

Estimation of an Item-Response Model of Support for Housing Growth

Or: What's the Matter with San Francisco?

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Abstract

In fast-growing cities, housing costs makes up an increasing proportion of household budgets. A cause of deteriorating housing affordability is housing supply inelasticity, which is partly due to housing market regulations. How do citizens form preferences over housing market regulations, and what explains these preferences? I examine this question by drawing on a novel panel dataset of precinct-level voting returns for 24 housing-related local ballot measures in San Francisco between 2000 and 2015. I model vote shares using an item response function that allows estimation of three variables: a latent precinct-level bias for certain types of measures, the elasticity of a measure's vote share to this bias, and a measure's baseline vote share. I generate posterior distributions for these variables using an MCMC method. Estimates of latent bias from this method are spatially clustered and consistent with qualitative descriptions of the city's political geography. Demographics such as homeownership, age, and income are predictive of precinct-level bias. Bias elasticity is highest for measures related to affordable housing and lowest for specific development proposals. These findings motivate a theory that citizens view housing-related ballot measures as a means of expressing preferences over the shares of regulated and market-rate housing in a city.