

# URBAN SPRAWL, RACIAL SEPARATION, AND FEDERAL HOUSING POLICY IN SOUTHERN CALIFORNIA

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Urban sprawl, racial division, and housing affordability problems have defined Southern California's development during its entire post-colonial period. Since regional development began in earnest with the completion of the transcontinental railroad in 1876, spatial racial and income/wealth fissures have been produced, transformed, and reproduced in complex and shifting ways. This essay examines the impact of federal housing-related policies on racial and income divides in Southern California during the past 30 years.

Increasingly, federal policies are viewed as playing a critical role in the creation of urban sprawl and of racial segregation in U.S. metropolitan areas; see, for example, Nivola (2000). This causative role of the federal government is seen most clearly in past policies, such as federal support for interstate construction and FHA housing loans in the 1950s. These two policies interacted to facilitate the movement of whites to new suburban enclaves while denying home-ownership opportunities to minorities. But while this historical role is now readily acknowledged, the continuing role of federal policy in the ongoing processes of urban sprawl and in evolving patterns of racial separation and integration has received little attention and is not well understood. This paper takes up this challenge by analyzing patterns in a place which is considered both a capital of sprawl and a bastion of racial tension. We argue that both historically and now, federal policies have interacted with housing market forces to exacerbate the racial separation, income segmentation, and urban sprawl that have come to define this region's growth. If these results of federal policy were intentional in the past, they are perhaps unintended today: nonetheless, federal housing-related policies remain non-neutral with respect to both urban sprawl and the degree of racial residential separation.

Our view that federal housing-related policies remain an active element in shaping the urban landscape is not universally shared. Many analyses regard federal policies and market forces as distinct, even as substitutes or competitors. For example, it is sometimes asserted that a government-led system for financing mainstream housing and for providing low-income housing was replaced after 1980 by a market-driven system (see Wachter 1990, Diamond and Lea 1992, and Downs 1995, for example). The inference is that the elimination of wasteful subsidies permitted the emergence of a more efficient housing allocation mechanism. This perspective embodies the idea that once government gets out of the way, spatial development can more clearly reflect consumer and business preferences. The idea that preferences underlie observed outcomes is a powerful theme in much writing on urban spatial patterns. A vast literature, spawned by Becker (1971), explains how racial discrimination in housing and other markets arises from some people's "taste" for being with their own kind. There can be little doubt that

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personal discrimination of this sort remains a key source of racial inequality in the contemporary US; see Ondrich, Stricker, and Yinger (1998). More recently, Gordon and Richardson (2000) have argued that suburban sprawl is an optimal urban form because consumers like it.

The widespread use of preference-based models by economists together with the reduced role of government allocation and regulation can suggest that any continued patterns of urban sprawl and racial separation observed today are preference-based and in some sense ‘optimal.’ One central point of this volume is that this view is untenable. And as with the topics addressed in other chapters, so with housing. The apparently microeconomic context of housing choice is embedded in the societal dynamics surrounding the construction and maintenance of the urban built environment; and these dynamics reflect political decisions and influences at many levels. This means that urban sprawl cannot be interpreted as simply reflecting consumer “choices.” It also means that racial preferences per se cannot explain residential patterns of racial segregation (Clark, 1993). Other factors are also involved. Federal housing policies is one of those contributing factors. In fact, federal housing-related policies have provided the context in which racial separation and urban sprawl have arisen and persisted. Market forces and federal policies together have generated the urban landscape – both in the earlier era of heavier regulation, and in the deregulated era of today.

The next section shows how federal homeownership and lower-income housing policies contributed directly to urban sprawl and racial separation before 1990. We then discuss federal policies and market processes in the 1990s. FHA housing finance receives special attention due to its unique role, past and present, in Southern California’s residential process.

### **Federal Homeownership Policies and Racial Spatial Inequality through 1990**

Housing affordability has been a chronic problem in Southern California. Carey McWilliams observed a half-century ago that the region’s residents were caught between continually rising land and housing prices and chronically depressed wage levels (McWilliams, 1973). This housing affordability problem has not lessened with time. One measure of housing affordability is the ratio of median rent to median income: a ratio of 30 percent or more is a benchmark indicator of unaffordable housing. In 1990, about half the census tracts in Southern California had (median-to-median) ratios higher than 30 percent, as Map 1 shows. Further, the unaffordable-housing threshold is more likely to be crossed as income levels fall.

Racial exclusion has also been a permanent fixture in the region. Policies insuring white supremacy have been established since eastern settlers first came to California (Almaguer, 1994). Exclusionary zoning and rampant discrimination were inescapable in the first half of the 20th Century. Consider the case of Los Angeles. These practices made 95 percent of available Los Angeles residential areas off-limits for minorities as of World War II, forcing minorities into isolated and marginal spaces such as East Los Angeles, Watts, and Little Tokyo (Dymski and Veitch, 1996). Eventually, political agitation by local leaders such as Ernest Roybal, together with the pressure of growing Hispanic, African American, and Asian American populations forced open more areas. East Los Angeles broadened to encompass Lincoln Heights on the west and Whittier on the east. As Horne (1995) documents, the Watts uprising resulted in the definition of “South Central Los Angeles” as a minority space, including neighborhoods that previously were primarily white.

After the Watts uprising and the end of racial covenants, racial exclusion was inverted: No longer did local political jurisdictions and associations keep minorities out through explicit 'white only' policies; instead, some spaces were informally designated as areas in which whites were no longer expected to live. Several Los Angeles County cities, notably Compton and Inglewood, became known as centers of minority population. Overall, Los Angeles remains selectively desegregated. Through the 1990 Census, the city's segregation indices rivaled those of other U.S. cities (Denton, 1994).

The interaction of housing affordability and racial exclusion also created distinctive racial and social fault lines in the other counties of Southern California. The latest development trends involve planned cities, often set at a far remove from other urban spaces – examples are Temecula and Murrieta in Riverside County, Santa Claritas in Los Angeles County, and virtually the entire emerging residential grid of Ventura County. These new growth areas not only significantly worsen the region's urban sprawl pattern; they also largely deepen the checkerboard pattern of racial/income polarization in the region.

How did federal housing-related policies affect these patterns? Here we focus on the period after World War II. Immediately after the War, federal housing policies privileged white households seeking housing in largely white neighborhoods (Isenberg, 2001). Minority households and minority and lower-income areas received virtually no federal housing support. There were two primary channels for federal housing policy. One channel involved federal efforts to build or subsidize units for lower-income units. This program was extremely small prior to the 1960s, and it was linked to slum clearance. The second and larger channel involved efforts to encourage 'mainstream' home ownership. A key here was Federal Housing Administration (FHA) mortgage underwriting, a program set up in the 1930s to stabilize and subsidize mortgage lenders; a smaller Veterans Administration (VA) mortgage program was also established after World War II. Another strand of this policy consisted of tax expenditures: mortgage interest and property taxes were made deductible on federal income taxes. Conventional and VA/FHA mortgage loans alike are eligible for this tax deduction. The criteria for deciding which homes would qualify for FHA underwriting used explicitly racist criteria (Squires, 1992; Vandell, 1995). Since over half the home-purchase loans made in the 1950s in Southern California were FHA loans, and since VA and other mortgage lending largely followed FHA criteria, federal tax expenditures for mortgage interest and property taxes and mortgage underwriting commitments flowed almost exclusively to residential areas that excluded non-white households. The criteria explicitly discouraging FHA mortgage underwriting in areas with minority residents remained in force through the mid-1960s.

These two channels of federal housing policies shaped the growth of Southern California housing markets in the 1950s and early 1960s. Public housing units built in these years were almost entirely located in lower-income, heavily minority areas. Meanwhile FHA and VA housing fueled the growth of Southern California's residential grid, during this period of explicitly racist underwriting practices. Minorities were largely restricted to inner-core areas, both because of the location of explicitly discriminatory covenants, because of prevailing housing-industry practices, and because of location decisions about public and subsidized housing units. Since FHA/VA loans were made with greater frequency in suburban than in inner-city areas, these federal policies promoted racial separation. And since population pressures

pushed the suburbs ever outward, while expanding the space ceded to minorities, these policies also underwrote urban sprawl.<sup>1</sup>

The explicit federal role in residential racial discrimination ended in the 1960s. The Civil Rights Act of 1963 and widespread episodes of urban unrest led to the War on Poverty. Included in this War were a wide array of social programs and several housing initiatives. In particular, federal expenditures on public housing were expanded dramatically, and various federal tax incentives for low-income housing were put into place. Continuing the established post-war trend, subsidized housing projects were located disproportionately in inner-core, heavily minority areas. Urban renewal programs targeted these same areas, clearing out dilapidated buildings and housing units and destabilizing inner-core neighborhoods. Consequently, downward pressure was exerted on the value of minority-area housing.<sup>2</sup> These patterns played out in the central city and older inner-suburban areas of Los Angeles County. Low-income housing programs in the 1970s were also concentrated in this area, in precisely the “marginalized” areas that minorities and lower-income people have occupied throughout the 20th Century.<sup>3</sup> This same pattern held in this region’s other counties.

Meanwhile, the changing fabric of federal laws and policies, including the Fair Housing Act of 1968, together with sustained pressure by community activists, forced an end to overt racial discrimination in FHA policy. The federal commitment to access to housing was broadened with the passage of the Home Mortgage Disclosure and the Community Reinvestment Acts in 1975 and 1977. These acts, respectively, require lenders to disclose the location of their residential real-estate loans, and mandate banks and savings and loan associations to meet credit and banking needs throughout their market areas. In effect, these two acts broadened the scope of federal housing policy; the federal government now has regulatory authority to insure that home mortgage loans are being made available to home-loan applicants in lower-income and minority areas, and that minority applicants also have equitable access to home mortgages.

These social and political reforms have led to the reinvention of the FHA as a financing vehicle aimed at first-time homebuyers, a disproportionate number of whom are minorities. FHA housing, however, was no longer the predominant financing vehicle for home purchases. Conventional loans – not supported by FHA underwriting and by FHA rules regarding property appraisal – became the primary housing-finance mechanism. And conventional loans were used to support ‘white flight’ to new suburban areas surrounding the central cities. Indeed, the cycle of suburban sprawl and white flight that was originally underwritten by biased FHA policies remained the definitive model of urban growth for most U.S. cities. However, conventional loans have replaced FHA loans as the workhorse of this expansion; conventional loans result in tax expenditures for mortgage interest and property taxes just as FHA loans do.

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<sup>1</sup> Voith (1999) finds statistical evidence that federal tax benefits are one factor explaining suburbanization and central-city decline.

<sup>2</sup> Newman and Schnare (1997) provide evidence that housing projects may worsen neighborhood quality. Lee, Culhane, and Wachter (1999) show that public housing projects have an adverse effect on housing prices in urban neighborhoods.

<sup>3</sup> Goetz (1993) provides a useful history of public housing in Los Angeles.

There is no doubt that FHA loans swung dramatically toward inner-core and heavily-minority areas. Home Mortgage Disclosure Act (HMDA) data for Los Angeles County during the 1981-89 period provides some insight into the balance between the spatial distribution of FHA and conventional loans. As a measure of this distribution, Los Angeles County's census tracts are first ranked by median income, from highest to lowest. These rank-ordered tracts are then sorted into five quintiles of equal size; and statistics on the relative number of FHA and conventional loans are computed for each quintile. This procedure shows that FHA loans constituted only 0.82 percent of all 1981-89 home purchase and refinancing loans in the highest-income quintile, but 4.8 percent of all such loans in the lowest-income quintile. When the same procedure is used to rank census tracts by their percentage minority populations, the distribution of FHA loans is similarly unbalanced: FHA loans constitute 0.95 percent of all home-purchase and refinancing loans in the lowest-minority quintile, but 6.3 percent in the highest-minority quintile.<sup>4</sup>

What is the net effect of these federal housing-related policies on urban sprawl in Southern California through 1990? In principle, there are contrary forces at work. The reorientation of FHA housing and expansion of federal investments in low-income housing in inner-core areas, on one hand, partially compensated for the suburban bias of homeowner tax expenditures, on the other. Data on lower-income housing expenditures are not available; but Table 1 presents some estimates of 1990 tax benefits in five Southern California counties.<sup>5</sup> The top left column contains an estimate of homeowners' mortgage-interest and property tax deductions in 1990, by county. The next two columns evaluate the impact of these tax benefits on urban sprawl in each county, by comparing the percentage of 1990 housing units and 1990 homeownership tax benefits in inner-core areas. Inner-core areas consist of those tracts in which the median year for housing-unit construction is 1960 or earlier. These figures clearly show that inner-core areas have systematically higher shares of housing units than of federal homeowner tax benefits.

Table 1 suggests outlying areas receive a disproportionate share of homeowner tax expenditures, indirectly supporting urban sprawl. No figures on federal lower-income housing expenditures are available, but undoubtedly these are far less than those for homeowners. The symbiotic interaction of market and federal policies is evident: location decisions for federally-subsidized housing, together with historical patterns of bias in FHA housing, reinforced a dynamic of poverty concentration and racial separation, which itself fueled further suburban flight and expansion of the urban fringe.

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<sup>4</sup> These figures undoubtedly undercount FHA loans. HMDA data in the 1980s were collected only from depository institutions, not from mortgage companies; and fewer lenders with small loan volumes provided data than after the 1989 revisions in HMDA reporting requirements.

<sup>5</sup> Data on mortgage-interest and property-tax-based tax expenditures are not made publicly available; and detailed subsidized-housing data is available only for the 1970s and for the late 1990s. The method used to estimate the spatial distribution of homeowner tax expenditures is based on Gyourko and Voith (1997), with differences in calculation due to data limitations. Details of the calculations reported here are available from the authors on request.

What, then, are the net effects of federal housing-related policies and market dynamics on racial segregation in Southern California prior to 1990? The 1990 Census can be regarded as a compendium of net effects through that point in time. According to 1990 Census data, all the Southern California counties have a larger percentage of white households and homeowners in suburban than in inner-core areas. Throughout the region, Blacks and Latinos are far more likely to live in inner-core areas, with Los Angeles, Orange, and San Bernardino counties showing the largest gaps; Asian Americans are more evenly distributed.

### **Federal Housing Policies and Access to Housing Credit since 1990**

What has changed in this picture since 1990? Three dimensions of federal housing policy are considered here: subsidized lower-income housing; homeowner tax expenditures; and FHA housing. We then consider evidence concerning access to housing credit, relying on data collected under the Home Mortgage Disclosure Act.

After a hiatus in the 1980s and earlier 1990s, the Department of Housing and Urban Development began making comprehensive data on the location of subsidized housing units available to the public in the late 1990s. Map 2 depicts the distribution of subsidized lower-income housing in 1997 and 1998. These spatial patterns clearly indicate the concentration of subsidized housing units in locations that are lower-income and heavily minority. Since residents of these units are disproportionately lower-income and minority, this reinforces income polarization and racial separation in the region. And as Massey and Denton (1993) have shown, concentrating low-income households in areas with high unemployment and low educational attainment reinforces these households' separation from access to social and personal resources.

Table 2 depicts federal lower-income units and dollar outlays in 1998 more systematically. The tracts in each county are divided into quartiles based on the percentage of their populations in poverty in 1990; thus, the first line of data for each county in Table 2 depicts that 25 percent of all census tracts with the lowest percentage of 1990 population in poverty, and so on. The four columns depicting data on federal lower-income housing outlays shows that in three of the four counties depicted, lower-income units and outlays are highest in the quartile with the highest poverty population. The exception is Orange County, in which lower-income subsidized housing is spread evenly throughout the third and fourth poverty quartiles.

This brings us to federal homeowner tax expenditures, which are shown by poverty quartile in the last two columns of Table 2. This table depicts the distribution of 1998 mortgage interest tax deductions for 1997 home purchases. As might be expected, the flow of mortgage interest deductions is disproportionately weighted toward the lowest-poverty quartile. Further, the imbalance in the locus of federal dollars by program type is remarkable. In Los Angeles County, the lowest-poverty quartile receives the bulk of the federal tax expenditures and outlays shown here in the form of mortgage deductions; the highest-poverty quartile has a larger volume of subsidized housing expenditures than of mortgage deductions. This remarkable result, it should be emphasized, is based solely on the estimated value of mortgage deductions for homes purchased in 1997 alone. We do not go on here to estimate the value in 1998 (or another benchmark year) of mortgage deduction tax expenditures for homes purchased in previous years; doing so with accuracy would require detailed information on home turnover. Clearly, however,

mortgage-based tax expenditures utterly dwarf lower-income subsidies in all Southern California counties.

Table 3 also contains some comparative spatial data on federal outlays for homeowners and for lower-income housing. Tax expenditures for homes purchased in 1997 with conventional home-purchase loans are weighted disproportionately toward suburban areas. In San Bernardino County, for example, note that 18 percent of all housing units are in inner-core tracts (see the upper middle column), versus only 4 percent of tax expenditures on homes purchased with conventional loans in 1997 (lower left column). Again with the exception of Orange County, a disproportionate amount of federal lower-income housing outlays are made in inner-core areas.

How does the FHA loan program, as reformulated, affect these trends? We have already noted the historical role of FHA loans in promulgating urban sprawl and racial separation, and the subsequent efforts to overturn this legacy, and the shift of FHA loans to lower-income and minority areas in the 1980s. Table 3 shows that tax expenditures on FHA-financed homes purchased in 1997 are far more heavily weighted toward inner-core areas than are tax expenditures for conventionally-financed homes. Overall, throughout the 1990s, the share of FHA loans among all home-purchase loans increased in lower-income and in high-minority areas.

The expanded reporting by lenders under the HMDA for loans in the 1990s makes it possible to look deeper into the relationship between the FHA loan process and racial separation in Southern California. Throughout the region, FHA loans have been made to white applicants in far higher proportions in suburban and upper-income than in inner-city and lower-income areas. Table 4 illustrates this pattern for home-purchase loans reported under HMDA in the years 1992, 1994, 1996, and 1998. For example, 41 percent of *all* inner-core home-purchase loans in Los Angeles county were made to whites; but whites got just under 6 percent of all FHA-insured loans made in Los Angeles' inner-core area. In suburban tracts, white borrowers got 53 percent of all home-purchase loans, but 30 percent of those that were FHA-insured. That is, FHA loans are used disproportionately as a vehicle for permitting white applicants to purchase suburban homes. This same pattern is found in San Bernardino and Ventura counties.

Table 4 contains other evidence of the racialized character of contemporary loan markets. Most notably, the over-representation of Latinos among those obtaining FHA-insured loans is remarkable in each of these five counties. Further, Latinos are especially likely to obtain FHA-insured loans in inner-core areas of Los Angeles, San Bernardino, and Ventura counties. Less distinct trends are found for Black borrowers. In the two counties in which they are numerically most significant, Los Angeles and Orange, Asian American borrowers are substantially more likely to use conventional than FHA-insured loans than conventional loans.

This evidence suggests that minority home-ownership applicants may be at a special disadvantage in seeking out housing in upper-income areas. Whether this is so can be ascertained by an additional empirical test: a probit model that investigates whether those seeking home loans are more or less likely to be approved if they are members of a racial minority. Probit models are a standard regression technique. Social scientists often use these techniques to determine whether an outcome of interest (in this case, the probability of loan approval) is systematically affected by another variable of interest (applicant race) after controlling for the

values of other variables that may also influence the value of the outcome variable. Probit models investigating whether minority applicants are less likely to obtain loans will typically control both for variables correlated with applicant creditworthiness and for the economic and social characteristics of the area in which the home is located. The model deployed here includes applicants' income levels and also their loan-income ratios. It also includes several neighborhood variables, including median income, population density, percentage of homeowners, and high levels of minority residents.

The appendix sets out the full model, and explains the data used to estimate it. A healthy list of variables is incorporated – suggesting that if applicant race is found to be significant, racial discrimination may exist in this market. At the same time, this model -- like most regression models -- is incomplete: it does not control for home values, nor for applicants' credit and employment histories, and wealth levels. This leads to some ambiguity about how to interpret a finding that applicant race has a statistically significant impact on the probability of loan approval. Some argue that if applicants of color are at a statistically significant disadvantage relative to others in an equation like those run here, then proof of racial discrimination has been shown. Others are more skeptical: they point out that racial discrimination is not proven, because the 'race variables' could be picking up differences in the creditworthiness of minority and non-minority applicants. The estimated equation may not have a large enough list of variables on applicant characteristics; and some of the excluded variables, if their values vary systematically with race, could influence the value and significance of the (included) race variables.

In part, these differing interpretations arise because experts in this field have different definitions of what racial discrimination is. Some analysts view racial discrimination as a situation in which significant structural differences in resources and opportunities exist between two groups – for example, whites and minorities, or women and men. A broad measure of racial disadvantage is then an appropriate investigative approach. Other analysts view racial discrimination as a specific, malign act by an institution or individual that is not linked to any legitimate business objective. These analysts are looking for evidence of racial perpetrators or of economically irrational practices.<sup>6</sup>

As of this writing, no regression model yet designed has been accepted as proving the existence of racial discrimination to the satisfaction of all experts. The model used here does not have variables that identify the behaviors of possible racial perpetrators, and thus is not designed to unearth personal discrimination. It is instead a model that tests identifies structural discrimination without sufficient detail to distinguish the specific sources of any racial differentials it identifies. This lack of precision is relatively unimportant here because of how this equation is used in this setting.

Here, we run some tests for the impact of applicant race on access to home-purchase loans in the years 1992, 1994, 1996, and 1998; these equations are run separately for each county. These equations differentiate between conventional and FHA loans, and they also differentiate between inner-core and suburban areas within each county. That is, we use this model to identify differences in the level of racial disadvantage in conventional and FHA Southern California home-loan markets, in different counties, in inner-core and suburban areas,

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<sup>6</sup> Recent reviews of this vast literature are Cloud and Galster (1993) and Dymski (1996).

and in different years. So these tests are not undertaken to determine whether racial disparities in Southern California loan markets are due to personal bias; they instead constitute a set of diagnostic tests for market, spatial and temporal variations in the impact of applicant race on home-loan decisions.

Dymski (1999) ran several similar equations for Southern California counties – without differentiating between conventional and FHA loans, or between inner-core and suburban areas – and found that minority applicants are almost invariably at a statistically significant and sizable disadvantage in winning home-purchase loan approval. The results of the probit model constructed for this study are shown in Table 5 and in Figures 1 and 2.

Table 5 depicts the coefficients for African American and Latino/Chicano applicants, by county, year, and area, as well as statistics on the number of applications included in each estimation. The model also incorporated coefficients for Asian Americans and Native Americans. The coefficients for African Americans and Latino/Chicano applicants are shown because they contain the most dramatic results. They indicate that Blacks and Latinos are frequently at a statistically-significant structural disadvantage in seeking home-purchase loans in Southern California. In Table 5, coefficients that are significant at the 1 percent (most robust) level are depicted in boldface and are underlined; those significant at the 5 percent level are depicted in boldface; at the 10 percent level, in italics. Social scientists often use the 5 percent level as a rough-and-ready cutoff level for what variables significantly affect a given outcome variable.

The equations for conventional home-purchase loans, for each county, almost invariably find African Americans at a statistically significant disadvantage in obtaining loan approval. For example, the  $-0.559$  obtained for Black applicants in Los Angeles in 1998, because it is significant at the 1 percent level, implies that Blacks applying for loans were 56 percent less likely to be approved for loans than non-Black applicants, all else equal (controlling for several other factors related to creditworthiness, as discussed in the Appendix).

A closer inspection of these results finds a disturbing trend: Black applicants are more likely to be at a statistically significant disadvantage in *suburban* than *inner-core* areas when seeking conventional loans, and the degree of their disadvantage is almost invariably greater in suburban areas. Further, there is no evidence that this disadvantage improved from 1992 to 1998 (a period of sustained economic growth). For Latino applicants, there is little evidence of statistically significant disadvantage in seeking conventional loans in inner-core areas. As for Blacks, however, there is a virtually uniform pattern of statistically significant disadvantage for conventional loans in suburban areas. The degree of measured disadvantage is less than that for Blacks. Again, there is no evidence of improvement from 1992 to 1998.

The equations for FHA-insured home-purchase loans generate less extreme patterns of racial exclusion. The pattern of disadvantage for Latino applicants reaches statistically significant levels only sometimes in the five counties, with little to choose between inner-core and suburban areas. However, a quite different pattern emerges for Black applicants. Coefficients for Black applicants for homes in inner-core areas are statistically significant and negative for FHA-insured loans only in Riverside and San Bernardino counties. However, when seeking FHA-insured loans in suburban areas, Black applicants are virtually certain to face

statistically significant levels of disadvantage which are just slightly less than for conventional loans in suburban areas. The sole exception is Ventura County, which has very few Black home-purchase loan applicants.

These results can be represented more dramatically in graphical terms. Figures 1 and 2 illustrate the main points from our model of access to housing credit. Instead of reproducing the coefficients from Table 5, we use a statistical transformation of these coefficients which are termed odds ratios. An odds ratio for a given applicant category depicts the effect of being in that category, all else equal, on an applicant's probability of loan approval. An odds ratio of 2 means that being in this category doubles an applicant's probability of loan approval; an odds ratio of 0.5 means an applicant's probability of approval is half what it would otherwise be; an odds ratio of 1 indicates that being in this category has no systematic effect on loan approval.

The figures shown here use large and small markers to denote statistically significant and insignificant coefficients, respectively. Using 1998 as the sample year, Figure 1 demonstrates clearly that African American applicants throughout Southern California have odds ratios just over 0.5 of obtaining conventional suburban home-purchase loans, with the highest odds ratio in San Bernardino County. Although not depicted on the graph, this disadvantage is very stable throughout the loan periods examined. Figure 1 also shows that Latinos applying for conventional suburban loans also exhibit some disadvantage, except that estimated odds ratios cluster around 0.75 instead of 0.5. The diverse character of Asian American experience is shown in this figure. Asian American applicants for conventional suburban loans are at a statistical advantage in Los Angeles and Orange counties, and at a statistical disadvantage in Riverside and San Bernardino counties. This difference in outcomes may reflect two special factors in the two former counties: the emergence of a robust Asian-American banking sector and the recent influx of a wave of Asian immigrants with relatively high wealth and skill levels. These results are consistent throughout the loan periods examined.

When our focus shifts from conventional suburban loans to inner-core loans, the systematic pattern observed for suburban areas largely disappears. For minorities seeking FHA home-purchase loans in suburban areas, a clear pattern emerges only for African Americans. Figure 2 shows that, for 1998, odds ratios for these applicants are stable and just higher than those for conventional suburban loans. However, Figure 2 also shows that no systematic pattern appears for either Asian Americans or Latinos applying for FHA home-purchase loans in suburban areas. While Asian American and Latino odds ratios appear higher than for African Americans, in San Bernardino and Ventura counties, the ratios are statistically insignificant. Also, unlike for conventional loans in the suburban areas, Asian Americans exhibit some disadvantage in applying for FHA loans.

The idea of the equations discussed to this point is this: how does being in one of the minority categories affect one's chances of home-loan approval? Implicitly, each minority is measured against 'white' experience, which is considered the 'normal case' (null hypothesis). Since here are four categories of minority, the impact of minority status is spread across several categories. An alternate way of measuring home-purchase loan status suggests itself: what is the effect of being white on the probability of loan approval, all else equal? Equations of this type, which invert the usual logic of credit-market discrimination models, were run. Findings suggest that there is little or no systematic advantage associated with being white in applications for

home-purchase loans in inner-core areas. However, there is a uniformly significant advantage for whites seeking conventional loans in suburban areas; and a pattern of partial advantage for whites seeking FHA loans to purchase suburban homes.

Taken as a whole, the results discussed here suggest that despite the termination of explicitly racist practices in federal homeowner subsidies, federal housing policies follow a racialized logic. Lower-income areas are far more likely to have federal subsidized housing outlays than homeowner tax expenditures, whereas the opposite is the case for upper-income areas. FHA loans are far more likely to be used for whites in suburban areas, but for minorities in inner-core areas. And Black and Latino applicants are far more likely to be at a disadvantage in suburban than in inner-core loan markets, no matter whether they are applying for conventional or FHA-insured loans. Given this racialized logic, it is not surprising that the home-purchase loan market tends to maintain or even worsen pre-existing patterns of racial separation.

## **Conclusion**

Scholars across the nation have in the past several years mounted an increasingly serious challenge to the idea that cities and urban form are best viewed as resulting from the operation of self-interested agents in decentralized market processes. Molotch famously referred to the contemporary city as an urban growth machine (Molotch, 1993). It may be that; but this machine operates unevenly over space. This chapter has found that the flow of federal expenditures for housing in Southern California is weighted heavily toward suburban and upper-income areas. Lower-income housing is located in areas that have historically absorbed marginalized minority populations; and this pattern has been stable over time. Each year's increment of tax deductions and federal housing-subsidy outlays simply deepens the long-established pattern of differential access to different kinds of federal expenditures for housing. In the case of the home-ownership market, these outlays continue to fuel urban sprawl and social separation; in the case of subsidized lower-income housing, these outlays reinforce the concentration of regional poverty. Minority households, and especially Blacks and Latinos/Chicanos, face unique challenges in seeking access to housing. They are far more likely to be at a structural disadvantage in home-purchase loan markets than are other applicants. This disadvantage becomes slightly worse if they seek conventional financing than FHA financing; but it becomes significantly worse if they seek loans of either type for homes in suburban, as opposed to inner-core, areas. Results for dissimilarity indices indicate both that there is widespread racial separation in Southern California, and that home-purchase loan markets either maintained or worsened this separation.

The home-acquisition/housing-finance process has to be viewed both as one source of increasing racial wealth disparities over time (Oliver and Shapiro, 1995; Conley, 1999) and as one source of urban sprawl. Federal policies once explicitly sanctioned – indeed, encouraged -- this dual dynamic. This policy thrust has been reversed, at least in principle, due to pressures exerted by generations of inner-core community residents. However, since federal subsidies in the form of tax expenditures are the silent partners to new subdivision development on the urban fringe, and since whites have systematic advantages (and minorities, systematic disadvantages) in obtaining home-purchase loans in such areas, federal policies now implicitly sanction this outward spatial thrust of the urban growth machine.

## Appendix: A Model of the Determinants of Home-Purchase Loan Approval

The Home Mortgage Disclosure Act (HMDA) requires that virtually all lenders of home mortgages report application-level data annually; these data are reported at the Census tract level. HMDA data encompass a range of residential loan types – home-purchase, refinancing, and rehabilitation; single- and multi-family; owner-occupied and absentee-owned. The determinants of loan decisions for these different loan types may be quite different. To insure uniformity, our sample is restricted to single-family purchase loans. The model estimated here for each county in our sample is as follows:

Probability of loan approval in the period 1992-98 =

Intercept term,  
Year 1992 dummy variable, *[controls for year effects]*  
Year 1994 dummy variable,  
Year 1996 dummy variable,  
Applicant's loan/income ratio, *[applicant characteristics]*  
Log of applicant's annual income,  
Dummy variable for female applicants,  
Dummy variable for Native American applicants for 1992, 1994, 1996, and 1998,  
Dummy variable for Asian American applicants for 1992, 1994, 1996, and 1998,  
Dummy variable for African American applicants for 1992, 1994, 1996, and 1998,  
Dummy variable for Chicano/Latino applicants for 1992, 1994, 1996, and 1998,  
[or, in lieu of the above four minority dummy variables:  
Dummy variable for white applicants for 1992, 1994, 1996, and 1998],  
*[census tract characteristics]*  
[Census tract] Median 1990 income,  
Median 1990 income squared,  
Residential density (average population per residential unit),  
Proportion of owner occupied residential units,  
Dummy variables for high-minority areas (those 25 percent of each city's census tracts with the highest proportion of minority residents) for 1992, 1994, 1996, and 1998.

Equations that use the dummy-variable method measure race effects relative to the level of the intercept term. These relatively simple equations implemented here aim at unearthing baseline information concerning the impact of applicant race on credit-market outcomes. More refined tests would be required to identify the extent to which personal discrimination on the part of lenders may account for significant race dummy variables.

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