Entry level home sale prices and the distribution of income in US zip codes

In this paper I use data from the American Community Survey, 2015-2020, and from Zillow public use data files to investigate two-bedroom home sale prices in US zip codes. I find that two-bedroom home sale prices are not adversely impacted by income inequality in favor of the well off in the community. In fact, the results show these prices may be slightly higher in communities where high quintile households receive a greater share of community income.

Keywords: home values, distribution of income

Douglas Coate

Dept. of Economics

Rutgers Univ., Newark

dccoate@gmail.com

August 2022

Entry level home sale prices and the distribution of income in US zip codes

"In their recent article, 'Why People Prefer Unequal Societies,' the psychologists Christina Starmans, Mark Sheskin, and Paul Bloom found that people prefer unequal distributions, both among fellow participants in the lab and among citizens in their country, as long as they sense that the allocation is fair: that the bonuses go to harder workers, more generous helpers, or even the lucky winners of an impartial lottery (Pinker 2019)."

"The sociologists Jonathan Kelley and Mariah Evans have snipped the causal link joining inequality to happiness in a study of 200,000 people in 68 societies over three decades. In developing countries, inequality is not dispiriting but heartening: people in the more unequal societies are happier. The authors suggest that whatever envy, status anxiety, or relative deprivation people may feel in poor, unequal countries is swamped by hope. Inequality is seen as a harbinger of opportunity, a sign that education and other routes to upward mobility might pay off for them and their children (Pinker 2019)."

"Members of a community containing many who are rich enjoy, in fact, a great advantage not available to those who, because they live in a poor country, do not profit from the capital and experience supplied by the rich (Hayek 1960)."

I investigate this question in this research:

Other things the same, how do sale prices of entry level homes in US zip codes differ by the percent of community income received by the highest quintile? For example, are prices higher for these homes in communities with greater income concentrations at the high end, reflecting a preference by relatively lower income home buyers for the values and consumption externalities of their better off neighbors?

I use data from the American Community Survey, 2015-2020, on median home values and on the income distribution within zip codes, and data from Zillow

public use files (https://www.zillow.com/research/data/) on two-bedroom home sales values by zip code in July 2017 to estimate regressions of the following form:

two-bedroom home price= f(percent of income earned by the richest 20% of households, median home value)

The median home value variable is specified to capture differences in community characteristics on the demand and supply sides that influence home values, such as school quality, property tax rates, distance from major employment or recreation centers, public safety, cost of living, age of the homes, building and zoning regulations, etc.   This variable should not be influenced by two-bedroom home sale prices, which should fall substantially below median home values.[i]

The results, below, indicate that a one standard deviation increase in the percent of zip code income going to the top quintile is associated with an increase in two-bedroom home sale values in the zip code by about $11,000, or 6% of the mean. I conclude from these results that the location decisions of home buyers of two-bedroom homes are not adversely impacted by income inequality in favor of the well off in the community. In fact, they may have a slight preference for locations in communities where high quintile households receive a greater share of community income, not less.

two-bedroom home sales price =   -127,000 + 2,236 top quintile income + .78 median home value

the t-values for the constant and the two variables are -17.9, 14.3, 241.0.

R squared = .84 and n is 13,011. Weighted regression by zip code population. Means and (standard deviations) are: two-bedroom home price 193,368 (194,565) top quintile income pct. 46.8 (5.2), median home value in the zip code 269,135 (226,377).
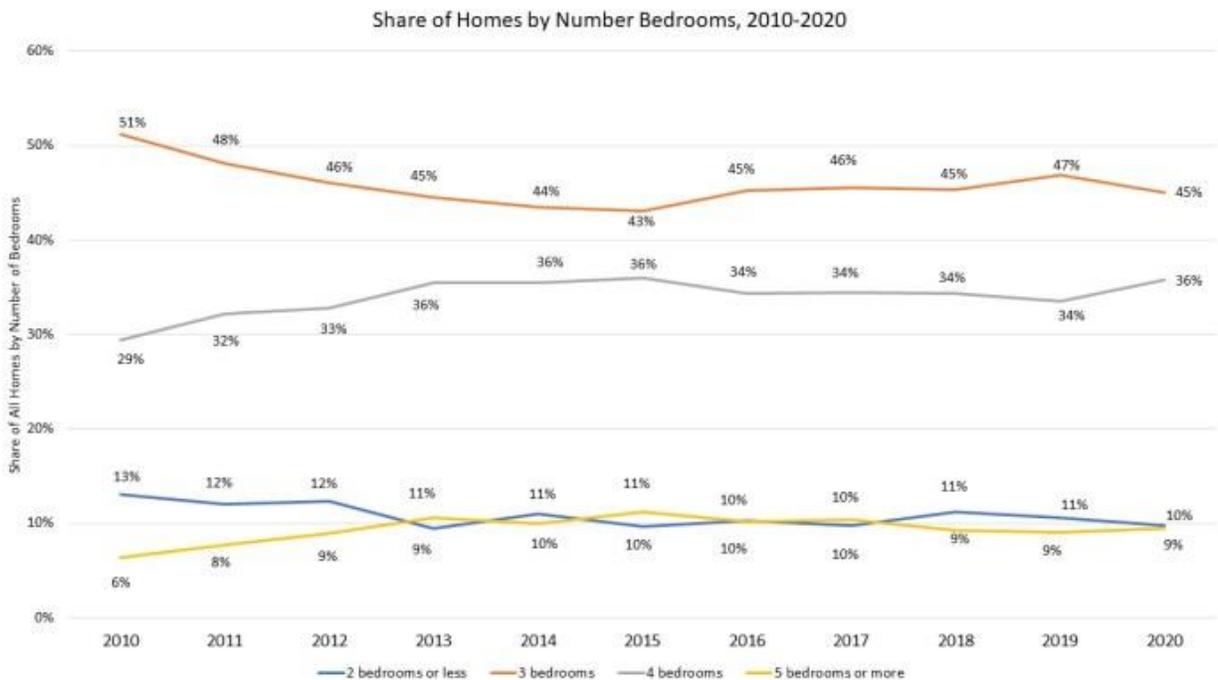
[i] Twenty six percent of occupied housing units in the US in 2019 were two-bedroom, 39% were three-bedroom, and 17% were four-bedroom. (https://www.statista.com/statistics/206393/distribution-of-housing-units-in-the-us-by-number-of-bedrooms/#:~:text=Distribution%20of%20occupied%20housing%20units,2019%2C%20by%20number%20of%20bedrooms&text=This%20statistic%20shows%20the%20distribution,had%20three%20bedrooms%20in%202019.) These figures include rental apartment units.

Of the 822,000 single-family homes sold in 2020, 348,000 (42 percent) had three bedrooms. (https://www.census.gov/construction/chars/highlights.html#:~:text=Of%20the%20822%2C000%20single%2Dfamily%20homes%20sold%20in%202020%3A&text=348%2C000%20%20had%20three%20bedrooms).

Share of Homes by Number Bedrooms, 2010-2020

https://eyeonhousing.org/2021/09/share-of-new-homes-with-4-or-more-bedrooms-jumped-in-2020/

Bedrooms	Number of Houses (1000s)	
	Renter-Occupied	Owner-Occupied
0	547	23
1	5012	541
2	6100	3832
3	2644	8690
4 or more	557	3783

https://www.transtutors.com/questions/the-american-housing-survey-reported-the-following-data-on-the-number-of-bedrooms-in-2221217.htm US Census 2003

Bibliography

Pinker (2019)   Chapter 9 from Enlightenment Now, The Case for Reason, Science, Humanism, and Progress, by Steven Pinker; Penguin Books (2019), an imprint of Penguin Random House LLC. Copyright © 2018 Steven Pinker.
Reprinted in *Journal of Applied Corporate Finance* (2021), Volume 33 Number 3 as "Inequality and Progress."

Hayek (1960)   Hayek, Friedrich A. The Constitution of Liberty. Chicago: University of Chicago Press, 1960, p. 48.