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Local Development Policies and the Foreclosure Crisis in California: Can Local Policies Hold Back National Tides?

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Abstract

Can local governments shape the long-run fortunes of their communities through their own policies, or is the autonomy of localities swamped by larger macroeconomic forces? This study considers the relationship between California municipalities' policy orientations toward residential development at the start of the housing boom in the late 1990s and the subsequent incidence of foreclosures during the housing crisis in 2008 and 2009. The authors find that cities reported to have stronger city council opposition to residential growth had a lower incidence of foreclosures a decade later, even after controlling for the rate of increase in the housing stock and other local economic, demographic, and geographic characteristics. Although the foreclosure crisis was driven by national and global forces, more cautious local government policy approaches to residential growth appeared to moderate the damage.

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Introduction

It has become readily apparent that what began as the bursting of a housing bubble based on subprime mortgages in several western U.S. states and Florida in 2006-2007 has evolved into a sustained national foreclosure crisis. In 2008, the U.S. housing market lost $3.3 trillion in value, and nearly one in six homeowners with a mortgage were "underwater," owing more than their homes were worth (Levy 2009). About 2.8 million properties—one of every forty-five households—received a notice of foreclosure in 2009 (Adler 2010), and by mid-2010 one in seven mortgages in the United States had slipped into foreclosure or formal declarations of delinquency (Howley 2010). Many of these foreclosed properties were abandoned, contributing to neighborhood blight, reducing nearby property values, and increasing crime rates in areas with concentrations of abandoned and dispossessed homes (Immergluck and Smith 2006a, 2006b; Schuetz, Been, and Ellen 2008).

As the cliché goes, crises present opportunities, and this foreclosure crisis provides an opportunity to explore a fundamental question in the study of local politics and policy: Do local governments have the ability to shape their community's long-run fortunes through their own policies, or is the autonomy of local government swamped by larger macroeconomic forces? A venerable body of literature has explored whether local governments have sufficient authority, incentives, and vision to direct their communities according to local preferences, or whether they are pervasively constrained by larger forces (e.g., Peterson 1981; Mollenkopf 1983; Wirt 1985; Gottdiener 1987; Logan and Molotch 1987; Wong 1988; Schneider 1989; Kantor 1995; Pagano and Bowman 1995; Lewis and Neiman 2009). While scholars predictably come to mixed conclusions on this issue, it is fair to say that there remains a prevailing tendency in the literature to see considerable constraints on local governments' capacity to set their communities' future course. These limits are variously seen as emerging from inter-local competition; economic globalization; the strength of pro-growth, land-based elites in local politics; or the restricted role for local governments in most political systems, particularly in the context of U.S. federalism. The immense scale of the foreclosure crisis thus represents what would seem to be a particularly difficult case for

establishing that local governments can act efficaciously to shape their future prospects.

Our focus in this paper is on the influence of local governments' residential development policies—often referred to as growth management policies or growth controls, but which might be thought of more broadly as "growth orientations"—on the local magnitude of the foreclosure crisis. Specifically, did cities with more "finicky" policy orientations toward residential development have a lower incidence of foreclosures once the foreclosure crisis developed?

The interest in local growth policies places our research squarely within the large literature on the effectiveness of local attempts to control or slow residential growth. Most of this work focuses on investigating the motivations for slow-growth policies and the ability of these policies to constrain population growth, usually during periods of economic expansion. By contrast, relatively little is known about whether local growth policies can function as buffers against the difficulties posed by property-based economic downturns.

The geographic setting for our empirical investigation is municipalities in California, one of the states with the greatest level of new housing construction during the property boom and among the hardest hit by the subsequent foreclosure crisis. As the nation's largest state, California contains an exceptionally diverse range of cities, with a wide variety of social and economic profiles. These cities also experienced a wide variety of outcomes from the foreclosure crisis, ranging from barely perceptible ripples to housing market distress as deep as anywhere in the United States. Most importantly, California is an advantageous research site for our research question in that it allows each of its hundreds of cities a great deal of autonomy in establishing land-use regulations, resulting in widely varied orientations toward growth policy. We use responses from an original survey of local government officials conducted in the late 1990s to measure each city government's policies and attitudes toward growth, and examine whether cities with more antigrowth political postures toward residential development in the late 1990s had a lower incidence of foreclosures in 2008 and 2009.

We find that California cities with stronger city council opposition to growth had lower foreclosure rates, even after controlling for the rate of growth in the housing stock and other local economic, demographic, and geographic characteristics. In short, we find that local policies were able to mitigate some of the worst effects of the bursting of the housing bubble. Our findings provide an interesting counterpoint to those studies that have argued that growth management policies exacerbated the economic cost of the

housing bubble (e.g., O'Toole 2009). While our results do not demonstrate that local growth policies are an unambiguous good, at the minimum they show that the relationship between local growth policies and the housing bubble is more nuanced than some critics have assumed.

The following section reviews the relevant theoretical and empirical debates in the literature on local growth policies and develops our main hypotheses. Subsequent sections introduce our data sources and methods, present multivariate results regarding the incidence of foreclosures across municipalities, and offer some conclusions and policy considerations.

Local Development Policy and the Foreclosure Crisis

Previous research suggests that there are two ways in which local attempts to control or slow residential housing growth may have either mitigated or exacerbated the effects of the foreclosure crisis—by influencing the *amount* of growth in a city, and by influencing the *quality* of that growth.

The most obvious way in which local development policies might have influenced the effects of the foreclosure crisis is through their effect on the supply of housing. Several studies have found that stringent land-use regulations or policies that restrict the supply of housing are related to higher home prices (Green 1999; Quigley, Raphael, and Rosenthal 2009) and less price elasticity (Green, Malpezzi, and Mayo 2005; Malpezzi and Mayo 1997; Quigley and Raphael 2005). Although restrictions on the supply of housing have been predicted to contribute to boom-and-bust cycles in housing prices (O'Toole 2009), the largest percentage price drops in California cities were actually in areas regarded as more growth-friendly (e.g., O'Keefe, forthcoming), most likely because these areas overbuilt in response to increased housing demand (Glaeser, Gyourko, and Saiz 2008). This suggests that communities with effective slow-growth policies will see fewer foreclosures, as smaller declines in home values will drive fewer mortgages underwater and higher home equity will make borrowers less likely to default on their loans (Immergluck and Smith 2006b). Communities that limited growth in residential development over the past decade may also experience fewer foreclosures because fewer of the residents of these communities would be short-tenure residents with large mortgages. Longer-tenure residents are also less likely to have the risky, subprime mortgages developed in the 1990s and 2000s that are associated with higher foreclosure rates (Immergluck and Smith 2005; Immergluck 2010). The higher cost of housing in these communities would also price out many first-time home buyers and other less

wealthy individuals who are both more likely to suffer a foreclosure and more likely to hold a subprime mortgage. Thus, one might expect that local governments that enacted policies to slow the growth in housing would be insulated from the worst effects of the foreclosure crisis.

Conversely, it is also clear that many local governments are not at all opposed to new housing construction (Lewis and Neiman 2009). However, extant research on local development policies, whether residential or nonresidential, has tended to concentrate on the role of local policy in restricting (rather than encouraging) growth and thereby raising the price of development. Specifically, the evaluation of local policy has focused on whether or not development regulations facilitate or hinder market responses to housing demand. Previous research suggests that the overall influence of residential development regulations limits the response to demand by increasing the fees and indirect costs that developers pay, lengthening the time to construction, limiting or prohibiting higher density and multifamily housing, curbing the supply of available land, requiring more expensive materials and construction practices, or directly dictating lower numbers of housing units than would be built in a less restricted market (Quigley and Rosenthal 2005; U.S. Department of Housing and Urban Development 1991; Dowall 1984).

However, if it is indeed possible for localities to impede development below "natural" or "free market" levels, then it follows that other communities might encourage such high levels of growth that they might in some contexts be seen as embracing more housing development than this "natural" level. Under some circumstances, state fiscal rules relating to local governments can create powerful motivations for fiscally weak cities to look favorably on housing proposals (Altshuler and Gomez-Ibañez 1993; Diaz and Green 2001). For communities struggling to pay for local public services, such development may generate valued revenues through permit fees and exactions on developers, through increased retail and commercial activity that typically accompanies new housing, or through increases in the value of taxable property.

For these reasons and others, some localities might very well not be sufficiently vigilant regarding housing development, even as others might exceed an optimal level of regulation. During periods of normal housing construction or when development activity is feverish, some communities may accommodate less than their "fair share" of new housing, some might take on a relatively optimal amount, while others might absorb much more than a suitable level of housing, outpacing the capacity of local schools, recreation facilities, roads, and other infrastructure. Stringent growth controls in some communities might also have a spillover effect, pushing new

housing development into nearby, less restrictive communities (Byun, Waldorf, and Esparza 2005; Glickfeld and Levine 1992; Levine 1999; Shen 1996).

And what if the run-up in housing stock among development-friendly cities is followed by a sudden collapse of the housing market? It is our expectation that the corollary of observing variation across communities in the level of regulation of housing construction is that the consequences of a collapse in the housing market will also be uneven. Specifically, we expect that cities that were more welcoming of development will have suffered more from the foreclosure crisis than cities that imposed greater restrictions on residential housing growth.

While the theoretical relationship between policies that limit the housing supply and the negative effects of the foreclosure crisis is clear, it is unclear if cities actually have the ability to implement such policies effectively. A large body of work examining the ability of local governments to control or slow residential housing growth has produced mixed empirical results. Some studies conclude that local housing regulations and antigrowth policies have a significant influence on restraining growth (Levine 1999; Pendall 2000; Fischel 2001; Staley 2001; Malpezzi 2002; Nguyen 2007), while others find that local growth management has fairly limited or even null effects (Baldassare and Protash 1982; Logan and Zhou 1989; Landis 1992, 2006; Warner and Molotch 1995; Logan and Crowder 2002).

However, even if local governments have only limited or even no ability to constrain housing growth, attempts to control growth may still have mitigated the damage from the foreclosure crisis by improving the quality of the development that is allowed. Policies affecting local development, residential and otherwise, are best understood as having multiple motives, chief among them the desire to avoid the negative consequences of growth, such as traffic congestion and declining service quality for everything from parks and recreation to schools (Warner and Molotch 1995; Steel and Lovrich 2000). Studies of the emergence of residential development controls have also demonstrated how, rather than simply preceding and affecting development, local residential development controls or a more general political animus to growth are instead often the consequences of earlier episodes of rapid, less controlled growth (Baldassare and Protash 1982; Baldassare and Wilson 1995, 1996; Donovan and Neiman 1992).

It may be that one major effect of local growth control policies is not in restricting the growth of the housing stock but in requiring more care in planning the location, design, and type of new housing. This has been observed in the influence of local direct democracy on growth issues, where Gerber and Phillips (2004) show that voter initiatives regarding

development projects do not stop or slow growth, so much as they are used to ensure that local public goods or quality of life are not compromised by new projects. More careful planning and attention to infrastructure in turn may lead to fewer purchases by consumers more at risk of foreclosure, such as those seeking investment properties to "flip" (quickly resell) or those willing to purchase poorly located or marginal-quality housing because of overextended household finances or credit problems. In contrast, communities that actively encouraged housing growth and accepted large-scale or low-quality tract housing development in the 2000s might have attracted a disproportionate segment of the riskier buyer pool, and thus suffered more during the foreclosure crisis.

All of this implies that cities with more restrictive growth orientations will experience (1) less actual housing construction and/or (2) more well-planned or well-located housing development than cities with less stringent orientations toward development. Thus, we hypothesize that the more restrictive a city was toward residential development, ceteris paribus, the lower its rate of foreclosures was once the foreclosure crisis developed.

Data Sources and Key Measures

Data on the number of foreclosures in California municipalities in 2008 and 2009 were obtained from DataQuick News (DataQuick News 2010), which compiles information on foreclosure activity from county assessor and recorder offices, and covers an estimated 80 to 95 percent of residential sales activity in California (Kan 2008). DataQuick's data for 2008 and 2009 covered 91 percent of cities (437 of 480) in California, with some very small communities omitted. The number of foreclosures for each year refers to recorded Trustee's Deeds (the transfer of the property from the homeowner back to the bank) in that calendar year.

Media coverage of the foreclosure crisis in California has emphasized that the most heavily affected areas were fast-growing inland locations with historically lower property values, while higher property value and coastal areas were less affected. This story is readily apparent in Figure 1, which presents a histogram of the number of cities (differentiated by coastal and inland counties) broken down by the mean annual number of foreclosures per 1000 homes for 2008-2009. The long tail to the right contains some of the fastest-growing California cities in the 2000s, including Patterson (the sixth fastest growing city from 2000-08), Lake Elsinore (twelfth), Lathrop (thirteenth), and Desert Hot Springs (nineteenth), all of which are in inland counties.

Information on city governments' development and growth control policies and attitudes toward growth was obtained from a mail survey of city

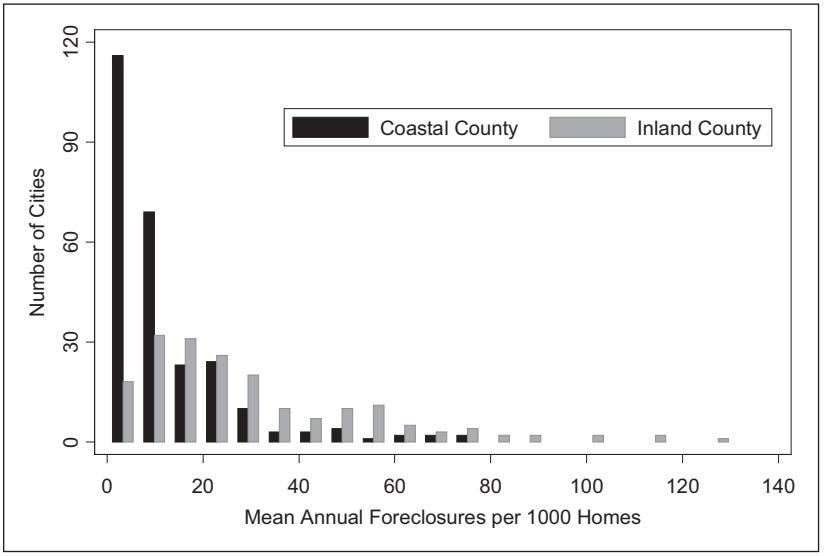

Figure 1. Foreclosure rates in California Cities, 2008-2009

planning directors in the three major regions of California (the San Francisco Bay Area, the Central Valley, and the greater Southern California region) conducted in 1998 and 1999 (Lewis and Neiman 2000).[1] The fact that this survey preceded the foreclosure crisis by a decade ensures that the survey responses could not have been influenced by consequences or even the anticipation of this crisis. Usable survey data were obtained from 297 municipalities, for a 76 percent response rate among the cities of these regions.

On the survey questionnaire, city planning officials were asked to rate the importance of various factors "in constraining or slowing residential development in your city"; these factors were rated on a 5-point scale ranging from "not at all important" (1) to "very important" (5). The item most relevant to our hypothesis was "city council opposition to growth." The vast majority of California cities operate under reformed municipal structures, with relatively weak mayors (who typically sit as a member of the council) and appointed city managers, making the city council the central political and policymaking institution in municipal government. We expect greater city council importance in constraining development to have a negative effect on the subsequent number of foreclosures in a city.

Our measure of local policy is subjective, representing the viewpoint of an informed local observer (the planning director) about their city government's influence on residential development. We do not use ostensibly "objective"

measures, such as a count of the number of growth management policies in the city. Our reasoning for using a subjective rather than objective measure is twofold.

First, tallying regulations "on the books" (such as restrictions on building permits, water hook-ups, building height, and so on) represents a count of "paper" policies that may or may not be actively and effectively implemented. Probably for this reason, several previous studies of local growth controls that have used objective "policy count" measures approach did not detect any relationship between these policies and development outcomes (e.g., Logan and Zhou 1989; Baldassare and Protash 1982).

Second, identifying variations in growth policy orientations by looking only at the number of overt growth management policies in a city poses risks of inappropriately measuring actual local policies and practices that affect residential growth. For instance, communities that have long had low-density, large-lot zoning codes have been "hard-wired" for slow growth from the start; thus they typically do not need to institute growth control policies of the type measured in growth-management surveys (Glaeser, Schuetz, and Ward 2006). Instead, it may be rapidly growing communities with substantial reserves of vacant land for whom overt growth management policies are more relevant and more likely to be passed. An "objective" measure of local growth management policies is likely to mischaracterize the rapidly growing city as being more antigrowth than the large-lot, low-density community.

Thus, in order to accurately capture the influence of city growth policies on residential development one needs a de facto rather than de jure measure of these policies. Our subjective measure that asks city planners for an assessment of city council influence on residential development is such a measure.

As a test of the validity of our subjective measure, we estimated a linear regression model with each city's growth rate in housing units from 2000 to 2008 as the dependent variable, and both our subjective measure and a tally of growth restrictions "on the books" in each city as independent variables, along with a set of control variables.[2] Our subjective measure has a statistically significant effect on city growth rates in the expected direction, while the number of growth restriction policies is statistically insignificant, providing further evidence of the validity of our measure. This regression is presented in the appendix.

Our models estimating the number of foreclosures in each city also include two other measures related to local growth policies. The first is the percentage of growth in the number of housing units in each city from 2000 to 2008 (i.e., 100 indicates a doubling of the number of housing units). Greater increases in the number of housing units are likely to indicate a city with more pro-growth policies. Of course, broader economic factors and the jurisdiction's size also

are likely to strongly affect the amount of housing developed. Thus, the housing growth rate may be viewed as partially a measure of policy and partially an economic control variable. Data on the number of housing units in each city was obtained from the California Department of Finance (State of California, Department of Finance 2010).[3] We expect that cities with higher growth rates in their housing stock leading up to the foreclosure crisis will have greater numbers of foreclosures, especially since subprime and other nontraditional mortgage types were heavily used to purchase properties during this time span.

We also include a dummy variable indicating whether a city had plans, as of 1998, to expand through annexation by adding land adjacent to the then-existing city boundaries. Again, this can be viewed as a measure of a pro-growth policy orientation (bearing in mind, however, that those cities that are completely landlocked by other incorporated municipalities cannot annex). Information on city annexation plans came from an earlier survey of California city managers in 1998 (Barbour and Lewis 1998).[4] We anticipate that those cities whose officials reported annexation plans in 1998 would have higher numbers of foreclosures a decade later (Johnson and Schmidt 2010).

Control Variables

A number of control variables were also included in the analysis to account for geographic and economic influences on the foreclosure rate. One such influence is whether it is even possible for a city to expand its housing stock. Some cities are "built out," and do not have any remaining vacant land on which to add housing, even if additional housing was desired. Information on which cities had no more vacant land available was obtained from the 1998 city manager survey, and a dummy variable was included in the analysis to indicate which cities were built out.[5]

Figure 1 emphasizes that the cities most heavily affected by the foreclosure crisis were those in inland locations, where property values historically have been lower. As many of the cities that have adopted slow-growth policies are in coastal, high property value regions, this may be a sign of a spillover effect that led to excessive development in metropolitan fringes and inland communities compared with urban coastal areas (Byun, Waldorf, and Esparza 2005). Alternatively, this could indicate that some other macro-regional economic factors are at work. In either case, controlling for these geographic and economic factors is important if one is to distinguish between the influence of slow-growth policies and other effects that may be associated with coastal and traditionally high property value regions. Information on median home prices in 2000 was obtained from the U.S. Census (2000), and included as a control

variable (measured in $100,000s). A dummy variable indicating if a city was located in a coastal county (bordering the Pacific Ocean or San Francisco Bay) was also included.

Finally, we include several control variables for the demographic makeup of each city. There is evidence that subprime and predatory lending to financially unstable households was especially prominent in minority communities, which would result in a greater number of subsequent foreclosures in these communities (Immergluck and Smith 2005; Kaplan and Sommers 2009). Thus, we include the percentage of African-American and Hispanic residents in each city in 2000 as controls. As foreclosures almost always occur when homeowners are no longer able to pay their mortgage, we included median household income in each city in 2000 (measured in $10,000s) and the city's unemployment rate in 2008 as measures of the financial resources residents might be able to draw on to meet their payments. We expect that the number of foreclosures will be lower in cities with higher median household incomes and lower unemployment rates. The income and race data are derived from the 2000 Census, while the unemployment rate data come from the California Employment Development Department (State of California, Employment Development Department 2011).

While both median household income and the unemployment rate might be important variables in explaining foreclosures, they are also closely related to several other variables in our model, raising concerns that multicollinearity might affect our empirical results. To address this concern we present two models below—one with all of the independent variables discussed here (Model 1) and another model that omits median household income and the unemployment rate (Model 2).

Methods and Results

Figure 1 reveals that the foreclosure rate across California cities is bounded below at zero and severely positively skewed, with a large number of cities experiencing relatively low foreclosure rates, and a smaller number of cities more heavily affected by the foreclosure crisis. This indicates that a linear regression on the foreclosure rate would be an inappropriate empirical strategy (Immergluck 2010). Thus, to examine how reported local opposition to residential growth influenced the number of foreclosures in each city, we use a negative binomial regression model, with the total number of foreclosures in each city in 2008-2009 as the dependent variable. The negative binomial model is the proper model to use for overdispersed event count data (count data where the variance is greater than the mean, as we have here); failure to account for this overdispersion would bias the standard errors downward

Table 1. Factors Influencing the Number of Foreclosures in California Cities, 2008-2009

Independent Variable	Model 1	Model 2
City council opposition to growth	–0.08** (0.04)	–0.09** (0.04)
Growth in housing units, 2000-2008 (%)	0.01** (0.004)	0.01** (0.004)
Annexation is expected	0.26** (0.11)	0.27** (0.11)
City is built out	–0.23 (0.15)	–0.27* (0.15)
Median home value, 2000 ($100,000s)	–0.24*** (0.07)	–0.23*** (0.05)
Coastal county	–0.22 (0.14)	–0.26* (0.13)
African-American population, 2000 (%)	0.03*** (0.01)	0.03*** (0.01)
Hispanic population, 2000 (%)	0.005 (0.004)	0.01* (0.003)
Median household income ($10,000s)	0.04 (0.05)	
Unemployment rate, 2008 (%)	0.03 (0.02)	
Constant	–3.53*** (0.39)	–3.12*** (0.24)
Overdispersion (α)	0.45*** (0.05)	0.45*** (0.05)
Number of observations	200	201
Wald χ^2	305.44***	273.55***

Note: These models are negative binomial regressions with the number of homes in foreclosure as the dependent variable. The logged number of homes in the city in 2009 was included as an exposure variable with the coefficient constrained to 1. Heteroscedasticity-robust standard errors in parentheses.
*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

(King 1989). To control for city size, the natural log of the total number of housing units in each city in 2009 was included, with its coefficient constrained to 1.[6] After removing observations with missing data, there were 200 (Model 1) or 201 (Model 2) cities available for analysis. The results of our analysis are presented in Table 1.

Table 1 reveals that city council opposition to growth is associated with fewer foreclosures in a city, even when controlling for the rate of increase in the housing stock and other local economic, demographic, and geographic characteristics. The independent effect of anti-growth orientations on the number of foreclosures even after controlling for growth in housing suggests that policy orientations influencing the type and quality of development played a role in mitigating the negative effects of the foreclosure crisis, regardless of whether local actions slowed housing growth.

As expected, higher rates of housing growth from 2000 to 2008 are associated with a greater number of foreclosures in 2008-2009. Some of the growth in housing that contributed to foreclosures was no doubt due to city growth policies,

although economic and geographic factors also affect the growth in housing stock. City plans for annexation are also associated with a greater number of foreclosures in 2008-2009, again indicating that cities that pursued pro-growth policies were more likely to later experience problems with foreclosures.

Most of the control variables have the expected effect, although some of these effects were not statistically significant in Model 1 (most likely due to multicollinearity between some of the independent variables). All else equal, cities that were built out, had higher property values in 2000, or were located in coastal counties experienced fewer foreclosures. Conversely, cities with higher percentages of African-Americans and Hispanics suffered more foreclosures, with the effect for African-Americans holding even after controlling for median household income and unemployment. In California, as elsewhere (Kaplan and Sommers 2009), there appears to be a racial disparity in foreclosure problems, perhaps because of predatory lending concentrated in minority communities or higher economic vulnerability among those groups.[7] Finally, the statistically significant overdispersion parameters indicate that the negative binomial model was an appropriate choice.

To ensure that our results were not driven by those few cities that were exceptionally hard hit by the foreclosure crisis, we dropped the nine cities in our analysis that had a foreclosure rate greater than 60 per 1000 homes from the data (the long tail to the right in Figure 1). Reestimating the models in Table 1 omitting these cities did not change the substantive results of our analysis. We also reestimated our model using the number of home sales in each city from 2002 to 2007 (DataQuick News 2011) as a proxy for the number of homes with recent mortgages as the exposure variable—again, this did not change the substantive results of our analysis.

As with any nonlinear model, one cannot interpret the substantive effects of these negative binomial coefficients as one would if this were a linear regression model. To demonstrate the substantive effects of the independent variables on foreclosures for our primary model (Model 1), we first calculate the expected number of foreclosures in a hypothetical California city of 10,000 homes where all of the independent variables take on values close to their median values.[8] Under this scenario, we would expect to see about 300 foreclosures in 2008-2009 in our hypothetical city.

We then calculate how the expected number of foreclosures in this hypothetical city would change as we sequentially change the value of each independent variable from its original value to a new value. To calculate standard errors for these estimates, we took 1,000 random draws from the multivariate normal distribution defined by the estimated model coefficients and covariance matrix, calculated the estimated change in foreclosures using each draw

Table 2. Changes in the Expected Number of Foreclosures in a City of 10,000 Homes as Values of the Independent Variables Change (Model 1)

Independent Variable (Change)	Expected Change in No. of Foreclosures
City council opposition to growth (1 → 5)	–84.57** (42.95)
Growth in housing units, 2000-2008 (%) (8 → 20)	33.44** (13.85)
Annexation is expected (0 → 1)	87.50** (36.38)
City is built out (0 → 1)	–62.94 (40.39)
Median home value, 2000 ($100,000s) (2 → 3.5)	–88.35*** (25.23)
Coastal county (0 → 1)	–60.85 (42.23)
African-American population, 2000 (%) (2 → 10)	88.50*** (25.99)
Hispanic population, 2000 (%) (10 → 20)	13.80 (11.14)
Median household income, 2000 ($10,000s) (4 → 6)	26.26 (31.63)
Unemployment rate, 2008 (%) (7 → 10)	19.24 (15.15)

Note: The change in the value of each independent variable that produces the corresponding change in the expected number of foreclosures from the baseline case is presented in parentheses below the name of each independent variable. The baseline case for these calculations is the number on the left in each set of these parentheses, and produces 299.98 foreclosures. Standard deviations for each expected change in the number of foreclosures are presented in parentheses below each number.
*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

as a new set of coefficients, and then reported the mean and standard deviation of these 1,000 calculations.[9] The results of these calculations are presented in Table 2.

Local opposition to growth had a noticeable effect on the number of foreclosures in a city. Table 2 reveals that the expected number of foreclosures in 2008-2009 in our hypothetical city would drop by 85, from 300 to 215 (a decline of 28 percent), if the role of the city council in constraining or slowing residential development had been "very important" instead of "not at all important." This difference in foreclosures is similar in magnitude to that one would expect if median home prices in 2000 in this city had been $350,000 instead of $200,000. City plans for annexation also had an effect in this range, as the intent to annex in the late 1990s is associated with about 88 more foreclosures in this hypothetical city in 2008-2009. Increasing the growth rate from the median (8 percent, meaning this hypothetical city had about 9,260 homes in 2000) to the third quartile in the data (20 percent, meaning this hypothetical city had about 8,330 homes in 2000) would be expected to increase the number of foreclosures in 2008-2009 by about 33,

while increasing the African-American population from 2 to 10 percent would be expected to increase the number of foreclosures by about 89. The other independent variables in Model 1 did not have a statistically significant influence on the number of foreclosures in this hypothetical scenario.

Conclusion

We have found that California city officials' reports from the late 1990s of city council opposition to residential development are negatively associated with foreclosures in these communities a decade later. We did find that many of the "usual suspects" regarding local residential development were important too; that is, local socioeconomic status, availability of land, proximity to the coast, and proportions of minority residents were related in expected ways to foreclosures. Yet even after accounting for the effects of these and other variables, local policy orientations toward residential development influenced local foreclosure rates. In short, although the mortgage crisis may be viewed as an unstoppable force of national or international dimensions, anti-growth cities in one hard-hit state apparently were able to moderate the local severity of this contagion.

Another measure of local policy orientations—the stated intention among city managers in 1998 that their cities would annex land—also mattered, as cities with annexation plans tended to experience more foreclosures. Further, some of the control variables we consider—such as the growth rate in housing from 2000 to 2008 and possibly even the racial composition of the city—may in turn have been affected by the city's pro- or anti-growth policy orientation, suggesting that our policy measure may affect foreclosure outcomes through both direct and indirect mechanisms.

Overall, these results provide significant evidence that local government regulation and local anti-growth politics can indeed affect not only how a city will grow but what consequences it will experience from such growth. Even where macroeconomic change would seem likely to overwhelm local communities, as in the case of the foreclosure crisis, it appears that local economic outcomes vary in part as a function of the posture that the city's policy makers take toward accommodating pressures to grow.

As a policy matter, these findings pose some challenging puzzles, and our findings should not be viewed as a recommendation favoring or opposing local growth management policies. On one hand, it seems likely that communities currently laboring under the weight of unprecedented numbers of foreclosures might have avoided some of their woes by being less amenable to new housing projects. In that sense, one might claim that if more cities had made an effort to manage growth, then the housing meltdown might have been significantly less burdensome.

However, there is also evidence suggesting that local growth policies do not affect the total amount of housing, but merely change the geographic distribution of this housing (Byun, Waldorf, and Esparza 2005; Glickfeld and Levine 1992; Levine 1999; Shen 1996). In this case, the impulse to manage growth among some localities may have simply shifted a greater than optimal amount of new housing stock to more growth-friendly communities (Glaeser, Gyourko, and Saiz 2008). In the face of the foreclosure crisis, then, growth-controlling communities may have not only evaded their responsibility to absorb their "fair share" of housing but also magnified and concentrated the ill effects of foreclosures in communities that were already more vulnerable to the problems associated with economic downturns. In this sense, it may be correct to argue that local growth policies contributed to the negative economic consequences of the housing bubble (O'Toole 2009), but at least in the case of foreclosures, these consequences appear to have been more severe in growth-friendly communities.

We therefore stop well short of counseling that local officials ought to embrace restrictions toward growth. But we do suggest that—contrary to some prominent veins of literature on urban politics and policy—local governments' actions and policy orientations do have some significant capacity to shape the long-run fortunes of their communities.

Appendix

Table A. Factors Influencing the Housing Growth Rate of California Cities, 2000-2008

Independent Variable	Coefficients
City council opposition to growth	−1.66* (0.98)
Annexation is expected	3.93* (2.14)
Number of growth restriction policies	0.66 (0.53)
City is built out	−5.42*** (2.04)
Median home value, 2000 ($100,000s)	−2.02*** (0.70)
Coastal county	−12.81*** (2.75)
African-American population, 2000 (%)	−0.08 (0.16)
Hispanic population, 2000 (%)	0.02 (0.07)
Median household income, 2000 ($10,000s)	1.49** (0.63)
Constant	20.90*** (5.43)
Number of observations	205
R^2	0.28

Note: This model is a linear regression with the rate of growth in homes from 2000 to 2008 as the dependent variable. Heteroscedasticity-robust standard errors in parentheses.
*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

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Notes

1. The Southern California region was defined as Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, and Ventura counties. The San Francisco Bay Area was defined as Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties. The Central Valley was defined as Butte, Colusa, Fresno, Glenn, Kern, Kings, Madera, Merced, Placer, Sacramento, San Joaquin, Shasta, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba counties. Together these regions accounted for more than 94 percent of California's population in 2000.
2. The tally of growth restriction policies in each city is described in Lewis and Neiman (2009, 140-41).
3. This data source does not make a distinction between condominiums and apartments, so the total number of housing units is an overestimate of the number of owner-occupied units. Limiting our analysis to only single-family homes (attached, detached, and mobile homes) did not change the substantive results of our analysis.
4. This survey was conducted by the Public Policy Institute of California, and had a 70 percent response rate. The wording of the relevant question was: "In your estimation, what are your city's plans relating to annexation over the next five years?" City managers could indicate that their city planned to annex more than five square miles, one to five square miles, less than one square mile, or that the city could not or would not annex.
5. The question wording was: "Which of the following statements best applies to your city? (check one answer): There is considerable vacant land for new development; There is a limited amount of vacant land available for new development; There is little or no vacant land available—the city is 'built out.'"
6. Since the expected number of foreclosures in this negative binomial model is given by $\exp(X\beta)$, including the natural log of the number of housing units as an independent variable and constraining the coefficient to 1 controls for city size in a way that preserves the ratio of foreclosures to housing units in our data.
7. Even though our model controls for the median income of the city, it is well known that African-Americans of a given income level tend to have less household

wealth than Whites of the same income level (Blau and Graham 1990; Oliver and Shapiro 2006). This lack of other resources likely hinders African-Americans' capacity to respond to shocks such as layoffs or health problems, thus increasing their likelihood of mortgage default.

8. The hypothetical city we consider here was at a 1 on the 5-point scale measuring city council opposition to growth, had grown about 8 percent since 2000, did not have plans to annex land as of the 1998-1999 survey, was not built out, had a median home value of about $200,000 in 2000, was located in an inland county, had a median household income of about $40,000, an unemployment rate of 7 percent, and had a population that was about 2 percent African-American and 10 percent Hispanic.
9. For more details on this approach to calculating standard errors on model estimates, see King, Tomz, and Wittenberg (2000).

References

Adler, Lynn. 2010. U.S. 2009 foreclosures shatter record despite aid. *Reuters* (Jan. 14).

Altshuler, Alan A., and Jose A. Gomez-Ibañez. 1993. *Regulation for revenue: The political economy of land use exactions*. Washington, DC: Brookings Institution.

Baldassare, Mark, and William Protash. 1982. Growth controls, population growth, and community satisfaction. *American Sociological Review* 47 (3): 339-46.

Baldassare, Mark, and Georjeanna Wilson. 1995. More trouble in paradise: Urbanization and the decline in suburban quality-of-life ratings. *Urban Affairs Review* 30 (5): 690-708.

Baldassare, Mark, and Georjeanna Wilson. 1996. Changing sources of suburban support for local growth controls. *Urban Studies* 33 (3): 459-71.

Barbour, Elisa, and Paul G. Lewis. 1998. Development priorities in California cities: Results from a PPIC survey. Occasional paper. San Francisco: Public Policy Institute of California.

Blau, Francine D., and John W. Graham. 1990. Black-White differences in wealth and asset composition. *Quarterly Journal of Economics* 105 (2): 321-39.

Byun, Pillsung, Brigitte S. Waldorf, and Adrian X. Esparza. 2005. Spillovers and local growth controls: An alternative perspective on suburbanization. *Growth and Change* 36 (2): 196-219.

DataQuick News. 2010. Housing foreclosure statistics [data file]. http://ca.rand.org/stats/economics/foreclose.html.

DataQuick News. 2011. *Housing prices and transaction statistics* [data file]. http://ca.rand.org/stats/economics/houseprice.html.

Diaz, Daniel, and Gary Paul Green. 2001. Fiscal stress and growth management effort in Wisconsin cities, villages, and towns. *State and Local Government Review* 33 (1): 7-22.

Donovan, Todd, and Max Neiman. 1992. Citizen mobilization and the adoption of local growth control. *Political Research Quarterly* 45 (3): 651-75.

Dowall, David. 1984. *The suburban squeeze: Land conversion and regulation in the San Francisco Bay Area.* Berkeley: University of California Press.

Fischel, William A. 2001. *The homevoter hypothesis: How home values influence local government taxation, school finance, and land use policies.* Cambridge, MA: Harvard University Press.

Gerber, Elisabeth R., and Justin H. Phillips. 2004. Direct democracy and land use policy: Exchanging public goods for development rights. *Urban Studies* 41 (2): 463-79.

Glaeser, Edward L., Jenny Schuetz, and Bryce Ward. 2006. *Regulation and the rise of housing prices in Greater Boston*. Cambridge, MA: Pioneer Institute for Public Policy Research and Rappaport Institute for Greater Boston, Kennedy School of Government, Harvard University.

Glaeser, Edward L., Joseph Gyourko, and Albert Saiz. 2008. Housing supply and housing bubbles. *Journal of Urban Economics* 64 (2): 198-217.

Glickfeld, Madelyn and Ned Levine. 1992. Regional growth, local reaction: The enactment and effects of local growth control and management measures in California. Cambridge, MA: Lincoln Institute of Land Policy.

Gottdiener, Mark. 1987. *The decline of urban politics: Political theory and the crisis of the local state.* Beverly Hills, CA: Sage.

Green, Richard K. 1999. Land use regulation and the price of housing in a suburban Wisconsin county. *Journal of Housing Economics* 8 (2): 144-59.

Green, Richard K., Stephen Malpezzi, and Stephen K. Mayo. 2005. Metropolitan-specific estimates of the price elasticity of supply of housing, and their sources. *American Economic Review* 95 (2): 334-39.

Howley, Kathleen M. 2010. Mortgage foreclosures hit record as job losses strain budgets. *Bloomberg Businessweek* (May 19).

Immergluck, Daniel. 2010. Neighborhoods in the wake of the debacle: Intrametropolitan patterns of foreclosed properties. *Urban Affairs Review* 46 (1): 3-36.

Immergluck, Daniel, and Geoff Smith. 2005. Measuring the effect of subprime lending on neighborhood foreclosures: Evidence from Chicago. *Urban Affairs Review* 40 (3): 362-89.

Immergluck, Daniel, and Geoff Smith. 2006a. The impact of single-family mortgage foreclosures on neighborhood crime. *Housing Studies* 21 (6): 851-66.

Immergluck, Daniel, and Geoff Smith. 2006b. The external costs of foreclosure: The impact of single-family mortgage foreclosures on property values. *Housing Policy Debate* 17 (1): 57-79.

Johnson, Katherine M., and Charles G. Schmidt. 2010. "Room to grow": Urban ambitions and the limits to growth in Weld County, Colorado. *Urban Affairs Review* 44 (4): 525-53.

Kan, Joel. 2008. Sources of foreclosure data. *MBA Research Datanotes* (July).

Kantor, Paul P. 1995. The dependent city revisited: The political economy of urban development and social policy. 2nd ed. Boulder, CO: Westview Press.

Kaplan, David H., and Gail G. Sommers. 2009. An analysis of the relationship between housing foreclosures, lending practices, and neighborhood ecology: Evidence from a distressed county. *Professional Geographer* 61 (1): 101-20.

King, Gary. 1989. Variance specification in event count models: From restrictive assumptions to a generalized estimator. *American Journal of Political Science* 33 (3): 762-84.

King, Gary, Michael Tomz, and Jason Wittenberg. 2000. Making the most of statistical analyses: Improving interpretation and presentation. *American Journal of Political Science* 44 (2): 347-61.

Landis, John D. 1992. Do growth controls work? A new assessment. *Journal of the American Planning Association* 58 (4): 489-508.

Landis, John D. 2006. Growth management revisited: Efficacy, price effects, and displacement. *Journal of the American Planning Association* 72 (4): 411-30.

Levine, Ned. 1999. The effect of local growth controls on regional housing production and population redistribution in California. *Urban Studies* 36 (12): 2047-68.

Levy, Dan. 2009. U.S. property owners lost $3.3 trillion in home value. *Bloomberg* (February 3).

Lewis, Paul G., and Max Neiman. 2000. Residential development and growth control policies: Survey results from cities in three California regions. Occasional paper. San Francisco: Public Policy Institute of California.

Lewis, Paul G., and Max Neiman. 2009. *Custodians of place: Governing the growth and development of cities*. Washington, DC: Georgetown University Press.

Logan, John R., and Kyle D. Crowder. 2002. Political regimes and suburban growth, 1980-1990. *City & Community* 1 (1): 113-35.

Logan, John R., and Harvey L. Molotch. 1987. *Urban fortunes: The political economy of place*. Berkeley: University of California Press.

Logan, John R., and Min Zhou. 1989. Do suburban growth controls control growth? *American Sociological Review* 54 (3): 461-71.

Malpezzi, Stephen. 2002. Urban regulation, the "new economy," and housing prices. *Housing Policy Debate* 13 (2): 323-49.

Malpezzi, Stephen, and Stephen K. Mayo. 1997. Getting housing incentives right: A case study of the effects of regulation, taxes, and subsidies on housing supply in Malaysia. *Land Economics* 73 (3): 372-91.

Mollenkopf, John H. 1983. *The contested city*. Princeton, NJ: Princeton University Press.

Nguyen, Mai Thi. 2007. Local growth control at the ballot box: Real effects or symbolic politics? *Journal of Urban Affairs* 29 (2): 129-47.

Oliver, Melvin, and Thomas Shapiro. 2006. *Black wealth / White wealth*. 2nd ed. New York: Routledge.

O'Keefe, Suzanne. Forthcoming. The impact of slow growth policies on local economies: Through housing boom and bust. *Applied Geography*. doi:10.1016/j.apgeog.2010.06.007.

O'Toole, Randal. 2009. How urban planners caused the housing bubble. *Cato Policy Analysis Series*, no. 646.

Pagano, Michael A., and Ann O'M. Bowman. 1995. *Cityscapes and capital*. Baltimore: Johns Hopkins University Press.

Pendall, Rolf. 2000. Local land use regulations and the chain of exclusion. *Journal of the American Planning Association* 66 (2): 125-42.

Peterson, Paul E. 1981. *City limits*. Chicago: University of Chicago Press.

Quigley, John M., and Steven Raphael. 2005. Regulation and the high cost of housing in California. *American Economic Association Papers and Proceedings* 95 (2): 323-28.

Quigley, John M., and Larry A. Rosenthal. 2005. The effects of land use regulation on the price of housing: What do we know? What can we learn? *Cityscape* 8 (1): 69-137.

Quigley, John M., Steven Raphael, and Larry A. Rosenthal. 2009. Measuring land use regulations and their effect on the housing market. In *Housing markets and the economy: Risk, regulation, and policy*, edited by Edward L. Glaeser and John M. Quigley, 271-300. Cambridge, MA: Lincoln Institute of Land Policy.

Schneider, Mark. 1989. *The competitive city: The political economy of suburbia*. Pittsburgh: University of Pittsburgh Press.

Schuetz, Jenny, Vicki Been, and Ingrid Gould Ellen. 2008. Neighborhood effects of concentrated mortgage foreclosures. *Journal of Housing Economics* 17 (4): 306-19.

Shen, Qing. 1996. Spatial impacts of locally enacted growth controls: The San Francisco Bay region in the 1980s. *Environment and Planning B: Planning and Design* 23 (1): 61-91.

Staley, Samuel. 2001. Ballot-box zoning, transaction costs, and urban growth. *Journal of the American Planning Association* 67 (1): 25-37.

State of California, Department of Finance. 2010. *E-5 population and housing estimates for cities, counties and the state, 2001-2010, with 2000 benchmark*. Sacramento, CA: California Department of Finance, Demographic Research Unit.

State of California, Employment Development Department. 2011. *Monthly labor force data for cities and Census Designated Places (CDP), annual average 2008—revised*. Sacramento, CA: California Employment Development Department, Labor Market Information Division.

Steel, Brent S., and Nicholas P. Lovrich. 2000. Growth management policy and county government: Correlates of policy adoption across the United States. *State and Local Government Review 32 (1): 7-19*.

U.S. Census Bureau. 2000. Census of population and housing, summary file 3 [data file]. http://www.census.gov/census2000/sumfile3.html.

U.S. Department of Housing and Urban Development. 1991. *"Not in my back yard": Removing barriers to affordable housing.* Washington, DC: Advisory Commission on Regulatory Barriers to Affordable Housing.

Warner, Kee, and Harvey Molotch. 1995. Power to build: How development persists despite local controls. *Urban Affairs Review* 30 (3): 378-406.

Wirt, Frederick M. 1985. The dependent city? External influences upon local control. *Journal of Politics* 47 (1): 83-112.

Wong, Kenneth K. 1988. Economic constraint and political choice in urban policymaking. *American Journal of Political Science* 32 (1): 1-18.

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