The Geography of Inequality:

How Land Use Regulation Produces Segregation

Jessica Trounstine
Foundation Board of Trustees Presidential Chair of Political Science
University of California Merced
jessica@trounstine.com

Public goods in the United States are largely funded and delivered at the local level. Local public goods are valuable, but their production requires overcoming several collective action problems including coordination, and minimizing congestion, free-riding, and peer effects. Land use regulations, promulgated by local governments, allow communities to solve collective action problems inherent in the provision of local public goods and maintenance of property values. A consequence of these efforts is residential segregation between cities along racial lines. I provide evidence that more stringent land use regulations are supported by whiter communities and that they preserve racial homogeneity. First, I show that cities that were whiter than their metropolitan area in 1970 are more likely to have restrictive land use patterns in 2006. Then, relying on Federal Fair Housing Act lawsuits to generate changes in land use policy, I show that restrictive land use helps to explain metropolitan area segregation patterns over time. Finally, I draw on precinct level initiative elections from several California cities to show that whiter neighborhoods are more supportive of restricting development. These results strongly suggest that even facially race-neutral land use policies have contributed to racial segregation.

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Public goods in the United States are primarily funded and delivered at the local level. Schools and libraries, police and fire protection, parks, sewer and water systems, garbage collection, and transportation systems are among the services that Americans expect their local governments to provide. Modern life is largely unthinkable without these essential amenities. Additionally, the quality of public services is capitalized into housing prices, which contribute households' wealth. In short, high quality local public goods are valuable. But, I argue, their production requires overcoming several collective action problems including coordination of supply, congestion, free-riding, and the management of peer effects. For anyone to ensure that her child has access to good schools and safe streets, and that her home's value appreciates, she needs the cooperation of her neighbors. Yet, her neighbors have individual incentives that can undermine the achievement of her goals. From the owner in a single-family neighborhood who sells his house to a developer building a condo complex, to the landlord who rents to residents with lower incomes than the rest of the community, what others do can affect the quality and price of local public goods and property values. I claim that land use regulations, promulgated by local governments, allow communities to solve collective action problems inherent in the provision of local public goods and the maintenance of property values. I provide evidence that a consequence of these efforts is residential segregation between cities along racial lines.[1]

Although there has been change over time, the United States remains a highly segregated nation. Scholars have provided powerful evidence of the economic and sociological forces generating these patterns, but dominant explanations ignore a more fundamental set of choices about the type and location of housing that gets built. Through their power to regulate land use, city governments control the value and geographic distribution of housing – which in turn allows

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[1] Replication data available at Dataverse: at
https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/EZFSQC

for economic and social factors to play a role in decisions about where people live. In the absence of land use regulation, wealth inequality and racism would have far less opportunity for expression and our cities and metropolitan areas would be more integrated along racial lines. Importantly, land use regulations need not be explicitly focused on race to have these effects. In this paper, I provide evidence that more stringent land use regulations are supported by whiter communities and that they preserve racial homogeneity.

First, I show that cities that were whiter than their metropolitan area in 1970 are more likely to have restrictive land use patterns in 2006. Then, relying on Federal Fair Housing Act lawsuits to generate changes in land use policy, I show that restrictive land use helps to explain metropolitan area segregation patterns over time. Finally, I draw on precinct level initiative elections from several California cities to show that whiter neighborhoods are more supportive of restricting development. These results strongly suggest that even facially race-neutral land use policies have contributed to racial segregation.

Understanding Segregation in the United States

The deleterious consequences of segregation are well-known. Segregation causes higher poverty rates for blacks and lower poverty rates for whites, lower high school and college graduation rates among blacks, higher imprisonment rates, and higher rates of single-motherhood among blacks (, Sampson 2012, Ananat 2011, Burch 2014, Cutler and Glaeser 1997). Children who grow up amidst concentrated poverty and disadvantage are overwhelmingly likely to live in similar places as adults (Sharkey 2013). As a result, segregation along race and class lines contributes an important causal effect to a lack of intergenerational mobility (Chetty and Hendren 2018a; 2018b). Segregation also magnifies the polarization and outgroup ostracization that characterizes modern politics (Enos 2018). This in turn decreases the provision of public

goods in segregated cities (Trounstine 2018) and decreases cooperation across metropolitan

regions (Einstein 2006).

Despite some progress, scholars have shown that America remains a highly segregated

nation (Boustan 2012a; Charles 2003; Ross 2008; Bischoff and Reardon 2013; Jargowsky 1996).

The debate over the fundamental causes of segregation is extensive and nuanced. Much of the

literature has focused on two explanations: individual preferences for same race/income

neighbors (particularly among whites and the wealthy) and market explanations (e.g. differences

in the socioeconomic status of different racial groups and the ability to pay for quality

housing/transportation among the poor).

The root of these explanations are classic models of individual choice. Thomas Schelling

(1971) argued that extreme racial segregation could result from individual decisions about where

to live, given even mild preferences for having neighbors of the same race. A small number of

racially intolerant residents can cause a neighborhood to rapidly transition because as each

intolerant resident is replaced with a resident who is more tolerant of neighbors of color,

residents with lower and lower levels of intolerance choose to leave, creating segregation across

neighborhoods.[2] Mummolo and Nall (2017) find that whites continue to prefer to avoid racially

mixed neighborhoods. Although not the focus of their study, conjoint experimental results

included in their on-line appendix reveal that white respondents have a strong preference for

whiter communities.[3]

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[2] For additional work on homophily see (Bayer, Ferreira, and McMillan 2007; Charles 2006; Denton and Massey 1991; Boustan 2010; Krysan, Farley, and Couper 2008; Emerson, Chai, and Yancey 2001)

[3] Their results reveal a linear positive relationship between community whiteness and preference among white Republicans. White Democrats were indifferent between communities that were between 75% and 96% white, but both were preferred to communities that were only 50% white. Respondents of color displayed a strong preference for communities that were at least 25% people of color.

Another individual choice scholar, Charles Tiebout (1956), proposed that residents with similar preferences for taxation and public goods provision should sort themselves into cities with like-minded neighbors. To the extent that heterogeneous preferences for tax and spending levels (or ability to pay) overlap with demographics, they will also generate segregation. Ellen (2000), Yinger (1997), Taub et al (1984), and Harris (1999) argue that some white residents use black neighbors as a proxy for neighborhood quality. That is, a subset of white residents seeking better neighborhood amenities or neighbor characteristics use blackness as a heuristic for these assets. Banzhaf and Walsh (2013) combine Schelling and Tiebout's insights into a single model establishing that preferences over public goods and homophily are mutually reinforcing in the generation of segregation.

However, most of the research on the causes of segregation ignores the context in which it occurs.[4] The backdrop to individual choice is the type, location, and value of housing that is available – factors that are shaped by local governments through land use regulation. Generally, land use regulation is a tool that city governments use to manage the "pace, location, and extent of development"(Pendall, Puentes, and Martin 2006).   Cities use a variety of regulatory policies to manage space – including, among others, zoning, planning, growth boundaries, development fees, and growth caps. [5]   While scholars have recognized that land use regulation can differentially constrain the housing market (resulting in household sorting), I contribute to these literatures by offering evidence that land use regulation also increases segregation across city lines.

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[4] Jonathan T. Rothwell, "Racial Enclaves and Density Zoning: The Institutionalized Segregation of Racial Minorities in the United States," *American Law and Economics Review* 13, no. 1 (2011). doi:10.1093/aler/ahq015.; Rolf Pendall, "Local Land use Regulations and the Chain of Exclusion," *Journal of the American Planning Association* 66, no. 2 (2000).

[5] Cities also use the placement of physical barriers like roads, amenities like parks, and negative land uses like landfills to affect the density and demographic composition of neighborhoods. But I do not study these tactics here.

A Theory of Land Use Regulation and Segregation

Cities have the power to regulate space as a result of their constitutionally enshrined police power to protect the health, safety, and welfare of residents. Since its inception, land use regulation has been used to serve the needs of property owners (Toll 1969; Stone 1989; J. R. Logan and Molotch 1987). Drawing on (Fischel 2001; Fischel 1992), I assume that land use regulations affecting *residential* development is largely driven by the demands of homeowners. We know that homeowners are powerful actors in city politics – both in suburban jurisdictions and central cities (Been 2018; Elmendorf 2019) and that homeowning has a causal effect on both knowledge and participation in local politics (Hall and Yoder 2019). It seems reasonable to assume that politicians seeking to maximize votes will head homeowners' preferences when generating policies that affect them.

What is it that homeowners want from land use regulations? I draw on existing theories to posit that homeowners will be motivated by three *jointly* held, interrelated motives: maximizing housing wealth (Fischel 1992), minimizing tax burdens (Hamilton 1975), and maximizing public service quality (Bradford, Malt, and Oates 1969).[6] The latter two goals also appear to be shared by renters. Hankinson (2018) shows that in high price cities, renters support development citywide (presumably to maintain lower rental prices) – but not in their own neighborhoods. Hankinson's results are consistent with my assertion that residents will seek to minimize tax burdens and maximize service quality.

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[6] It is likely that different people will prioritize these goals differently. For instance, people who buy houses with the intention to flip them may care about home value and tax prices but care less about public goods quality. Some residents will be willing to bear a higher tax price because they ideologically support redistribution via public goods. Furthermore, different people will value some public goods more so than others. A renter without children may care only about traffic and safety and care less about the quality of the schools. So, while these goals are generally widely shared and tightly linked for most homeowners, in future work scholars may find it productive to attempt to specify and measure the implications of this variation.

I argue that residents must work together to achieve these goals but face typical hurdles in producing desirable collective outcomes (Olson 1965). More specifically, I propose that residents need to generate coordination, reduce congestion and free-riding, and manage peer effects on public goods inputs. Generally, governments can help to overcome collective action problems.[7] In this case, it is *local* governments that offer the solution, because they alone have the authority to regulate land use. My argument – that residents use local land use policy to minimize threats to achieving collective goals – builds on a body of established theory and empirical scholarship on land use regulation. I add to this literature by offering a more unified theory of land use regulation and public goods provision and tying both to segregation. I provide evidence consistent with my argument that communities seeking to minimize integration have more stringent land use regulations, and I show that these regulations work to slow racial diversity over time.

Collective Action Hurdles at the Local Level

We know that the market for property is affected by the relationship between supply and demand. As homes are the single most important investment for most people, homeowners have an incentive to act as monopolists, but individual owners may find it profitable to sell to a developer who plans to increase housing supply (Banzhaf 2014; Ellickson 1977). Limiting development can increase home values in the context of strong demand to live in the community (Gyourko, Saiz, and Summers 2008; Saiz 2010). Land use regulation can be used to erect barriers to entry (e.g. limiting development), thereby maximizing home values. Fischel (2001) finds that homeowners are the most important supporters of development restrictions. Marble

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[7] A significant body of work investigates the *private* means for generating collective action in pursuit of these goals. Such activities include behaviors like vigilante violence, restrictive covenants, and racial steering. Troesken and Walsh (2017) show that communities were more likely to seek governmental mechanisms when private forms of collective action failed.

and Nall (2018) reveal that this is the case even among homeowners committed to redistribution in national politics and those who believe that housing costs are too high. Generally, empirical work shows that more stringent land use regimes are associated with higher housing prices, but evidence has been mixed regarding the power of homeowners in driving these outcomes (Gyourko and Molloy 2015).

Homeowners are also attentive to the quality and price of public goods, which are both valuable in their own right and capitalized into the price of housing (see Hilber 2011 for a review). Scholars have shown that theoretically that local public goods are subject to congestion (Calabrese, Epple, and Romano 2012). When a community builds a school, it may add new children without affecting the educational experience of the existing children until it reaches capacity. After this point, adding additional children to the community will either degrade the quality of the educational experience for all children, or a new school will need to be built. For the most part, local public goods are only available to and paid for by the people who buy or rent housing in the community proximate to their provision. Land use regulations can prevent congestion by limiting the number of people who access the community's public goods, for example by restricting the amount and type of housing that is allowable (e.g. though growth caps or low-density zoning). Banzhaf and Magnum (2018) provide empirical evidence that a significant portion of housing values reflects a price for accessing the community. Hilber and Robert-Nicoud (2013) show that areas that are in high demand feature more stringent land use regulations. These results are consistent with the argument that land use regulations can be used to reduce congestion. Generally, we should expect all incumbent residents to be concerned about congestion, but worries may be heightened in places with growing populations and limited land area.

Hamilton (1975) argued that local public goods should also be subject to free-riding. Poorer households have an incentive to buy or rent small houses in rich communities. Their entry into the community equates to a transfer of funds from richer households, because the benefits they receive in public goods are worth more than the costs they pay in property taxes. As a result, public goods financing becomes a redistributive transfer. Land use regulation can prevent this redistribution by requiring a minimum level of housing consumption (e.g. through minimum lot sizes, preventing small square footage homes, or prohibiting renting). Lutz (2015) provides empirical evidence that wealthier communities are more likely to use land use regulation to restrict entry.

Finally, Schwab and Oates (1991) argue that the quality of public goods like education, public health, and public safety, will be powerfully affected by the characteristics of the residents themselves – that is, public goods are subject to peer effects. For example, Oates (1981) explains "a given input of police services will be associated with a higher degree of safety on the streets the less prone are the members of the community to engage in crime" (p95). Naturally, residents may seek to prevent the criminally prone from accessing housing in their community. Land use regulation can affect what *types* of people have access to a community and its public goods. To provide evidence of this exclusionary motive, scholars have focused on the link between land use regulation and the presence or lack of low-income residents (see for example Pogodzinski, J.M., and Sass 1994; Bates and Santerre 1994). However, the intent behind these strategies are impossible to uncover. Zoning to limit access to poor residents, minimize redistribution, and increase housing values are observationally equivalent with respect to community wealth composition (Bogart 1993). Rather than focusing on the role of land use regulation in excluding low-income residents, I analyze its role in excluding people of color.

We have a great deal of evidence that white Americans have long-standing beliefs that the presence of people of color will degrade the quality of their public goods and property values (Krysan, Farley, and Couper 2008; Connolly 2014). A real-estate guide published by the National Association of Real Estate Boards in 1923 asserted "property values have been sadly depreciated by having a single colored family settle down on a street occupied exclusively by white residents." The guide goes on to prescribe "segregation of the Negro population," as the only "reasonable solution of the problem, no matter how unpleasant or objectionable the thought may be to colored residents" (McMichael and Bingham 1923, p181).

Beliefs regarding the benefit of community whiteness are not just historical artifact. In the 2000 General Social Survey (GSS), respondents were asked to place racial groups on a 7-point scale of non-violent to violent and intelligent to unintelligent. White respondents rated Latinos and Blacks as significantly more violent and less intelligent than whites. Some white residents may conclude that black and Latino neighbors will degrade the quality of public safety and schools. In fact, as recently as 1996, the GSS asked white respondents if they would be willing to send their children to a school that was more than half black. Forty-six percent of respondents said no, and a full 66% of respondents said that they opposed the busing of black and white children to different districts. School districts control school finances and catchment areas, but they cannot zone. So, although cities do not (for the most part) handle the funding of schools, they play a key role in determining the quality of this public good by using land use regulation to shape who has access to which local public schools.

In short, the maintenance of a white community can be, *in and of itself*, an amenity to be valued (Du Bois, W E B 1935; Schelling 1971; S. Banzhaf and Walsh 2008; Card, Mas, and Rothstein 2008; Troesken and Walsh 2017; Darity, Hamilton, and Stewart 2015; Darity 2005).

But, an owner selling her house or a landlord who does not live in the neighborhood may find it profitable to sell or rent housing to people of color. I argue that land use regulations can minimize this threat. Although scholars have made similar claims regarding the role of land use regulation in maintaining racial homogeneity, they have not offered convincing empirical evidence of these assertions.

It is relatively straightforward to see how land use regulation can be used to affect the *number of houses* in a community, the *number of people* who access the community's public goods, and the *wealth of the people* who live in the community. But how can land use regulation affect the racial composition of the community? To the extent that different demographic groups have varying levels of wealth, any land use regulation that excludes the poor (for example, by preventing apartment complexes) will also disproportionately exclude racial groups with lower socio-economic status. But this is not the whole story. Many scholars have shown that racial segregation patterns cannot be convincingly accounted for by black-white differences in socioeconomic characteristics such as education, income, wealth, or family structure (Bayer, McMillan, and Rueben 2004; Massey and Denton 1988; 1993; Erbe 1975; Iceland and Wilkes 2006; Emerson, Chai, and Yancey 2001).[8]

Importantly, evidence suggests that white residents are willing to pay higher housing prices to live in whiter communities (Boustan 2012b; Cutler, Glaeser, and Vigdor 1999). Because white residents value whiteness more than do people of color, land use regulations that increase housing costs can generate segregation even in the absence of underlying socio-economic disparities across groups.

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[8] Socioeconomic differences do explain a fair amount of the segregation of Latinos and Asians (J. Logan 2011)

Finally, land use regulation can affect demographics because local officials can utilize discretion in the land use process in such a way as to affect the racial makeup of a neighborhood or community. Elmendorf (2019) argues "development permitting…has become thoroughly discretionary, requiring project-by-project negotiations over design, scale, public benefits, affordable housing set asides, and so much more. Local governments and neighborhoods NIMBYs use this discretion to kill projects they dislike" (p90). Local officials can selectively deny and approve variances for developers depending on their target demographic market or alter the zoning designations from residential to industrial depending on the race of the neighborhood's residents. Einstein, Glick, and Palmer (forthcoming) reveal that land use regulations allow motivated groups and individuals to delay the development process, driving up costs and killing some developments altogether. Additionally, local officials have consistently used racial considerations in determining which neighborhoods to raze for redevelopment (Hirsch 1983; Rothstein 2017). By invoking their powers of control over land, local governments affect the aggregate demographic makeup of communities and the spatial distribution of residents and services, thereby generating and enforcing racial segregation.

To summarize, land use regulations are a tool that city governments can use to coordinate housing production in order to maximize housing wealth, prevent congestion of public goods, minimize the tax price for the provision of city services by reducing free-riding, and shape the demographics of the community to maximize the quality of public goods. We might expect, all else equal, that *homeowners* will be most interested in using land use regulation to protect property values, *wealthy* residents to be most interested in using land use regulation to minimize the prospect of redistribution, and residents of relatively *whiter* communities to be most

interested in using land use regulation to exclude people of color.   It is this latter claim that I seek to test (while controlling for the first two).

Of course, all of these measures are proxies for underlying theoretical claims. It is possible that whiter communities will seek more stringent land use regulations for reasons other than managing the population of people of color. Perhaps white communities endeavor to prevent redistribution more so than communities of color. Because race and poverty are correlated it will be difficult to disentangle these motives. We cannot observe intent – only consequences. My argument does not require any assumption that managing the racial makeup of the community is the sole or even predominant motivation for land use regulations. It requires only the more limited assumption that community whiteness is valued, either directly or via public goods. I propose that residents of white communities will be those most likely to view people of color as a threat to their public goods and property values. I hypothesize that communities that are whiter than neighboring communities will seek more restrictive land use regimes, allowing them more control over the demographic makeup of the city population. In turn, I propose that higher levels of land use regulation will increase city homogeneity.

Segregation in Post-1970 America

Most research on segregation is focused on the degree to which whites and people of color live in different neighborhoods within the same city. Scholars have shown that neighborhood level segregation peaked in 1970, and then dropped dramatically over the next several decades (C. S. Fischer et al. 2004; M. J. Fischer 2008). Shertzer, Twinam, and Walsh (2016; 2018) have offered powerful evidence that early land use regulations played an important role in generating this kind of segregation. Regulations were used to direct development and housing types *within* a city – but generally, not to prohibit it altogether. Scholars agree that

starting in the 1970s suburban jurisdictions began to use land use regulations more forcefully to limit and exclude development (Elmendorf 2019; Been 2018; Fischel 2001). I argue that these post-1970's patterns of land use regulation have contributed to segregation *between* cities – the degree to which whites and people of color live in different incorporated communities.

In the decades after WWII, suburban populations exploded. Rising incomes, low-cost federally-backed mortgages, the lucrative federal mortgage deduction, new housing construction in suburban tracts, and an extensive highway system all worked to pull people to the periphery (Gotham 2000; Nall 2018). Yet, during this period, as a result of both federal policies and discriminatory behavior among white residents, real estate agents, and mortgage lenders, suburban living was nearly exclusively available to whites (Kruse and Sugrue 2006; Jackson 1987).[9] Exclusivity protected by federal policies would come to an end (legally speaking) with the implementation of the federal 1968 Fair Housing Act. After 1970, suburbs could no longer rely on federal mortgage lending to maintain community homogeneity. The 1970s also featured an increased voice for residents in land use regulation decisions. Codified in the 1974 Community Development Block Grant Program, neighborhoods gained increasing power in development decisions through planning boards and review processes.[10] In 1973, 66% of white respondents said that they would support a law allowing a homeowner to discriminate against buyers on the basis of race (GSS 1948-2008). It is not surprising then, that scholars have

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[9] Suburban populations eventually changed, and many racial minorities live in suburban communities today (Frasure-Yokley 2015). However, exclusive white communities remain (Briffault 1990).

[10] It is likely that an array of state level changes to property tax law (inspired by California's Proposition 13) also affected land use regulation in the 1970s. Cities were incentivized to limit residential development in favor of commercial development while homeowners were incentivized not to move (tightening the link between maximizing public goods quality and housing wealth). Fischel (2001) argues that prior to the 1970s land use regulation was managed informally by homeowners and developers, but that the growing suburbanization of employment made suburbs more interested in exclusionary zoning. Additionally, the rising environmental politics movement may have played a role in the change. I am unable to determine *why* land use regulation increased in stringency during the 1970s. It is only vital to my argument that it did, indeed, become more stringent.

identified "a dramatic upswing in the number and variety of land-use regulations at the local level," starting in the 1970s (Elmendorf 2019, 10).

Predictors and Consequences of Land Use Restriction in the Aggregate

Land use regulation is a quintessentially local policy arena. Every incorporated city in the United States has a distinct set of policies governing land use, which makes studying the topic a difficult task. Four broad-scale scholarly attempts have been made to collect data on land use policy (Linneman et al. 1990; Glickfield and Levine 1992; Pendall, Puentes, and Martin 2006; Gyourko, Saiz, and Summers 2008) and I rely on the most recent survey for this analysis: the Wharton Residential Land Use Regulatory Index (WRLURI) developed by Gyourko, Saiz, and Summers (2008). The index is built from a 2006 survey of local governments and measures characteristics of the regulatory process, rules of local residential land use regulation, and regulatory outcomes. These data were combined to measure the, "stringency of the local regulatory environment in each community" (Gyourko et al. 2008, p3). The survey contains data for more than 2,700 municipalities. I merged these data with city level demographic information from the 1970 and 2000 Census of Population and Housing, resulting in complete data for 1,286 cities. As explained above, 1970 represents a watershed moment in the promulgation of land use regulation policies. I expect that communities that were whiter than the metropolitan area as of 1970 to have more stringent land use regulations in 2006 compared to communities that were less white. I use relative whiteness as a proxy for communities that should be most motivated to protect public goods and neighborhoods from diversification. Alternatively, if land use stringency is mostly driven by property owners seeking to maximize housing wealth, racial makeup should not matter once we control for homeownership rates. Similarly, if land use stringency is driven by the minimization of the tax-price of public goods, racial makeup should

be moot after accounting for difference in community wealth. Or if land use stringency is focused on congestion, irrespective of demographics, then population change should be an important correlate. If land use stringency is purely a mechanism to manage space, we might anticipate that communities with less land area would have more stringent land use regulations.

My dependent variable is the *WRLURI* for each city. The WRLURI is comprised of 11 sub-indices, all designed so that low scores represent less restrictive land use policy. The WRLURI is centered at zero and has a standard deviation of 1. It ranges from about -2 to +5. Because cities compete for residents and businesses within metropolitan regions, land use stringency levels are metro area specific (Pendall et al 2006). To account for this, my dependent variable is measured as each city's difference from the minimum regulatory score in the metropolitan area. This variable ranges from 0 to 4.2 with a mean of 0.93 and a standard deviation of 0.77.

My primary independent variable is the city's *White Population Share in 1970* gathered from the Census. My theory suggests that some residents will seek to manage the demographic characteristics of people who access their public goods. I have proposed that white residents represent the group most likely to believe that people of color will threaten public goods and housing values and so, whiter communities should have more stringent land use regulations. However, the threat of diversity is obviously greater in some metropolitan areas than in others. I capture this dynamic by measuring the relative whiteness of the city – the difference between the city's white share and the metropolitan area white share.[11] This variable ranges from a low of -0.61 to a high of 0.33 and has a mean just above zero at 0.05. The data include 197 metro areas with between 2 and 99 cities.

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[11] The results are nearly identical if I used fixed effects instead of these difference measures.

In a second specification, I add controls for the city/metro area difference in the share of the city that is *Wealthy* (above the 90th percentile in income), and the share of households that are *Homeowners* in 1970.[12] These variables are intended to account for the other dominant pressures for land use regulation, minimizing redistribution and maximizing housing value, that are also highly correlated with racial makeup of the community. To ensure that the 1970 demographic data are not the result of earlier land use regulations, which then predict future land use stringency, I add a dummy variable denoting whether a city had a zoning law in place before 1930 (after which federal guidelines made zoning ubiquitous).[13] I also add an indicator, *Central City*, designating whether the city was the largest city in the metro area by population in 1970. To account for the possibility that land use control responds to congestion associated with changing population size and the need to manage space, I include the total *City Population* in 2000, the total *Land Area* in 2000, and the *Change in City Population* between 1970 and 2000. I cluster the errors by metro area. The dependent variable is left censored at zero, so I estimate Tobit models with robust standard errors. Table 1 presents the results.

Table 1: Correlates of Restrictive Land Use

	Model 1			Model 2		
	β	SE	P>|t|	β	SE	P>|t|
Metro Diff % White 1970	1.731	0.394	0.000	0.721	0.364	0.048
Metro Diff % Wealthy 1970				0.421	0.246	0.087
Metro Diff % Homeowner 1970				1.001	0.231	0.000
Early Zoning Law				0.117	0.063	0.066
Central City 1970				-0.337	0.105	0.001
Land Area 2000 (100 million sq miles)				0.025	0.020	0.158
Population 2000 (100k)				0.037	0.014	0.010
Population change 1970-2000 (100k)				0.118	0.045	0.008

[12] The share of homeowners is highly correlated with the share of the city's housing stock that was *Single-Family* homes in 1970. Using this measure instead does not change the results.
[13] These data were gathered from several sources including Rice (1968), Connerly (2005), Silver (1997), Knauss (1929) and numerous issues of the NAACP's *Crisis Magazine*.

|	0.812	0.040	0.000	0.751	0.046	0.000
Constant						
N	1286			1286		
R²	0.015			0.039		

Note: Tobit regression; Robust standard errors clustered by 197 metropolitan area

The table reveals that cities that were whiter than the metropolitan area in 1970 had significantly more restrictive land use regimes in 2006. The powerful negative coefficient on central city and positive coefficient on land area suggests that land use stringency is *not* predominantly about managing space. However, cities that witness more rapid population changes do appear to have more stringent land use regimes. In addition to whiteness, homeownership and wealth also positively predict land use restriction. Because homeownership and wealth in 1970 are highly correlated with whiteness, variation in these variables accounts for about half of the direct effect of whiteness on land use restrictiveness.

What does this look like in practice? We can compare three cities in the Los Angeles-Long Beach metropolitan area, one with a 1970 white population share 6 percentage points lower than the metropolitan average (Carson City), one slighter whiter than average (Pomona), and one with a 1970 white population that was 13 percentage points higher than average (Glendora). As of 2006, Glendora involves more actors and has more official veto points in the development process than Pomona, and Pomona features more than Carson City. Glendora required local zoning board approval for rezoning, while Pomona and Carson City did not. Only Glendora had both one and two-acre minimum lots sizes for neighborhoods. The average time to review residential development in Glendora is two years, compared to about 6 months for both Pomona and Carson City. Survey respondents were asked how important citizen opposition to growth is in limiting development on a 1-5 scale. Glendora received a score of 5 compared to Pomona's score of 3, and Carson City's score of 1. Overall, Glendora has the most rigid land use regime of the three cities; and this is just what Glendora voters want.

The estimation in Table 1 presumes that there is a linear relationship between community whiteness and land use restriction. But, if communities are using land use regulations to protect exclusivity and minimize negative peer effects, we might expect a more powerful result at the top end of the distribution. To see whether this is the case, I divided the 1970 relative white population share into quintiles. The first quintile contains cities that are less white than the metro area as a whole. The second quintile ranges from parity with the metro area to about 3% whiter. The third quintile ranges from 3% to 8% whiter, the fourth from 8% to 15% and the top quintile includes cities that are 15% to 33% whiter than the metropolitan area. I use the same model as Table 1, Column 1 and regress the *Relative WRLURI* on these quintiles (with the first quintile as the comparison category). Figure 1 plots the linear prediction of land use stringency for each quintile.

Figure 1: Linearity of Relationship Between 1970 Whiteness & 2006 Land Use Stringency
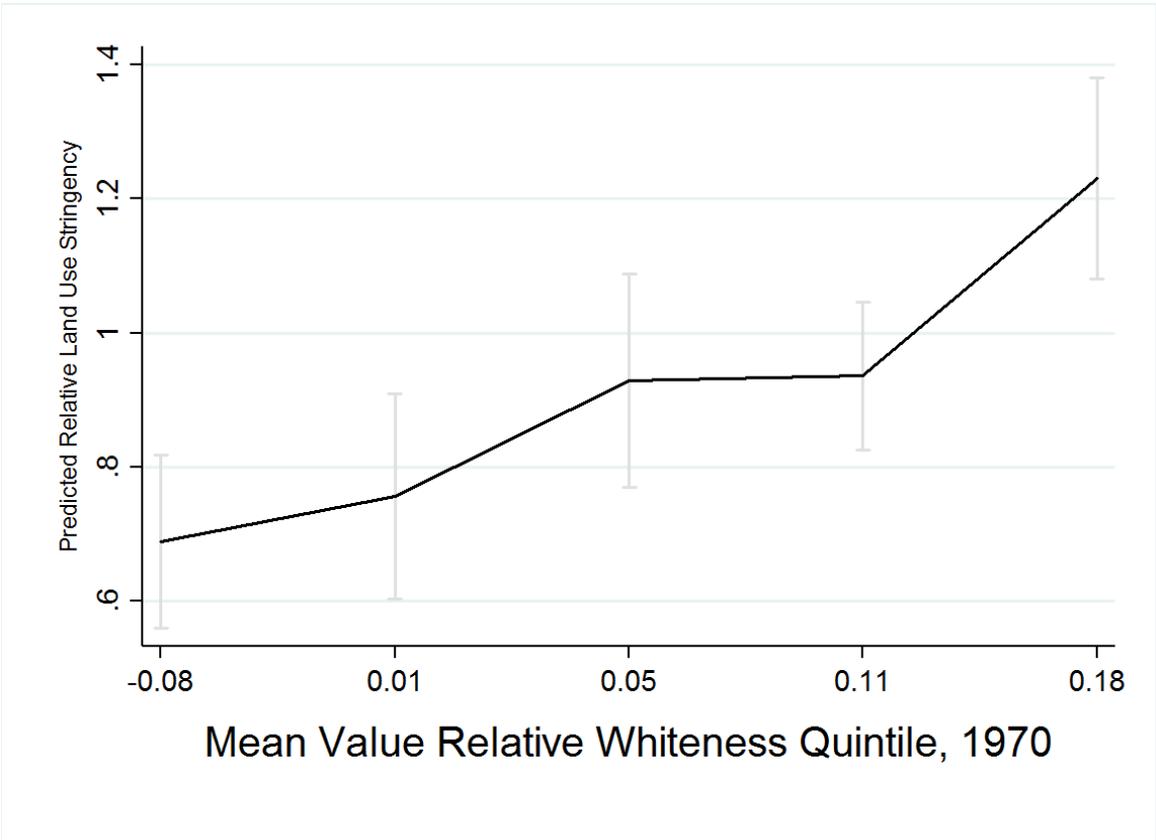
Even cities that were modestly whiter (>3%) than the larger metropolitan area have more stringent land use policies than cities that were less white than the metro area. But, the figure reveals that the most powerful effect is at the top end of the scale. When cities are greater than 15 percentage points whiter than the metro area, they are more likely to restrict land use than all other quintiles. It appears that *this* group of cities best represents the theoretical concept of communities seeking to manage which types of people have access to their public goods (e.g. racial peer effects). This pattern is evident in the Los Angeles area cities described above – Carson City's relative land use stringency is 0.71, Pomona's is 1.18, and Glendora's is 3.87.

The Effect of Land Use Restriction

If land use regulation is a tool to solve collective action problems inherent in the production of public goods, we'd expect communities with more stringent regulations to be more likely to maintain demographic exclusivity over time. Is this what we see? The answer is yes. Generally, cities with more restrictive land use regimes remained whiter between 1970 and 2011 than cities with less restrictive policies.

I begin with a descriptive analysis using the *WRLURI* as an independent variable, predicting *Percent White* in 2011, controlling for *Percent White* in 1970, *Percent Homeowners* in 1970, and *Percent Wealthy* in 1970. If my argument is correct, the *WRULRI* should positively predict *Percent White in 2011*, after we account for the fact that whiter communities today are likely to have had a higher share of homeowners and would have been whiter and wealthier in 1970 than other cities in the metropolitan area. The model includes fixed effects for metro area to determine the effect of restrictive land use on demographics *relative* to changes in neighboring communities. Figure 2 presents the results of this analysis. It shows that cities with more

stringent land use laws were whiter than their metro area neighbors in 2011, even controlling for their demographic makeup in 1970.

Figure 2: Association between Land Use Restriction and City Demographics
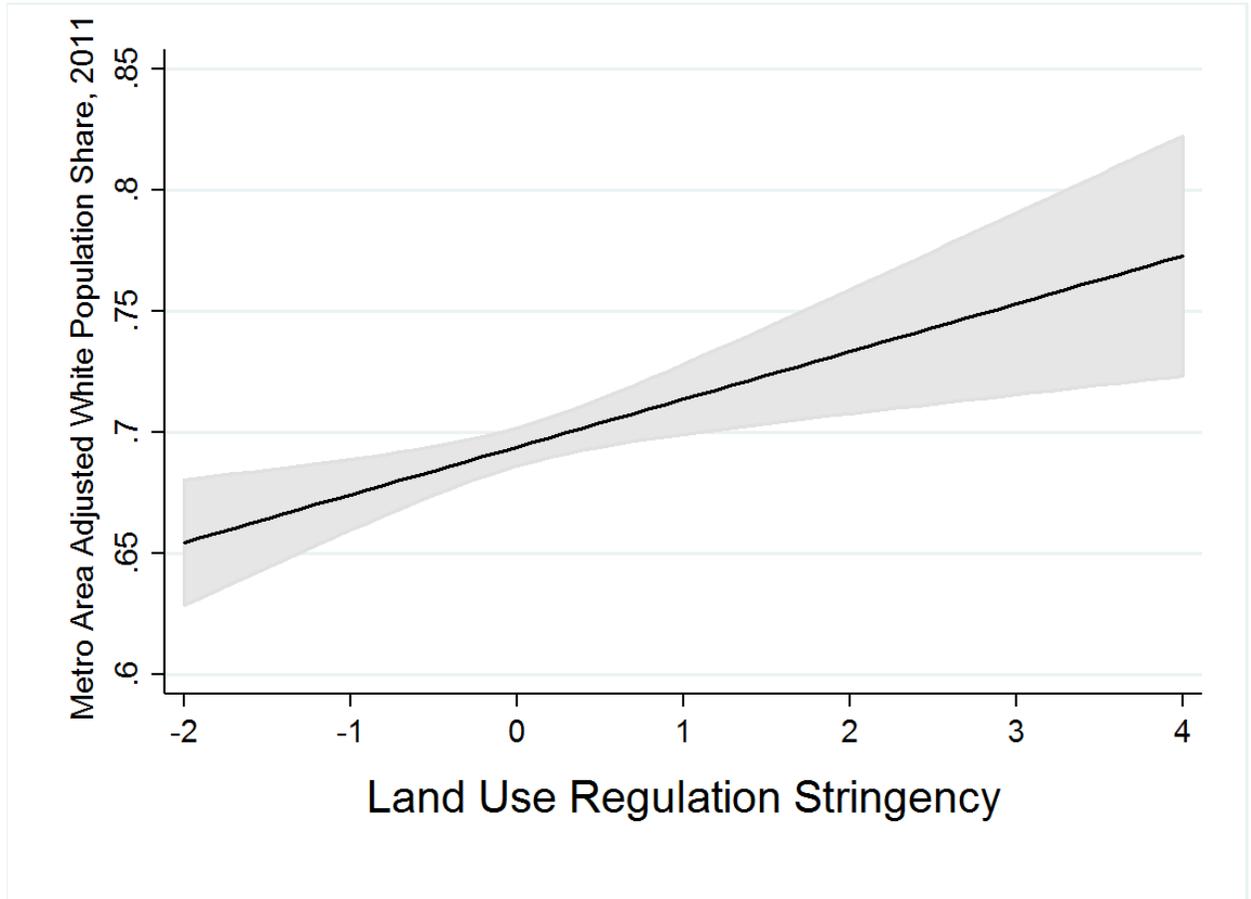
The United States has diversified significantly since the 1970s. In my dataset, the average city was 94% white in 1970 and only 69% white in 2011. Figure 2 reveals that land use restriction is significantly associated with the growth of the white population relative to other cities in the metropolitan area. What this means is that cities with more restrictive land use regimes tended to diversify more slowly than their neighbors. But, how can we be sure that these cities would not have witnessed a slower pace of diversification regardless of their land use practices? To provide additional evidence that land use regulation plays a role in shaping demographics, I draw on data from federal court cases.

As explained above, in 1968 Congress enacted the Fair Housing Act. Soon after, both the Justice Department and private parties began to bring charges against local governments that were perceived to have violated the law. Technically Title VIII of the Civil Rights Act of 1968, the Fair Housing Act prohibits discrimination in the sale, rental, or financing of housing based on race, color, national origin, religion, sex, familial status, and disability. Importantly, the Act also makes it unlawful for municipalities to make housing unavailable to persons from the protected classes. For instance, if a city's land use regulations (or application of the regulations) prevent the building of multi-family housing, and this is shown to disproportionately affect people of color, the city can be sued for violation of the Act. Plaintiffs can establish a violation by showing that the city failed to make reasonable accommodations in rules, policies, or practices that would afford people from protected classes an equal opportunity to live in a dwelling. Once a violation is established, the Act entitles plaintiffs to injunctive relief – meaning that the city is ordered by the court to change its land use policy.[14]

To locate cases that meet these conditions, I searched Lexis Uni for all Federal and State cases containing the terms "Fair Housing Act" and "injunct*" between 1968 and 2010.[15]   I recorded the date of each decision, and for a subset of the cases, I read the case and recorded the outcome.[16] This resulted in a timeseries dataset of Fair Housing Act cases involving municipal governments. I then combined these Fair Housing Act data with demographic data from the Census of Population and Housing for all incorporated cities in metropolitan areas from 1968-

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[14] It may be obvious to assert, but cities do not always comply with these orders and multiple rounds of lawsuits can take place. The court can make it extremely expensive for failure to comply over time. For a readable account of such a pattern I recommend Lisa Belkin's book *Show Me a Hero*.

[15] This search returned 2,281 records – including many cases where private individuals are the only parties to the suit (e.g. a prospective renter sues an apartment complex for discrimination). I further focused the list by searching case names and case summaries for the terms "city," "village", "town*", "twp", and "auth" which resulted in a list of 513 cases.

[16] The subset is comprised of 269 cases in which one of the search terms was included in the summary provided by Lexis.

2011. I have a total of 4,568 cities and 182,809 observations. Of these, 199 cities were engaged

in a Fair Housing Act lawsuit during the timespan. If my argument is correct, cities that were

sued under the Fair Housing Act should be enjoined to have less restrictive land use policies than

they otherwise would have had. So, I expect their white population share to be lower than it

would have been without the lawsuit. Obviously, the cities that face lawsuits differ in important

ways from cities that do not face lawsuits. So, my analysis includes fixed effects for cities,

enabling me to compare the white population share before and after the court's intervention in

the same place. Additionally, during this time-period, the United States was becoming less white

overall. I include year fixed-effects to account for the trend and all other time-varying

confounders.

      I estimate the following equation

$$w_{jt} = \alpha_j + \beta_t + cF_{jt} + \varepsilon_{jt}$$

Where j indexes city and t indexes time. F_{jt} is a binary indicator for the court having

decided the city's first *Fair Housing Act Lawsuit* as of time t and w_{jt} is the city's *White*

Population Share in city j at time t.[17] Identification of c requires that the *timing* of the court's

decision in the Fair Housing Act lawsuit be uncorrelated with other time-varying factors that

affect the white population share of the city, conditional on city and year fixed effects. So, in a

second analysis I include controls for the city's *Percent Wealthy*, *Percent Homeowners,* and the

natural log of total *City Population* all of which could affect the racial makeup of the city's

population and play a role in the likelihood that a lawsuit is filed in a particular year. To account

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[17] This variable and all other Census derived variables are interpolated from decennial Censuses. Pooling over
decades produces extremely similar results.

for differences in demand across housing markets I control for the city's *Average Home Value*,

the share of housing units that are *Vacant*.[18]   Table 2 presents the results.

Table 2: Effect of Land Use Change on City Whiteness, 1968-2011

	Model 1			Model 2		
	β	SE	P>|t|	β	SE	P>|t|
Fair Housing Act Lawsuit	-0.051	0.002	0.000	-0.053	0.002	0.000
% Homeowners				0.248	0.005	0.000
% Wealthy				0.316	0.005	0.000
City Population (logged)				-0.038	0.001	0.000
Average Home Value (100k)				-0.011	0.000	0.000
% Vacant				-0.064	0.009	0.000
Constant	1.000	0.005	0.000	1.295	0.007	0.000
N	182,809			176,250		
# Cities	4,568			4,559		
R^2 (overall)	0.089			0.264		

Note: OLS regression; DV is share of the city population that is white in each year. Fixed effects for cities and years included but not presented

Table 2 offers clear evidence that when cities are threatened or forced by the court to liberalize

their land use laws they see growth in their population of people of color. In 1970, the average

city was about 94% white, whether it would later face a Fair Housing Act lawsuit or not. By

2011, cities without lawsuits were about 73% white on average, compared to 68% white in cities

with lawsuits.[19] Land use regulations have the power to shape the demographics of

communities.   In the final section, I provide evidence that voters in white communities are

supportive of these restrictions.

Preferences for Land Use Regulation

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[18] I was able to determine the outcome of the suit for a subset of cases. Running the regressions on these cases alone does not change the conclusions.

[19] Estimated effects for 2011 calculated using margins command in Stata 14.

To analyze preferences over local land use policies I draw on precinct level election returns on local initiatives from several California cities. I expect that people who live in whiter neighborhoods will be more supportive of stringent land use policy. First, I gathered information on all local initiatives dealing with land use that were on the ballot in the general election in 2016. Then, I limited the set to initiatives clearly affecting residential development. This produced a list of 14 initiatives from six counties (described in Appendix Table A1). Some initiatives propose to build new housing. For example, in Pacifica, voters were asked to authorize "up to 206 multi-family units." In other cases, the measure made residential development more difficult or prohibited it directly. Morgan Hill voters had the opportunity to voice their preference for establishing "a population ceiling of 58,200, with a slower rate of growth than currently exists, and [to] improve policies to maintain neighborhood character, encourage more efficient land use, conserve water, and preserve open space." In the 2016 election, California voters overwhelming supported development restriction. Pro-growth initiatives garnered an average of 42% of the vote, while anti-growth initiatives garnered better than 60%. However, support for development restriction was not uniform.

To determine which neighborhoods were most likely to favor restrictive land use, I gathered precinct level election returns on every measure from each county registrar of voters, and data on the partisan and racial makeup of the voters for each precinct from the California Statewide Database (California's data repository for redistricting).[20] Then, I consolidated

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[20] The Statewide Database provides precinct-level data on the racial/ethnic makeup of registered voters and voters who cast ballots for each election for each county in the state. Data on the racial/ethnic composition of registered voters and the electorate are generated through surname matches. This process utilizes surname dictionaries to assign registered voters to Latino or one of six Asian ethnicities (which I combine). Individuals from each ethnic category are then aggregated to generate a total count of Latino and Asian registrants and voters within a precinct. I calculated the share of white voters by subtracting Latino and Asian voters from the total number of voters. The demographic data are estimated from the 2010 Census of Population and Housing. The results are extremely similar if I use the share of non-Hispanic white residents from the Census for each tract.

precincts to the Census tract level using GIS, and merged data on homeownership and wealth

from the 2011 American Community Survey. After dropping tracts with fewer than 10 voters

(and thus offering unreliable demographic proportions), I have data on 456 tracts across the 14

initiatives.

My dependent variable in this analysis is *Percent Restrict*: the share of ballots cast in the

initiative election that supported restricting development. The main independent variable is the

share of voters that are *White*. I control for the share of households that are *Homeowners,* and

the share of the population that is *Wealthy*.[21] To ensure that these results were not an artifact of

the consolidation to the Census tract level, I gathered additional precinct data from two

residential development initiatives that were presented to voters in 2002 in San Francisco where I

was able to get data on both ownership and racial demographics (but not wealth) at the block

level.[22] A description of the initiatives, their ballot placement source, votes needed to pass, and

total vote received is included in table Appendix A2.[23] I used GIS to match vote precincts[24] and

Census block boundaries[25], generating total populations of *Homeowners* and non-Hispanic

Whites in each voting precinct.[26] Because these data are for residents, not voters, in the San

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[21] Adding a control for the proportion of voters that are *Democrats* does not change the conclusions. It is interesting to note that Democratic neighborhoods are MUCH less likely to vote to restrict development. See Appendix Table A4

[22] Election data available at
https://sfelections.sfgov.org/ftp/uploadedfiles/elections/ElectionsArchives/2002/november/SOV021105.xls

[23] Local propositions can be placed on the ballot in a number of ways in San Francisco; by majority vote of the 11 member Board of Supervisors; by signature of at least four Supervisors or the mayor (for ordinances only); or by petition of the public (signatures totaling 5% of the total number of people who voted in the last mayoral election). Most propositions need a simple majority to pass, but general obligation bonds require a 2/3rds vote.

[24] Available at http://statewidedatabase.org/geography.html

[25] Available at https://data.sfgov.org/Geography/Census-2000-Blocks-no-water-Zipped-Shapefile-Forma/ffb3-h5vz
and http://www.bayareacensus.ca.gov/small/small.htm

[26] The populations from census blocks that crossed precinct boundaries were allocated to each precinct by weighting the population by the share of the block's population residing in each precinct. This procedure assumes that the racial makeup of both portions of the block are the same.

Francisco analyses, I also control for *Total Turnout*. This resulted in complete data for 631 precincts.

Scholars debate the best way to generate inferences from these kinds of data (Box-Steffensmeier, Brady, and Collier 2010; King, Rosen, and Tanner 2004; Gelman et al. 2001; King 1997). Because I am interested in estimating the behavior of neighborhoods not individuals, I use a straightforward ecological regression, with fixed-effects for each measure, to determine the relationship between the demographic composition of neighborhoods and support for restricting development. Table 3 presents the results.

Table 3: Correlates of Support for Restricting Residential Development

| | 2016 Elections in 6 California Counties | | | | | | 2002 Elections in San Francisco | | | | | |
| | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | |
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
% White	0.303	0.025	0.000	0.244	0.026	0.000	0.161	0.016	0.000	0.184	0.018	0.000
% Wealthy				0.058	0.025	0.019						
% Homeowners				0.106	0.014	0.000				0.300	0.014	0.000
Turnout										0.451	0.095	0.000
Constant	0.193			0.273	0.018	0.000	0.354	0.010	0.000	0.412	0.025	0.000
N	456			456			1262			1262		
R^2 (within)	0.256			0.413			0.134			0.490		

Note: Fixed effects for measure included but not presented

The analyses from both sets of data reveal that whiter neighborhoods are supporters of residential restriction, even after controlling for wealth and homeowner status (which are, of course, both related to the race of residents). For example, Model 4 predicts that in San Francisco about 28% of voters supported restricting development in precincts that were comprised of 10% white residents, compared to 68% support in precincts that were 90% white. The data also reveal that tracts with more homeowners and wealthy residents also support restriction at higher rates.

To determine what voters might have understood about the implications of voting in favor of or against each initiative, I analyzed ballot statements and news reports covering the measures. Appendix Table A3 presents a summary of statements that were printed in the 2016 California voter guide in support or opposition to the initiatives. I find that concerns about affordability, density, traffic, open space, and community character featured prominently in the debates over these land use initiatives. Coverage in local newspapers also made the trade-offs clear. Writing about Santa Monica's Measure LV, the Los Angeles Times reported that "critics of the ballot measure worried that it would grind development to a halt, hurting the local economy. They argued that some new housing is necessary and could reduce prices."[27] On the other side were supporters who "said Measure LV would protect the beachside city's character by stopping high-rise development….[and] prevent traffic on increasingly congested roads from getting worse."[28] In Encinitas, the Affordable Housing Coalition of San Diego County threatened to sue the city over its persistent refusal to "accommodate its future housing needs, particularly those of low-income people" while opponents argued that the "proposed zoning changes would allow the construction of extra-dense, extra tall buildings that would destroy the city's small town character."[29] On Pacifica's Measure W, the Peninsula Press explained, "The heart of the debate is whether adding more homes to Pacifica's coastline is good for the city. Measure W comes at a time when communities throughout the Bay Area are struggling to keep up with surging populations that have resulted in housing shortages and heated debates over building more homes versus preserving open space."

[27] http://www.latimes.com/local/lanow/la-me-ln-measure-lv-20161109-story.html
[28] https://la.curbed.com/2016/11/9/13573588/measure-lv-santa-monica-development-results-defeated
[29] https://www.voiceofsandiego.org/topics/land-use/lawyers-threaten-sue-del-mar-encinitas-housing-plans/;
http://www.sandiegouniontribune.com/communities/north-county/sd-no-encinitas-what-now-20161110-story.html

In short, new development was purported to lower housing costs and increase access to the housing market, while increasing density, traffic, and decreasing open space. However, as the tract level analysis in Table 3 showed, support for land use restriction was not uniform across neighborhoods. As my theory would suggest, neighborhoods with larger shares of homeowners, wealthy, and white residents supported restriction. We cannot know if voters in these neighborhoods were motivated by worries about housing values, congestion, redistribution, peer effects, or some combination of factors. But, together with the evidence presented in previous sections, what we *do* know is that restrictive land use regulation contributes to racial segregation across city lines. The analyses in Table 4 suggest that is wealthy white homeowners who are most likely to favor these policies.

Conclusion

Many metropolitan areas in the United States are facing a crisis of housing affordability. Homelessness is on the rise as rents and housing prices skyrocket. The problem is largely the result of limited growth and development. This modern reality offers a stark contrast to the America of the 1950s and 60s when a housing boom, federal mortgage programs, and new highways brought hundreds of thousands of people to rapidly developing suburban communities. The cities pulled people from the rural hinterlands, from central cities, and from foreign nations. But, during this period, the residents who had access to suburbs were nearly exclusively white. I have shown that places that were whiter in 1970 have locked in that demographic profile using land use restriction and I showed that cities with more stringent land use remain whiter over time. I provided evidence that white voters are more likely to support restricting development in initiative elections and that more stringent land use regimes generate whiter cities. It is this

maintenance of homogeneity that generates segregation across city lines. Given Americans'

overwhelming commitment to local control – it is likely to be a pattern that persists.

On-Line Appendix

Initiative Research

Appendix Table A1

CNTYNAME	PLACE	LTR	BALQUEST	Restrict Residential	PASSFAIL
SAN DIEGO	San Diego	B	(INITIATIVE) Shall this Initiative be adopted for the purpose of amending the County General Plan, Zoning Ordinance and Code of Regulatory Ordinances and approving the Lilac Hills Ranch Specific Plan ("Plan")? The Plan provides for the development of a 608-acre master-planned community including 1,746 dwelling units, three commercial centers, a public park, 10 private parks and 16 miles of trails. The project site is generally located north of Escondido and east of I-15 in the unincorporated area of North San Diego County.	0	Fail
LOS ANGELES	Beverly Hills	HH	(INITIATIVE) Shall an ordinance be adopted allowing a 26 story (345 feet) residential building instead of two residential buildings of 8 and 18 stories (101 and 218 feet); increasing open space from 3.28 to 3.89 acres and identifying 1.7 acres of open space as private garden generally open to the public subject to property owner's reasonable restrictions; removing conference center and relocating its uses; prohibiting discretionary architectural review; reducing graywater use requirements?	1	Fail
LOS ANGELES	Calabasas	F	Shall the Ordinance No. 2016-333 approving changing the existing Zoning from Planned Development - Residential Multifamily (20) - Open Space Development Restricted - Scenic Corridor to Commercial Retail - Residential Multifamily (20) - Open Space Development Restricted - Scenic Corridor - Development Plan to accommodate: 67 Single-Family Detached Homes and two Affordable Duplexes; a 72,872 square-foot, three-story hotel; and preservation of approximately 61.0 acres as Permanent Open Space on a 77-acre property at 4790 Las Virgenes Road, Calabasas be approved?	0	Fail
LOS ANGELES	Santa Monica	LV	Shall the City's General Plan and Municipal Code be amended to require: a new permit process for major development projects exceeding base sizes or heights of 32-36 feet, with exceptions such as single unit dwellings and some affordable housing projects; voter approval of major development projects and development agreements, excluding affordable housing and moderate income and senior housing projects, among others; and voter approval of changes to City land use and planning policy documents.	1	Fail
ORANGE	Costa Mesa	Y	(INITIATIVE) Shall the ordinance to require voter approval of development projects that require adoption, amendment, change or replacement of the General Plan, the Zoning Code, a specific plan, or an overlay plan, and that generates over 200 additional trips, increases intersection volume/capacity, changes the intersection utilization/level of	1	Pass

			service, adds 40 or more dwelling units, adds 10,000 sq.' of non-residential use, or changes a public use to a private use under specified conditions, be adopted?		
ORANGE	Cypress	GG	Shall an ordinance that approves the "Cypress Town Center and Commons Specific Plan" to allow for development of a town center, single-family and multi-family housing, commercial/senior housing and a public park on portions of Los Alamitos Race Course, the former Cypress Golf Club and adjacent properties, together with related general plan and specific plan amendments and zone changes, be adopted?	0	Fail
SAN DIEGO	Del Mar	R	Shall the ordinance which proposes to amend the Del Mar Community Plan, Housing Element, and Municipal Code to require voter approval for certain development projects be adopted?	1	Fail
SAN DIEGO	Encinitas	T	Shall City Council Resolution No. 2016-52 and Ordinance No. 2016-04, which collectively update the City's General Plan Housing Element, amend related General Plan provisions, and amend Specific Plans, Zoning Code, Zoning Map, Municipal Code, and Local Coastal Program, in an effort to comply with State law, incentivize greater housing affordability, implement rules to protect the character of existing neighborhoods, maintain local control of Encinitas zoning, and resolve existing lawsuits, be adopted?	1	Pass
SAN MATEO	Pacifica	W	(INITIATIVE) Shall the Initiative which amends Ordinance Number 391-C.S. to authorize up to 206 multi-family units of residential development at the Rockaway Quarry only under certain conditions specified in the Initiative measure entitled "Pacifica Initiative Amending Ordinance No. 391-C.S. To Authorize a Future Rezone of the Quarry Which Could Include Residential Development, Under Certain Conditions", be adopted?	0	Fail
SANTA CLARA	Cupertino	C	(INITIATIVE) Shall an initiative ordinance be adopted amending Cupertino's General Plan to limit redevelopment of the Vallco Shopping District, limit building heights along major mixed-use corridors, increase to 45 feet the maximum building height in the Neighborhoods, limit lot coverages for large projects, establish new setbacks and building planes on major thoroughfares, and require voter approval for any changes to these provisions?	1	Fail
SANTA CLARA	Cupertino	D	(INITIATIVE) Shall an initiative be adopted enacting the Vallco Town Center Specific Plan for the 58-acre Vallco Shopping District Special Area requiring residential (approximately 389-800 units, including approximately 20% senior housing), office (2,000,000 sf), commercial (640,000 sf), hotel, park, civic/educational uses; requiring funding/community benefits for transportation (approximately $30,000,000), schools (approximately $40,000,000), green roof (approximately 30 acres), recycled water; granting initial entitlements; establishing development standards and limited future	0	Fail

			approval process; and making related Cupertino General Plan and Municipal Code amendments?		
SANTA CLARA	Milpitas	K	Shall an ordinance amending the City of Milpitas General Plan be adopted to mandate that any attempt to rezone parks, parklands or open space to residential, commercial or industrial, or any proposal for residential, commercial or industrial development in parks, parkland or open space, must be placed before Milpitas voters and secure two-thirds support in the City's next general election?	1	Pass
SANTA CLARA	Morgan Hill	S	Shall a measure be adopted to amend the Morgan Hill General Plan and Municipal Code to update the City's voter-approved Residential Development Control System (RDCS) to extend it to 2035, establish a population ceiling of 58,200, with a slower rate of growth than currently exists, and improve policies to maintain neighborhood character, encourage more efficient land use, conserve water, and preserve open space?	1	Pass
SONOMA	Healdsburg	R	Shall Healdsburg voters amend the existing Growth Management Ordinance to increase inclusionary housing requirements on new development to 30%, remove existing restrictions on the number of new residential units allowed per year, adopt and periodically amend new growth management measures in conjunction with the Housing Element update, and adopt and periodically update a Housing Action Plan to provide a greater variety of housing?	0	Fail

Table A2: San Francisco Propositions, 2002

Title	Purpose	Ballot Placement Source	Vote Needed	Vote Received
Prop B: Affordable Housing Bonds	General obligation bond authorizing city to borrow $250,000,000 to make grants or loans to buy, build, or renovate housing for low income households	Supervisorial Vote 9 – Yea 2 – No	66 2/3%	56%
Prop O: Conditions for Providing Services and Payments to Homeless Individuals	Ordinance requiring development of 1000 housing units for homeless individuals and drug and alcohol treatment services for at least 700 individuals.	4 – Supervisor Signatories	50% +1	52%

Table A3: Ballot Statements: Local California Development Initiatives, 2016

		Anti-Development Arguments	Pro-Development Arguments
San Diego	B	Measure B is a developer attempt to build 1,746 houses and 90,000 square feet of retail space in a critical agricultural area where only 110 homes and no retail uses are allowed by law (a 1,487% density increase).	Measure B authorizes development of Lilac Hills Ranch, a pedestrian-oriented village in North County that includes housing priced to start at $300,000 – within reach of most working families and first-time home buyers – to address the County's housing crisis and reduce development pressures near your neighborhood.
Beverly Hills	HH	Using a legal loophole that circumvents the process used by every other project in Beverly Hills, Measure HH will allow a tower 345-feet high with an additional 30 foot rooftop canopy. Do you want a 345-foot skyscraper, taller than the Statue of Liberty; twice the height of any building in Beverly Hills, extending the Wilshire Corridor into Beverly Hills?	Measure HH creates a beautiful western gateway to Beverly Hills with more green space by combining two condo buildings into one, removing the 8-story building and replacing it with a beautiful 1.7-acre garden for Beverly Hills residents to enjoy year-round
Calabasas	F	The project is too big for this sensitive canyon. Invaluable scenic vistas would be obstructed.	The proposed hotel is expected to provide over $500,000 per year in revenue to the City which can be used for additional Sheriff's patrols, youth and senior programs, and enhanced beautification, environmental and community services.
Santa Monica	LV	Vote YES on LV to protect Santa Monica from overdevelopment and increased traffic congestion. Measure LV is the Land Use Voter Empowerment (LUVE) Initiative.	Why do most responsible community leaders and organizations say Measure LV is too extreme? Because a one-size-fits-all height limit of two stories citywide goes too far, and Measure LV is full of unintended consequences. While it claims to reduce traffic, Measure LV may make our unbearable traffic problems worse by reducing housing for workers, forcing them to commute and clog our streets.
Costa Mesa	Y	Measure Y is a citizens' initiative to give the people of Costa Mesa control of their future. A vote FOR Measure Y is a vote about the future of our neighborhoods and our community, ensuring that residents determine the future character of Costa Mesa.	Measure Y, will force a vote of certain projects, is so restrictive in nature that if it were in place years ago, Costa Mesa as we know it today wouldn't exist. The suppression of new housing would essentially lock out middle class families from entering the market.
Del Mar	R	Protect Our Community Plan and Small Town Character - Vote "YES" on "R" - Ensure Your Right to Vote. If a developer wants to change the zoning to create a Specific Plan where the allowed density, height of buildings, floor area ratio and lot coverage are changed, the development must be submitted to the voters for their approval.	Measure R is a barrier to providing affordable housing in Del Mar; It eliminates Community Plan goals for mixed use residential housing

Encinitas	T	Passage of this measure will result in 12,000 to 24,000 more cars on the road each day causing more congestion, strain on infrastructure, gridlock, and air pollution. Developers have an incentive to increase the number of units by 35% over zoning. Preserve our small town character.	A Yes vote will enable more housing choices for seniors, millennials, first time home buyers, and young families. This could be your parents, adult children, or even you as your needs change. This housing plan allows for smaller, more accessible and affordable homes, and brings the city into compliance with California law.
Pacifica	W	Measure W authorizes the City to approve 206 multi-family units but doesn't commit the developer to build anything. We are voting without any review of environmental or traffic impacts. Haven't we learned what coastal erosion, flooding, and storms do to coastal developments?	You will see that Measure W is a thoughtful approach; ensuring our community will benefit from permanent open space; limited development, significant tax revenue; and needed traffic mitigation.
Cupertino	C	Measure C empowers the electorate to reject uncontrolled growth in Cupertino. Uncontrolled growth will damage the quality of life we enjoy today	Measure C will block mixed-use revitalization of Vallco, resulting in an empty 'ghost mall' for years to come. Measure C will block the construction of much deserved housing for seniors.
Cupertino	D	Too Dense! Too Tall! The site would be turned into a concrete jungle with insignificant ground level green space.	Measure D will revitalize Vallco as an innovative, sustainable mixed-use town center as called for in Cupertino's community-created General Plan.
Milipitas	K	The people will have the right to decide what is best for the city. Measure K will ensure that any attempt to change Milpitas Parks or Open space into residential, commercial, or industrial uses first must be approved by the people of Milpitas with a two-thirds (66.7%) vote before a change in use can take place.	But what this ordinance does is drive the cost of modification up substantially and takes the outcome out of the hands of the professionals.
Healdsburg	R	Now a few people want to take away your right to stop unlimited growth. We negotiated in good faith with the City to find creative solutions to house more workers and families, but the City rejected our ideas. Instead, they want to remove voters' right to limit large projects altogether	Housing prices have skyrocketed, young families can no longer afford to live in Healdsburg, and our middle-income workforce has been priced out of the market. By voting yes on Measure R we can correct these inequities and provide greater housing opportunities for all Healdsburg residents.

Table A4: Correlates of Support for Restricting Residential Development, Controlling for Partisan Registration

2016 Elections in
6 California Counties

	β	SE	P>|t|
% White	0.127	0.022	0.000
% Wealthy	-0.028	0.021	0.167
% Homeowners	0.065	0.012	0.000
% Democrat	-0.546	0.035	0.000
Constant	0.606	0.026	0.000
N	456		
R^2 (within)	0.623		

Note: Fixed effects for measure included but not presented

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