



UCLA ECONOMIC LETTER

REAL ESTATE AND THE MACROECONOMY

A partnership between the UCLA Ziman Center for Real Estate and the UCLA Anderson Forecast sponsored by the Ziman Center's UCLA Rosalinde and Arthur Gilbert Program in Real Estate, Finance and Urban Economics

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Monthly condensed analyses of crucial real estate and economic issues offered by UCLA Anderson Forecast and UCLA Ziman Center for Real Estate. In this August 2023 Letter, UCLA Anderson Assistant Professor of Finance Gregor Schubert, BYU Marriott School of Management Assistant Professor of Finance Darren Aiello, and BYU Marriott School of Business Assistant Professor of Finance Jason D. Kotter show that homeowners with larger housing wealth tend to overpay for their new home. This not only increases home prices in their neighborhoods but also leads to lower overall returns on their next home purchase.

The full report – Housing Wealth and Overpayment: When Money Moves In – is available [here](#).

Housing Wealth and Overpayment: When Money Moves In

By [Darren Aiello](#), [Jason Kotter](#), and [Gregor Schubert](#)

House price appreciation over the last several decades has generated substantial wealth for homeowners. Using a new set of data that tracks 25 years of moves within the U.S., our research documents a surprising fact: Households that use this wealth when moving, tend to overpay for their next house. This overpayment has real consequences on their household wealth: overpayment leads to significantly lower future returns when it comes time to selling this property.

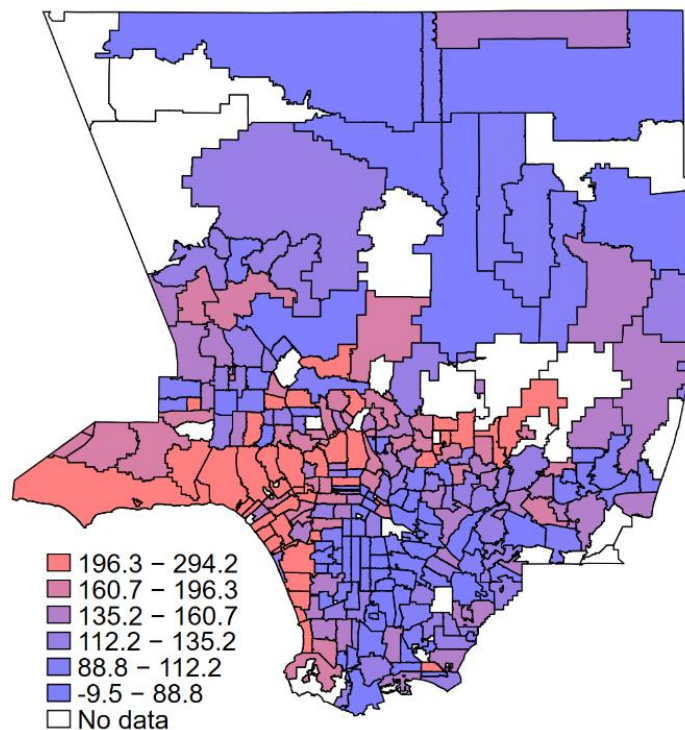
Why do households use their housing wealth to overpay? We show that the relation between equity gains and overpayment is likely driven at least in part by “information frictions” (incomplete information about the value of their next purchase). Because housing markets are segmented and illiquid, acquiring information about the fundamental value of a house takes a significant amount of time and effort. Households use equity gains to substitute for the effort and cost of attaining accurate information: They choose to overpay and remain ignorant about the price rather than pay the effort costs necessary to become informed. This individual behavior causes an external effect:

Households with large equity gains that move into an area drive up their new neighbor's home prices by approximately the same amount that they overpaid.

“Overpayment leads to significantly lower future returns when selling the property. It also drives up new neighbors’ home prices by approximately the same amount that they overpaid.”

Unexpectedly, this overpayment is higher for local than for non-local movers, and this appears to be true for the vast majority of counties in our data. In this sense, the common story that rich out-of-towners drive up prices is incomplete—local movers with lots of housing wealth drive up neighborhood prices by more than similarly wealthy non-local movers. However, overall, the effects of housing wealth flowing into an area put a significant amount of price pressure on local house prices.

(See below map denoting equity gains of movers into different areas in Los Angeles County)



Legend: Average equity gain (in \$K) of people who moved into different areas in Los Angeles County, in sample period of 1996-2021. Redder shades indicate that people buying houses in those neighborhoods made more money on their previous home than the people buying homes in the bluer neighborhoods. Map by Darren Aiello, Jason Kotter, and Gregor Schubert.

DATA AND ANALYSIS

We begin by constructing a novel dataset of household moves based on the Zillow Transactions and Assessments (ZTRAX) data. We focus on moves between owner-occupied single-family residential properties between 1996 and 2021 where we observe three specific transactions—the purchase and sale of a particular property (the “sold property”), as well as the purchase of the subsequent property (the “purchased property”). This allows us to measure, over the individual household’s holding period, the increase in the value of their housing asset (their “equity gain”) and relate it to observed behavior in their subsequent housing purchase. For that subsequent purchase, we recover the residual (“overpayment”) from a repeat sales regression model that controls for both time invariant observable and unobservable property characteristics as well as time-varying zip code and census tract average price levels, measured with respect to the entire universe of housing transactions in the ZTRAX data. This measure of overpayment only contains information about how the purchase price differs from a reasonably objective measure of the fundamental value of the asset. Consistent with this interpretation, we show that overpayment negatively predicts future realized returns on the purchased property.

There is a strong positive correlation between the equity gain a household realized on their sold property and the overpayment observed on their purchased property. However, assessing the effects of a household's equity gain is challenging. For one thing, households that realize a large equity gain are likely to be more sophisticated or skilled (or have hired better real estate agents) and therefore less likely to overpay for their new house. The existence of sophisticated housing market participants tends to move downward any naïve estimate of the effect of equity gain on overpayment.

We address such concerns in a three-fold manner. First, we use observable characteristics to control for differences in the types of households moving by including a control for the median house price of the zip code where the house is being sold (but at the time that property was originally purchased), a fixed effect for the number of years lived in the house, and interacted fixed effects for the characteristics of the property being sold. Second, we include zip-year fixed effects for both the sale and purchase locations, allowing us to control the timing of the move (at the year level) as well as current zip code level price conditions in both the sale and purchase locations separately. Finally, we predict a household's change in equity gain using the change in the zip code level housing price index at the sale location over the household's holding period, thus removing any impact of the household's ability to extract a better price in a housing transaction.

The only remaining concern relates to possible local economic shocks under very narrow conditions. If average price growth in the, e.g., Beverly Hills, CA, zip code (90210) where the household is selling their house is correlated with prices in the purchase neighborhood because of some particular affinity, then our estimates could still be biased. But this purchase neighborhood of concern has to both be small in size and unique relative to its surrounding area—its prices have to move differently from the average property in its zip-month and census tract- year. Moreover, we show that this potential selection into micro-neighborhoods is unlikely to be driving our results, as overpayment predicts a lower future return on the transaction relative to other buyers in the area—which is inconsistent with persistent changes in the valuation of the purchased property.

Given this framework, we uncover a dramatic finding: For every dollar of “exogenous” (external) equity gain that a seller receives, they overpay for their next house by 7.9 cents. For the average equity gain in our sample, that represents an overpayment of about 2 percent of the overall purchase price. What leads buyers to use their equity gains to overpay? For one thing, to the extent that equity gains relieve capital constraints, buyers might be able to consider a larger set of houses, potentially leading to a better match. Consequently, the overpayment we observe might be driven by buyers using their equity gains to buy a house for which they have a higher private valuation (and thus are more willing to overpay).

Having established that equity gains cause overpayment, we next examine how a household with large equity gains moving in affects neighborhood house prices. We show that the equity gain a buyer realized on their recently sold home causes an increase in average housing prices in the nearby neighborhood—8.9 cents for every dollar of equity gain.

To more fully characterize how housing wealth affects buyer behavior, we also estimate the effect of equity gains on other dimensions of the purchase decision. Buyers with larger equity gains spend more on a house, both because they purchase a property in a more expensive zip code and because they buy a bigger house. As noted above, we find that for each dollar of equity gain, households spend \$0.87 more on their next house. Of that, \$0.79 represents a house with a higher fundamental value, and the remaining \$0.08 is spent on overpayment.

Finally, we examine the extent to which these individual spillover effects explain county-level house price growth. For this analysis, we focus on the effect of aggregate out-of-area equity gain inflows on county house prices. To estimate the causal impact, we need to identify inflows of equity gains that are driven by forces outside of the housing market that we are studying. We do this using predicted equity gain inflows based on historical migration routes from IRS data. Again, we find that the cumulative effect of equity gain inflows drives up local house prices.

CONCLUSIONS

The findings of this research have profound implications for various stakeholders in the real estate market. For house sellers and buyers, understanding the tendency to overpay due to “information frictions” means that they should be circumspect in gathering comprehensive price information, and understanding the role that recent market dynamics play in appraisals. If sales prices for recent comparables are driven by high equity gain buyers moving into a neighborhood, the premiums that contemporaneous buyers pay to match those prices may be difficult to recoup in a

future sale. Conversely, realtors and assessors can utilize these insights to offer better guidance to their clients, highlighting the importance of understanding current market dynamics and the characteristics of buyers that purchased comparable homes in the neighborhood. For policymakers, recognizing the price pressures caused by equity gains could inform housing and urban planning strategies by highlighting where and when to target affordable housing initiatives in a city. As affordable housing becomes a focus of policy efforts, understanding and anticipating the shocks that drive house prices increases should be an important pillar of crafting effective housing policies.

