Do liberal cities limit new housing development? Evidence from California

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ARTICLE INFO

ABSTRACT

Traditional explanations for why some communities block new housing construction focus on incumbent home owner incentives to block entry. Local resident political ideology may also influence community permitting decisions. This paper uses city level panel data across California metropolitan areas from 2000 to 2008 to document that liberal cities grant fewer new housing permits than observationally similar cities located within the same metropolitan area. Cities experiencing a growth in their liberal voter share have a lower new housing permit growth rate.

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1. Introduction

Housing supply regulation raises the cost of building new housing. The consequences of such regulation have been documented in a number of studies including Pollakowski and Wachter (1990), Fischel (2004), Mayer and Somerville (2000), Quigley and Raphael (2005), Glaeser et al. (2005), and Schill (2005).

Within a metropolitan area, why are some cities "pro-growth" while others oppose it? Areas far from the city center may enjoy economy of scale in providing basic local services and this encourages them to seek growth. Home owners have a financial incentive to discourage new construction because it reduces the scarcity value of their asset (Fischel, 1999, 2001; Dehring et al., 2008). Based on data from the Boston metropolitan area, Glaeser and Ward (2009) find that current zoning policy is highly correlated with a city's historical (1940) population density. A city's overall political ideology may also be a relevant determinant of issuing new housing permits. California's cities such as Berkeley and Santa Monica are famous for their liberal progressive attitudes. Such areas may discourage growth to maintain the character of their city.

This paper tests whether liberal cities issue fewer new housing permits than less liberal cities located in the same metropolitan area. This work builds on research documenting the role of ideology in determining land use patterns (Dubin et al., 1992; Gerber and Phillips, 2003). Using a California city/year panel dataset, I document that more liberal places issue fewer new housing permits than observationally identical non-liberal places. Throughout this paper, I measure a city's ideology based on voter registration data and in particular on the share of the city's voters who are registered as Democrats, Green Party or Peace and Freedom Party voters.

To test the hypothesis that liberal cities limit new housing, I estimate OLS, instrumental variables and first differenced regressions. As an instrument set, I use a city's lagged political party registration shares. Recognizing that these instruments may be correlated with time invariant unobserved characteristics of cities, I also report first differenced estimates in which I exploit decade long changes in a city's demographics and political composition to tease out the role of changes in city political ideology on changes in new housing permits issued. Together, all three sets of econometric results suggest that liberal cities issue fewer new housing permits.

A recent innovation in the housing supply literature has been using GIS software to construct measures of how "developable" are different parcels of land. Saiz (2010) creates a detailed topographical data base and uses a cross-metropolitan area estimation strategy to document that there is less new housing construction in metropolitan areas whose land is more sloped. His work highlights that housing supply research must simultaneously account for "man made" regulation constraints and exogenous topographical attributes of land. Using a subset of the Saiz (2010) data for the Greater Los Angeles Region, I document that both topographical

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features of land and land use regulation both influence the scale of new housing construction within a major metropolitan area. At least within the Greater Los Angeles Region, the negative correlation between a city's liberal share and new housing permits is robust to controlling for Saiz's topographical measure.

2. Liberal ideology as a determinant of new housing supply

To test for the role of resident ideology in determining new housing production across different cities, I merge data on California city new housing permits by year to political voter registration data. The UC Berkeley Statewide Database which provides data for each California census tract on its voter registration shares by political party in both the year 2000 and 1992.[2] I create my "Liberal" measure for each city based the sum of the shares of registered voters from the Democratic Party, Peace and Freedom Party and the Green Party. The Green Party is well known for its environmentalism activism, and California is the state with the highest count of Green Party registered voters both in absolute terms and as share of all registered voters.[3] "The Peace and Freedom Party is an open, multi-tendency, movement-oriented socialist party. We are united in our common commitment to socialism, democracy, feminism and unionism and our common opposition to capitalism, imperialism, racism, sexism and elitism."[4]

3. Empirical framework

My data sample consists of 317 California cities whose centroid lies within 35 miles of a Central Business District.[5] Census data from the year 2000 is merged to each city/year. These cities contain 73.5% of California's year 2000 population.

The new housing permit data were obtained from the California Industry Research Board.[6] The dataset includes the total number of permits granted each year between 2000 and 2008 for single family homes and all housing permits for 317 California cities. I merge to these data information from the year 2000 Census of Population and Housing and geographical data. These geographical data include the centroid of each city's distance to the closest Central Business District and the distance to the Pacific Ocean.

In this paper, I will use the new housing permit data to explore cross-city variation in permitting behavior. The primary estimating equation is presented in Eq. (1). In one set of results I will present below, the dependent variable will be the log of the count of annual new housing permits issued in place j in metropolitan area l in a given calendar year *t*. The unit of analysis in the regressions will be a city/year such as Santa Monica in 2002.

$$\text{New housing}_{jlt} = \text{MSA}_l + \text{MSA}_l * \text{Trend}_t + \gamma \text{Liberal}_{jl2000}$$
$$+ \varphi X_{jl2000} + U_{jlt} \tag{1}$$

Controlling for year 2000 city characteristics, (X), metropolitan area fixed effects and metropolitan area specific time trends, the key explanatory variable is city j in metropolitan area l's year

2000 political ideology. I test whether γ is less than zero. This would indicate that there is less new housing production taking place in liberal cities. The standard errors are clustered by city.

This study's evidence on the role of political ideology as a determinant of housing supply is based on within metropolitan area variation. Assuming that a metropolitan area is a common local labor market, the metropolitan area specific time trends capture long run growth.

I will report both OLS and IV estimates of Eq. (1). I will report estimates of Eq. (1) in which I instrument for a city's year 2000 liberal voter share using the same city's 1992 liberal voter share. I recognize that there could be unobserved attributes of the city that are correlated with the explanatory variables. For example, the presence of the University of California, Berkeley campus in Berkeley attracts progressive intellectuals to live nearby. This "unobservable" would be highly persistent over time and would invalidate the use of the lagged liberal share variable as an instrumental variable.

I will also present estimates of a long differenced version of Eq. (1) that exploits within city changes between 1992 and 2000 in the city's liberal share. This econometric strategy explicitly addresses concerns about fixed unobserved city attributes.

I will also report results for the Greater Los Angeles Region in which I include the Saiz (2010) measure of how much of the land around each city exhibits slopes above 15%. This allows a robustness test to see if the liberal ideology effect is robust to controlling for exogenous limits to growth.

This paper's econometric strategy does not attempt to pinpoint what particular regulations that liberal communities are enacting to slow growth. Jurisdictions adopt multiple regulations at the same time and this makes it difficult to tease out the marginal contribution of any specific regulation in slowing growth. Given this fact, my core goal here is to establish the total effect of city liberalism on local permitting and growth.

4. Results

As a first step for exploring the role that city ideology plays in determining housing market outcomes, I study how this measure correlates with "green product" purchases and political voting. My goal here is to raise confidence that a city's liberal voter share is a meaningful explanatory variable. To study this, I examine whether liberal cities purchase more hybrid vehicles and whether they were less likely to vote for George W. Bush in the 2000 Presidential Election. Hybrid vehicles such as the Toyota Prius have been celebrated by environmentalists. The R.L. Polk Company sells vehicle registration data at the zip code level. Using these data, I have spatially aggregated these data to the city level. In Table 1 columns (1) and (2), I report city level regressions where the dependent variables are the share of the 2007 vehicle stock that are hybrids such as the Toyota Prius. As shown in columns (1) and (2), richer cities have higher hybrid vehicle shares. Holding city income constant, I find that more liberal California cities have a higher share of registered hybrid vehicles. A 10% point increase in a city's liberal voter share is associated with a 1/7th standard deviation increase in the city's hybrid vehicle registration share. As shown in column (2), this result is robust to including metropolitan area fixed effects. In the right columns of Table 1, I document that liberal cities were much less likely to vote for George W. Bush in the 2000 Election and this result is robust to controlling for metropolitan area fixed effects. A 10% point increase in a city's liberal share is associated with a 2/3rd of a standard deviation decrease in the vote share for George W. Bush.

In estimating Eq. (1), I will report both OLS and IV estimates. My instrument will be a city's liberal voter registration share in 1992.

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[2] See http://swdb.berkeley.edu/. It is important to note that voting precincts and census tracts spatially overlap but they do not coincide. To translate the voting precinct data into census tract data, The Berkeley IGS takes the precinct data (there are over 1700 Precincts in Los Angeles County alone) and uses a statistical procedure based on ecological inference to create the census tract data. I use the University of Missouri's Mable Geocorr data set to map census tracts to political city (borders http://mcdc2.missouri.edu/websas/geocorr2k.html).

[3] See http://cagreens.org/platform/ecology.htm.

[4] http://www.peaceandfreedom.org/home/.

[5] For these 317 cities, I have complete information on their annual housing permits issued between 2000 and 2008, year 2000 demographics, and the political party voting data in the year 2000.

[6] http://www.cirbdata.com/.