality deteriorate to the point where the controlled rent is actually the market price. After all, the landlord has no incentive to make the apartment any nicer than he must in order to keep it occupied. While the impact on quality may be mitigated by tenant investment in quality (as in Olsen, 1988), the theoretical predictions seem quite clear.

Two provisions of rent control ordinances may interact with this desire to improve quality: the ability to pass through cost increases and the ability to raise rents upon vacancy. While Arnott (1995) argues that provisions of second generation rent control that make it possible to raise rents when quality is improved will mitigate this problem, I am more skeptical. All rent control ordinances allow for an appeals process, where renters can challenge the increase in rents. Most of them make it difficult for the landlord to receive more than 100 percent of the costs and require a fair amount of bureaucratic effort on the part of the landlord. As such, if the landlord only receives 90 percent of his costs back (taking into account the possibility of challenge, tenant complaints, etc.), then the landlord will not improve quality any more than he would if he received no compensation for the quality improvements. I continue to believe that even second generation rent control creates strong disincentives for quality provision when the unit is occupied.

If the rent control allows prices to be raised to market rates upon vacancy, then this will provide an incentive for landlords to improve quality when the unit becomes vacant. After all, the landlord can recoup his investment by charging higher rents. This generates a pattern familiar to observers of many rent controlled areas. The landlord allows the unit to deteriorate when it is occupied, but then invests as soon as the unit becomes empty. Indeed, these vacancy provisions create an extra incentive for the landlord to allow the quality to deteriorate

riorate when it is occupied so that the tenant will leave. As such, we should expect to see quality deterioration under all forms of rent control, but this will be mitigated somewhat by investments upon vacancy in cities where landlords are free to set rents for new tenants.

There is a modest empirical literature which tests whether rent control actually does lead to quality deteriorations. Moon and Stotsky (1993) is perhaps the most compelling of these papers and they show that rent controlled units in New York City deteriorate faster than comparable decontrolled units. Pollakowski (1999) provides more recent evidence documenting the deterioration of rent controlled apartments that appears to be continuing. Olson (1988) argues that much of the older work is flawed, but still the consensus of papers does support Assar Lindbeck's famous line "next to bombing, rent control seems to be the most efficient technique so far known for destroying cities."

If rent control reduces quality, what impact will this have on the degree of segregation? In this case, the answer would seem to be whether low quality is the norm in the city or the exception. If the city is on net rich and well-maintained, then having a few low quality units which are particularly attractive to the poor will increase mixing. Of course, it does so at a cost. After all, the premise of this effect is that the poor will be living in deteriorated housing. Moreover, these low quality units will surely create negative externalities for their neighbors.

Conversely, if the city is on net poor and most units are poorly maintained, then ubiquitous low quality due to widespread rent control will act to ensure that the rich don't live in the city. As such, the impact of quality deterioration will depend on the city. In richer cities, a small amount of mediocre housing will increase integration. In poorer cities, if rent control is widespread, then it will make it difficult for luxury apartment buildings to bring some integration.

5. Rent control and new construction

The fourth, and final, aspect of rent control is the degree to which it impacts new construction. Indeed, the most classic criticism of rent control (Friedman and Stigler, 1946) focused on the deleterious effects that rent control is likely to have on new buildings. However, in almost all cases modern rent control laws exclude all new construction from their ordinances. The authors of rent control laws clearly

intended to limit the impact that their rules would have on new construction and as such applied net control laws only to the existing housing stock.

One might wonder whether these provisions are really all that credible. After all, communities that have imposed rent control in the past would appear likely to impose them in the future as well. Of course, given the incredible variety of ways that governments interact with the construction process, it is almost impossible empirically to ever test whether such expectations play a role in the building of new rental apartments. Still, it is hard for the casual observer not to notice the difference in the supply of new construction for rental purposes in Chicago (which is very much a non-rent controlled city) and New York City (which has among the most Byzantine and volatile rent control rules in the control). Chicago's lakefront is dotted with apartment buildings built after World War II for rental purposes. New York's Upper East Side is filled with one-time rental buildings that were gradually turned into cooperatives and lacks new rental buildings despite the fact that technically these buildings would be free from rent control.

Regardless of what one believes about the impact of rent control on new construction, in this section of the paper, I discuss the effect that limiting new construction will have on the integration of the city. Two cases should be distinguished. First, rent control may just act to limit all construction of new housing. Second, rent control may act to limit the construction of housing of a particular quality, i.e. particularly luxurious or particularly low quality housing.

In the general case, the reduction in new supply created by rent control will have two clear effects. First, it will make the true market price of housing increase. This will mean that the price of housing in the uncontrolled sector of the city (if one exists) will rise as a result of rent control. The rent controlled units themselves will become increasingly more scarce and the shadow price of those units will also get higher. If the city is getting progressively richer and more expensive, this construction effect will actually reduce the amount of integration. In a free market city, new housing will be brought to the market which will act to reduce rents and make housing available to poorer residents. In a rent controlled city, no such housing will be available and only those poor people who have an older rent controlled unit are likely to be able to live in the city.

The second impact of the supply restriction is that the housing stock will remain unchanged except for getting increasingly older. This means that pre-existing housing patterns will remain and in some cases pre-existing population patterns will remain. Cutler, Glaeser and Vigdor (1999) show that the segregation between the races has fallen fastest in those cities with the most growth. We argue that this occurs because those cities are not locked into old patterns of racial hostility. If rent control stops new construction then it ensures that older patterns will remain, and in some cases those older patterns may be more segregated.

Rent control may also influence the nature of the housing stock that is built. For example, in some places luxury apartments are excluded from rent control. This will mean that there is no barrier to building luxury apartments and the supply of these apartments will either exacerbate segregation (in richer cities) or diminish it (in poorer cities). In other cases, it may be that low quality housing is freed from rent control and in that case the tendency to produce only low-end housing will diminish segregation in richer cities or increase it in poorer cities.

On net, the theory is certainly ambiguous. It may well be that rent control enables the poor to continue living in areas that are getting progressively more expensive. But this advantage is countered by the fact that these long term residents are unlikely to be the parents with small children that are most likely to gain from integration. On the other hand, the tendency of rent control to replace the market mechanism with some sort of allocation can increase segregation. Likewise the tendency of rent control to reduce housing quality may also create pockets of poverty. Finally, if rent control creates constraints on supply this may make the availability of housing for the poor decrease. There is no theoretical reason to be sure why one effect will dominate and thus the true effect of rent control on segregation becomes an empirical matter.

5. Rent control and segregation: Evidence

While there is a copious body of research on rent control in general, there is much less research on the impact of rent control on segregation. The most relevant body of research concerns the characteristics of renters in rent-controlled units. For example, Ault and Saba (1990) show that in 1968 in New York the mean income of residents of rent

controlled units is 60 percent of the mean income of residents on non-controlled units. In a classic study, Olsen (1972) also found that rent control tends to benefit the poor.

Using the most recent version of the New York City Housing and Vacancy Survey (e.g. Gyourko and Linneman, 1989), I have updated these facts just to get an overview of the different sectors within New York City. I have restricted the sample to Manhattan only because the outer boroughs tend to be quite different along many dimensions. These numbers are simple population means and they cannot answer any of the great questions about rent control. Still, they help give us some idea of the nature of rent control within New York.

There are three groups in the sample: renters in non-controlled units, renters in rent stabilized units and renters in rent controlled units. Rent control applies only to buildings built before 1947 and to tenants who have lived in their apartments continuously since 1971. Rent stabilization applies to buildings constructed between 1947 and 1973 and to older buildings with tenants who have moved in since 1971. Both categories place limits on rent increases, but rent controlled apartments are much more severely restricted. Following Arnott's (1995) distinction between first and second generation rent controls, it is probably appropriate to think of rent controlled apartments as working under a first generation system and rent stabilized apartments as having something closer to a second generation system.

The first three rows of the table show the personal characteristics of the three groups of renters. The average income of renters in rent controlled units is USD 31,000. The comparable figure for rent stabilized tenants is USD 51,000. Tenants in the non-controlled sector earn USD 61,000 on average. The rent controlled tenants are likely to be older. On average, they are 54 years old. The rent stabilized and non-controlled tenants are closer in age at 45 years and 42 years respectively. Thus, it does seem that rent controlled units appear to belong, disproportionately, to older, poorer tenants.

Interestingly, the racial composition of the three groups is more varied. The rent controlled group is the least white. 58 percent of the rent controlled tenants are Black, Hispanic or Asian. However, the non-controlled sector is almost as mixed. 50 percent of them are non-white. The whitest sector of the New York rental market is the rent stabilized sector which is 65 percent white. This lends some credence to the view that rent control sometimes works against minorities, perhaps because the allocation mechanism favors whites.

The fourth row in the table gives the mean rent level for the four groups. While these differences do not control for neighborhood location or unit quality, the differences are still startling. The mean rent in the controlled sector is USD 462. The mean free market rent is USD 1077. The rent stabilized apartments lie between these extremes and on average they go for USD 820. While controlling for quality would eliminate some of these differences, it is hard not to be impressed by the remarkable gaps in cost across these three groups.

Rows five and six of the table show two different dimensions of apartment quality. The fifth row describes the average number of rooms. Most New York apartments are small, by American standards, but the largest apartments are on average in the rent controlled sector. Not only are the free market renters paying more than double the rents, they are actually living in smaller apartments. The smallest apartments tend to be in the rent stabilized sector.

Row six shows the share of apartments that are either dilapidated or deteriorating. This question is answered by the surveyor who makes an assessment of the quality of the apartment based on a relatively uniform standard. Almost 20 percent of the rent controlled apartments are either dilapidated or deteriorating. About 10 percent of the apartments in the either two categories are dilapidated or deteriorating. Since the rents of stabilized units can be increased during vacancies, it seems likely that this has created an incentive for landlords to keep the quality of those units up. The quality problems that are much more severe in the rent controlled sector support the idea that rent control does not provide strong incentives for landlords to maintain apartments.

What do I take from this table? First, it is true in a very expensive city, many of the poorest residents live in rent controlled apartments. Notably, this occurs mostly in the controlled sector, not the stabilized sector. This suggests that the selection of the poor into controlled units may not be too strong, but the tendency of the poor to remain in those units is much stronger. Second, these renters are much older than the average for the city, so rent control has not worked well at taking care of the younger poor. Third, rent control has a mixed record with regard to race as many minorities end up in the noncontrolled sector. Fourth, rent controlled apartments tend to be larger than average but also of deteriorating quality.

Table 1. Characteristics by rental status in Manhattan

Type of renter	Rent control	Rent stabilization	No rent control
Annual income in	31873	51764	61443
current dollars	(38909)	(51588)	(77434)
Age	54	45	42
	(19)	(17)	(16)
Percent non-white	.58	.35	.50
	(.24)	(.23)	(.25)
Monthly rent	462	820	1077
	(338)	(485)	(920)
Number of rooms	3.46	3.08	3.19
	(1.38)	(1.36)	(1.34)
Dilapidated or deterio-	.18	.11	.09
rating	(.15)	(.10)	(80.)
Number of observa- tions	585	1171	890

Note: All figures are means from the 1999 New York City Housing and Vacancy Survey. Standard deviations are in parentheses. The number of observations for income are 544, 1106 and 853 for the three groups respectively. Percent non-white includes Asian, Black, Hispanic and other.

Although these facts are suggestive, they do not answer the question of whether rent control reduces segregation. To directly address this question, I now turn to a sample of US cities, some of which had rent control in the 1970s and 1980s and others which did not. Rent control is very unevenly spread throughout the US. Currently, there are only four states in the US (California, Maryland, New Jersey and New York) that have rent controlled cities. In the majority of states, state-level legislation has been passed that stops localities from passing their own rent control laws. As such, comparisons across the US all have a tendency to be misleading as the places with rent control are quite different from the places without rent control.

Furthermore, just because a municipality has a rent control ordinance, this may not mean that this ordinance has any real bite. Nonetheless, I will proceed with two types of information. First, I will look specifically at cities with more than 50,000 inhabitants in New Jersey and California. These states are attractive because they are large and because there are cities both with and without rent control. Furthermore, California is a growing place with rapidly increasing costs. Many of the New Jersey cities are declining.

For my data on rent control, I rely on the Department of Housing and Urban Development's 1991 report to Congress which categorizes cities into rent control and non-rent control places. This discrete classification surely misses a great deal of the interesting variation within rent control regimes, but it is the best that can be done at this point.

According to this data, there are eight cities in California with rent control and seven cities in New Jersey with rent control. In both cases, rent control was generally adopted during the inflationary period of the 1970s and early 1980s. In most cases, a significant amount of the housing stock was impacted by the rent control ordinances, so none of these laws are paper tigers. Rent control regimes were not randomly allocated across cities in either state. In both states, bigger cities were more likely to impose these regimes. Moreover, it is quite possible that other factors made some cities adopt rent control and others not, so it is worthwhile accepting any of these results with a grain of salt.

To slightly balance the fact that rent control may be adopted by cities with different characteristics, I look only at changes in city characteristics between 1970 and 1990. Since rent control was adopted during this period, these comparisons show whether the cities that adopted rent control moved in different directions than the cities with rent control. Of course, I cannot eliminate the possibility that the cities with and without rent control differ not only in their initial values but also in other factors which change their growth patterns.

The first question we can ask with this data is whether rent control impacted the supply of new housing. The answer to this question is mixed. As shown in Table 2, in California, the housing stock in cities with rent control grew on average by 33 percent. The housing stock in cities without rent control grew by 42 percent. In New Jersey, the housing stock in cities with rent control shrunk on average by 6 percent. The housing stock in cities without rent control grew by 9 percent. The differences between rent controlled and noncontrolled cities are statistically significant in New Jersey but not in California. In California, the differences become statistically significant if you weight by initial city population so that larger cities count more than smaller cities.

Table 2. Characteristics of cities with and without rent control In California and New Jersey

	California, rent control	California, no rent control	New Jersey, rent control	New Jersey, no rent control
Growth in	.34	.42	064	.09
housing stock	(.44)	(.29)	(.09)	(.10)
Growth in real	.29	.37	.23	.33
median rents	(.18)	(.10)	(.09)	(.13)
Growth in real	.16	.10	05	.14
median income	(.14)	(.14)	(.14)	(.10)
Growth in pov-	.039	.033	.10	.03
erty rate	(.034)	(.04)	(.06)	(.03)
Change in un-	005	.004	.07	.03
employment	(.014)	(.019)	(.02)	(.02)
Change in per-	.015	.027	.14	.07
cent black	(.052)	(.069)	(.11)	(.14)
Number of ob- servations	8	126	7	29

Notes: All data are from the US Census, various years. All changes refer to changes between 1970 and 1990. In the case of rents, income and total housing units, changes represent the logarithm of the value in 1990 minus the logarithm of the value in 1970. The classification of rent control regime is based on the 1991 HUD Report to Congress on Rent Control. All cities have more than 50,000 residents as of 1970. Standard deviations are in parentheses.

In fact, when you control for the initial population of the city, in New Jersey the results become less statistically significant, but stay similar in magnitude. In California, the unweighted comparison remains insignificant and the weighted comparison remains statistically significant. It is hard to take too much from these results, but it is true that the cities without rent control grew faster than the cities with rent control. This may have occurred because rent control limited new construction or because other factors made these places less attractive

A second question is whether rent control has acted to reduce median rents in these cities. In both states, the imposition of rent control appears related to ten percent lower growth in median rents. In both states, these differences are statistically significant. Controlling for other variables, such as initial median rent values and initial population, does not cause the statistical significance to vary. In these sam-

ples, it does appear to be true that cities with rent control had less growth in median rents than cities without rent control.

In the third row of the table, I turn to the correlation between rent control and the growth in median income. While the two states looked similar in the first two rows, they look quite different in this row. In California, the cities with rent control have on average six percent higher per capita income growth. Far from making the city poorer, in these cases, rent control cities became relatively richer. This may have occurred because these cities grew less and acquired fewer poor migrants. The difference is insignificant statistically, so it doesn't make much sense to spend too much time trying to understand the change. However, it is an interesting correlation.

And the correlation gets more interesting because of the different experience in New Jersey. In New Jersey, the cities with rent control experienced a five percent, on average, real income loss. The cities without rent control experienced a ten percent real income gain. This difference is quite statistically significant and robust to a normal bevy of controls. While it would be extreme to attribute this income loss to rent control (many other things also went wrong in these cities), it is appropriate to note that the cities in New Jersey with rent control had declining per capita incomes over this period.

The next row shows the change in percent of families living in poverty. In California, rent control is associated (very weakly) with a slight increase in poverty. This is somewhat surprising because those cities are also getting richer. This, to me, seems like weak evidence supporting one aspect of the rent control argument—rent control does seem to allow poorer people to continue living in cities that are getting richer.

In New Jersey, rent control is associated with rapidly increasing poverty rates. In these cities, rent control seems to be ensuring that poor people continue to live in poor places. Rent control regimes in these declining cities appear to support segregation, not integration. These patterns continue for percent black and changes in the unemployment rate. In California, there is little difference between rent controlled and non-rent controlled places. In New Jersey the differences are big and they don't appear to be supporting integration.

One way of summarizing this claim is the following regression:

Poverty =
$$\frac{1.4}{(.2)} + \frac{1.8}{(.7)} * \text{Rent control} - \frac{1.3}{(.02)} * \text{Log(Income)} - \frac{.20}{(.08)} * \text{Log(Income)} * \text{Rent control},$$
 (1)

The number of observations is 36 and the standard errors are in parentheses. Poverty refers to the poverty rate in 1990 and Log(Income) refers to the logarithm of per capita income in 1990. The key point of this regression is that poverty and income are linked for all cities—richer cities have less poverty. However, this link is much stronger for cities with rent control in New Jersey. Thus, not only are rent control cities poorer, but when they have lower levels of income, they are particularly likely to be poor (relative to free market cities). This essentially illustrates that rent control in New Jersey means that poor people live particularly in poor places.

Another way of thinking about this is the degree to which the poor are isolated from the rich. The usual isolation index is:

$$\sum_{Places} \frac{\text{Poor}_{Place}}{\text{Total poor}} \frac{\text{Poor}_{Place}}{\text{Population}_{Place}}$$
 (2)

This index asks what is the percentage poverty in the city where the average poor person lives. In the rent controlled cities of New Jersey, this number is 23 percent. In the nonrent controlled cities of New Jersey, this number is 14 percent. In the rent controlled cities of California, this number is 17 percent. In the non-rent controlled cities of California, this number is 15 percent. Clearly, rent control does not seem to support integration of the poor at the city level.

I am not sure if rent control is responsible for any of the differences between rent controlled cities and non-rent controlled cities in these two states. But if it is, then there is some weak evidence suggesting that rent control has made it possible for a small number of poor people to live in more expensive places in California. There is much better evidence to suggest that rent control has ensured that poor people live with other poor people in New Jersey. Far from eliminating segregation, at least in New Jersey, rent control has appeared to increase it.

So far, I have looked at the mixing of rich and poor across cities. It is also worthwhile asking whether rent control appears to create mixing within cities. Hopefully future research will address this question. When I have looked at segregation by races within the US (and race is strongly correlated with income), I have found no evidence suggesting that New York and Washington, D.C. are particularly integrated. Far from it, these cities have very high measures of segregation. Of

course, so does Chicago, which is a free rent town. I take the lesson of this to mean that rent control doesn't appear to have much influence on the level of neighborhood segregation within the US.

All in all, I have found some evidence supporting the idea that rent control provides low rent places within costly cities. This, in principle, should be good news for rent control advocates. However, these apartments tend to be occupied by older people, often without children. As a result, rent control is not targeting the people who are likely to gain the most from integration. Moreover, there is no evidence that rent control improves the level of integration within the city itself. Neighborhoods in rent controlled cities appear to be as segregated as neighborhoods in free market cities. Finally, when rent control is imposed on declining cities, it seems to make them more, not less segregated.

Perhaps rent control in some places helps integration, but given all of the other costs of rent control and given the fact that it does not seem to have particularly large effects, to me it makes sense to turn to other tools. There are much more effective means of encouraging poor people to live in wealthier neighborhoods that generally don't have any of the costs of rent control. In the final, concluding section, I discuss these tools very generally.

6. Conclusion: Other housing market approaches to integration

If the goal is to increase integration, then there are many better means than bureaucratic and highly distortionary rent control. I favor two approaches, which are relevant worldwide, and one approach which is particular to the US case. The more general approaches are housing vouchers and sensible regulation of new construction. The US specific policy proposal is to turn to state, or nationwide, school vouchers instead of using the current locality based school system.

The most obvious and effective means of fighting segregation through the housing market is the housing voucher. Katz, Kling and Leibman (2001) show that a random sample of poor families who are given Section VIII vouchers (which pay for housing) use these vouchers to move out of poor neighborhoods. They examined two types of vouchers: one which required moving to a low poverty area and another which allowed free migration. In both cases, the families on average moved to much lower poverty areas. By supporting hous-

ing consumption for the poor individuals, they can be induced to live in better neighborhoods.

In principle, these vouchers can be designed with many different features. They can pay for all of housing or just match spending over a certain point. In either case, people will be induced to move. The vouchers can be targeted at particular populations (parents with young children). They can be tied to specific migration decisions so that they pay more if the recipient moves to a low poverty area. Their flexibility is quite high and there has been a lot of experience with Section VIII vouchers since they began to be used in the US in 1974. To me, they appear to be a much fairer and effective means of getting poor people into rich areas than rent control.

A second important policy tool for addressing integration is control over housing supply. Governments throughout the world generally impose a web of regulations on new construction. Frequently (as shown in Glaeser and Gyourko, 2002), government regulation is the main force behind high housing prices. One way of looking at the problem of high prices and segregation is that there is too little housing in high demand areas. A natural response is to give builders a free hand from regulation in those costly areas. If desirable locations get a great deal more housing, prices will fall and many more of the poor will be able to live in those places.

This can in principle be done by subsidizing builders as well. Indeed, there have been a large number of programs giving builders specific subsidies for building low cost housing in high cost areas. I am much less hopeful about this approach. In general, the administrative costs of these programs are quite high and often they end up contributing only a small stock of housing which is then given to the politically well-connected instead of to the truly needy. A better approach is to allow landlords to charge free market rents, but to allow new construction so that market prices fall to construction costs.

The third tool is to eliminate artificial aspects of governance which act to exacerbate segregation. In the United States, school districts determine the quality of schools that children can attend. As such, richer people congregate in richer districts to get good schools. If the US replaced this system with a voucher system that allowed people to attend any school regardless of where they lived, then this would surely eliminate a huge part of rich people's incentive to flee inner cities.

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DOES RENT CONTROL REDUCE SEGREGATION?, Edward L. Glaeser

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