Housing Wealth Accumulation and Electoral Representation*

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We show that the median registered voter in the United States is a homeowner who is doing unusually well in the housing market – and that this is not a coincidence. Using a nationwide voter-property dataset linking administrative voting records to housing transactions, we document that housing wealth accumulation differs systematically within homeownership along lines of political participation. As homeowners participate in more elections they experience monotonically higher housing appreciation than otherwise similar homeowners: high versus low participation is associated with roughly 1.2–1.9 percentage points higher annual returns. Strikingly, this gradient runs opposite to the standard resource story – more politically active homeowners have lower incomes and wealth on average, and the differences are not explained by location, traditional political cleavages, or financial resources of any kind. Instead, homeowners who are more politically active take systematically different actions: they purchase undervalued properties, time transactions more effectively, and invest more in home improvements. They also have different personality traits. Although these homeowners represent roughly 41 percent of the voting-age population, they account for 58 percent of voter registrations. They also accumulate up to 78% more housing wealth over their lifetime. These findings identify political and economic engagement as co-determined at the individual level, independently of resources, and imply that democratic representation systematically overweights the housing experiences of those who benefit most from housing markets.

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"In a really equal democracy, every or any section would be represented, not disproportionately, but proportionately[...] I consider it entirely inadmissible that the superiority of influence should be conferred in consideration of property."

– John Stuart Mill, *Considerations on Representative Government*

1 Introduction

The relationship between economic power and political representation has long occupied a central place in debates within political economy and democratic theory. Much of this work focuses on differences in income, wealth, or demographic characteristics across voters. Less attention has been paid to whether the process of wealth accumulation itself differs systematically across politically engaged and disengaged individuals. Housing markets provide a particularly important setting in which to examine this question, as housing constitutes the largest component of household wealth in the United States and plays a central role in shaping economic opportunity and political preferences.

In democratic societies, political outcomes depend not only on preferences but also on who participates in the electoral process. Electoral participation shapes which issues rise to prominence and how they are addressed (Downs 1957; Dahl 1971, 1989; Caughey and Warshaw 2018), yet participation itself is uneven across citizens. Because individuals' economic experiences shape their political demands – from job insecurity (Compton and Lipsmeyer 2019) to rising housing costs (Ansell 2014) – differences in economic outcomes can translate into differences in political representation when participation is unequal. Housing markets provide a particularly salient example. Debates over land use, NIMBYism (Hankinson 2018), and eviction protections (Slee and Desmond 2023) reflect not only underlying economic interests but also the composition of the participating electorate, which may be disproportionately drawn from homeowners who benefit from housing appreciation. If housing wealth accumulates unevenly across politically engaged and disengaged individuals, such differences may therefore extend from markets into political representation.

In this paper, we show that the median voter in the US is a homeowner who is doing unusually well in the housing market, and that housing wealth accumulation differs systematically across individuals with varying degrees of political participation. We further show this dimension of political representation is distinct from differences in location, economic resources, or traditional political cleavages such as race, gender, or partisanship. While a large literature shows that

wealthier individuals participate more in politics (Avery 2015; Leighley and Nagler 2013; Schafer, Cantoni, Bellettini, and Berti Ceroni 2022), far less is known about how the process of wealth accumulation is distributed across political participants and nonparticipants, and whether any differences primarily reflect other dimensions or instead constitute an independent *sui generis* dimension of political participation. More broadly, an open question is whether participation in political and economic processes is jointly shaped by underlying individual-level factors.

Conceptually, systematic differences in housing appreciation across levels of political participation need not exist. Housing returns are highly spatial, shaped by neighborhood demand, local labor markets, amenities, and regulatory environments. Political participation itself varies geographically and demographically, raising the possibility that any observed relationship simply reflects traits of the location or of other forms of electoral divide. Alternatively, differences in appreciation could be driven by resources or individual dispositions; for example, differences in income, wealth, credit access, education, or psychological traits could jointly shape both electoral participation and housing outcomes. Finally, housing appreciation could itself increase entry into the electorate, mechanically generating a correlation between returns and participation without implying a representational divide.

To answer these questions, we construct a unique voter-level dataset integrating multiple administrative records across the whole U.S., including property transaction deeds, tax assessments, credit histories (for one large U.S. state), and detailed voter registration and participation records. Our final integrated dataset consists of four key components: voter registration and participation records; property-level information on transaction price, assessed value, hedonic characteristics, and location; individual income, individual measures of wealth, and balance sheet information for a subset of voters; and tract-level socioeconomic characteristics. Using this integrated dataset, we are able to measure the relationship between political participation and housing returns more precisely than what is possible with other available data, and we are able to provide evidence in support or against the role of many ex-ante expected mechanisms. We supplement this data with analysis using the American Housing Survey (AHS) and originally collected survey data.

By comparing housing appreciation across homeowners who differ in their intensity of political participation, we document that homeowners who participate in more elections experience consistently higher housing appreciation than otherwise similar homeowners. For any given holding period, a six to seven-times difference in political participation is associated with 1.16–1.86 percentage points higher annual house price growth. These differences translate into a substantial differences in housing wealth over their lifetime. Homeowners with high levels of political partic-

ipation accumulate between 22 and 78% more housing wealth over a 40 year horizons and account for 58 percent of voter registrations despite accounting for only 41 percent of the voting-age population. By contrast, homeowners with low political participation experience persistently lower housing appreciation despite comparable exposure to housing markets.

We also show that the relationship between political participation and housing appreciation is monotonic in the degree of political participation. Housing appreciation rises steadily with the number of elections in which homeowners form part of the electorate, even for relatively small differences in participation. That is, housing wealth accumulation is not driven by narrow constituencies, but instead reflect a structured division between more- and less-politically represented voters within the electorate.

We next examine potential channels underlying the relationship between political participation and housing wealth accumulation. A first possibility is spatial: political participation may interact with neighborhood characteristics or fostered by location. This can occur, for example, if local governments are more responsive to constituent demands through improved public services, favorable zoning, or infrastructure investments that elevate property values, or if geographic disenfranchisement efforts (e.g., polling closures, gerrymandering) correlate with property appreciation. In this case, the observed relationship could reflect broader spatial processes rather than individual behavior. However, our estimates indicate that such factors do not account for the pattern we document. The monotonic association between political participation and higher housing returns persists and remains virtually unchanged after controlling for successively more local neighborhood fixed effects and also after accounting for local housing market's secular and seasonal trends.

A second possibility is that political participation simply reflects traditional political or demographic cleavages that jointly affect both housing returns and political engagement. For example, the burden of property taxes – a frequent source of grievance among homeowners (Nathan, Perez-Truglia, and Zentner 2025) – disproportionately falls on minority communities (Avenancio-León and Howard 2022). Similarly, racial minorities and women experience greater financial distress following homeownership (Avenancio-León and Korgaonkar 2025), which can influence both voter participation (McCartney 2021) and housing returns (Kermani and Wong 2024). However, this relationship and its monotonic pattern is not explained by birth year, gender, race, and political affiliation, and point estimates remain virtually identical to baseline estimates.

A third possibility is that the relationship between political participation and housing appreciation reflects differences in individual resources – such as income, wealth, or credit history – that

shape both economic and electoral behavior. However, our estimates indicate that neither income nor wealth nor credit can account for the empirical pattern we document. While prior research has shown strong correlations between financial resources and political behavior (Avery 2015; Schafer et al. 2022; Leighley and Nagler 2013; Franko, Kelly, and Witko 2016; Akee, Copeland, Costello, Holbein, and Simeonova 2018), our findings suggest that the mechanisms behind the relationship between political participation and housing wealth accumulation extend beyond resources.

Finally, we evaluate the role of individual psychological and cognitive dispositions. Using originally collected survey data, we show psychological traits such as personality, perceived self-agency, and beliefs about democracy or markets likewise do not account for the pattern, although they shape its magnitude. While more frequent participants are modestly more educated – by roughly seven months of schooling – neither individual- nor neighborhood-level education mediates the relationship between housing appreciation and political participation.

In contrast to location-based factors, traditional political cleavages, and other factors, we show that, instead, more electorally incorporated homeowners take systematically different actions in housing markets: they are more likely to purchase undervalued properties, time housing transactions more effectively, and invest more in home maintenance and improvement. On the electoral side, they are also more likely to vote, donate, and contact their local representatives. This is consistent with economic and political behavior being rooted on the same sources of active engagement.

Contributions. Documenting the systematic differences in housing wealth accumulation across the electorate contributes mainly to two streams of literature – that on the political economy of housing and wealth accumulation. An important part of that contribution is to reshift focus from just owning a home to the process of housing wealth accumulation when evaluating the incidence of housing in political representation. Existing work largely treats housing as a binary condition – owning versus renting – or emphasizes local housing conditions as location-based drivers of political participation. For example, McCartney (2021) shows that ZIP-code–level home value declines after the 2008 financial crisis are associated with lower individual turnout, while an older literature documents higher civic engagement among homeowners than renters (DiPasquale and Glaeser 1999; Oliver, Ha, and Callen 2012; Wolfinger and Rosenstone 1980; Verba, Schlozman, Brady, and Nie 1993). Using property–voter level data, Hall and Yoder (2022) find that turnout increases following homeownership, with effects that scale with the price of the home purchased – distinct from the wealth accumulation patterns we study.

All of these studies leave unresolved whether housing itself catalyzes greater engagement or

whether both political participation and housing outcomes reflect shared underlying economic, demographic, or behavioral factors. This distinction is critical, as a parallel literature shows that wealthier individuals are systematically more engaged in politics (Braconnier, Dormagen, and Pons 2017; Fowler et al. 2013). As a result, observed differences in participation by homeownership status may primarily reflect selection on systematic factors, rather than either a causal effect of housing experiences on political participation or an underlying idiosyncratic feature distinguishing housing-advantaged and housing-disadvantaged electorates. Beyond standard structural explanations about political cleavages, resources, or location-based factors, our findings point to individual-level differences in active economic behavior as a key link between housing wealth accumulation and political participation, sharpening our understanding of who is represented in housing policy debates.

More broadly, our findings contribute to the expansive literature exploring the determinants of political participation by providing evidence in support of a previously underappreciated dimension: political engagement's intrinsic relationship with individual-level economic engagement, independent of traditional socioeconomic predictors of participation such as income, wealth, demographic traits, or neighborhood contexts (Avery 2015; Leighley and Nagler 2013; Schafer et al. 2022). While existing studies often focus on resources, logistical barriers, or social networks as key determinants of political participation, our analysis highlights active decision-making behaviors (e.g., choice of asset/property, economic timing, investment of effort/upkeep) as potential mediating and characterizing features of the relationship between political participation and wealth accumulation. This perspective shifts the analysis of the relationship between economic and political behavior from a focus on systematic factors to an understanding of their co-determination based on shared individual-level active engagement.

Lastly, at a macro-level, this paper contributes to the literature on democracy and economic performance by shifting attention from aggregate-level analyses to individual-level mechanisms linking political participation and wealth accumulation. Whereas prior work primarily examines how democratic institutions affect aggregate growth or how economic conditions shape democratic transitions (e.g., Acemoglu, Naidu, Restrepo, and Robinson 2019; Acemoglu, Johnson, Robinson, and Yared 2008; Barro 1996), we document a robust micro-level association between political participation and economic engagement. We show that electorally incorporated individuals systematically accumulate greater wealth, independent of standard socioeconomic, demographic, and spatial explanations. Our evidence parallels macro-level patterns linking democracy and economic growth with a micro-level relationship in which active engagement and decision-making jointly

shape electoral and economic engagement. By uncovering this relationship, our findings suggest a set of micro-level mechanisms that may underlie the well-documented association between democratic systems and economic growth, and hopefully point to the value of further research connecting individual electoral engagement to aggregate economic outcomes.

2 Housing Wealth Accumulation as a Dimension of Political Representation

Housing constitutes the largest component of household wealth in the United States, and housing markets sit at the center of some of the most contested policy debates in democratic politics – from land use and zoning to eviction protections and property taxation. Whether and how housing wealth accumulation aligns with political representation is therefore a question with direct consequences for understanding whose interests shape housing policy.

We use the term political cleavage to denote a dimension along which economic outcomes and political representation systematically diverge within the electorate. Classic examples include class, race, and geography. Our claim is that housing wealth accumulation constitutes a similar but previously unrecognized cleavage: realized housing gains are systematically higher among homeowners who are more deeply incorporated into democratic institutions, and this alignment is distinct from existing cleavages and their standard correlates.

Political cleavages are defined by the alignment between material interests and political participation, not by the mechanisms that generate either. As with class or race, the political significance of housing wealth accumulation derives not from any single causal channel but from the durable alignment between who benefits from housing markets and who is represented in democratic institutions.

2.1 Alternative Explanations

Three classes of explanation could generate a correlation between political participation and housing appreciation without implying a distinct cleavage.

Location and spatial sorting. Political participation varies systematically across space, as do housing returns. If more politically engaged individuals are disproportionately concentrated in areas with stronger housing demand or more favorable local policies, the observed gradient may reflect differential exposure to local market conditions rather than anything about individuals

themselves. This account predicts that conditioning on sufficiently fine geographic fixed effects should substantially attenuate the relationship.

Traditional demographic and partisan cleavages. Age, race, gender, and partisan affiliation all independently predict both political participation and housing outcomes. Racial disparities in appreciation persist due to historical and ongoing discrimination. Gender gaps in housing returns reflect differences in bargaining and market timing (Goldsmith-Pinkham and Shue 2023). Partisan affiliation may also correlate with housing outcomes through residential sorting and local policy environments (e.g., McCartney, Orellana-Li, and Zhang 2024). If these established cleavages drive the pattern, controlling for them should largely eliminate the participation-appreciation gradient.

Socioeconomic resources. Income, wealth, and credit access reduce barriers to political participation and enable access to higher-appreciation markets. Under a resource-based account, the participation-appreciation gradient should weaken substantially once financial characteristics are accounted for.

Each of these explanations implies that the relationship between political participation and housing appreciation is not a distinct dimension of representation but a reflection of something already well understood. The empirical analysis tests this directly: under the null that housing wealth accumulation does not constitute a political cleavage, conditioning on location, demographics, and financial resources should substantially attenuate – or eliminate – the gradient. We find that it does not.

3 Data and Empirical Specification

3.1 Data

Our main dataset comprises three components: voter records data, property-level transaction deeds data, and tract-level characteristics. For a subsample of observations, we complement this core dataset with credit bureau and Home Mortgage Disclosure Act (HMDA) information.

The voter records are obtained from L2, a non-partisan data vendor widely used in political campaigns and academic research. The L2 data provide information on all registered voters' birth year, gender, and ethnicity, with each voter assigned a unique identifier. The dataset also contains year-by-year observations of voters' marital status and homeownership status. We pool

observations from 2014 to 2020 and aggregate voter registration and turnout histories to identify levels of political participation.

L2 additionally reports year-by-year information on voters' partisanship. For 34 states (and Washington, DC), party affiliation is self-reported by voters. In the remaining states, partisanship is inferred using multiple sources, including primary election participation, demographics, and exit polls. By aggregating voters' partisanship histories over time, we identify voters' party affiliations.

The core data for our analysis consist of property-level transaction deeds obtained from CoreLogic. Each observation corresponds to a housing transaction and includes the transaction date, sale price, property type, buyer name, and seller name. The data also include indicators for foreclosure sales, intra-family transactions, new construction, investor purchases, and corporate purchases. Using these indicators, we restrict the sample to arm's-length, non-foreclosure transactions of secondary residential properties. In addition to transaction details, the dataset includes static property characteristics such as property code, FIPS code, ZIP code, and year built, which allow us to uniquely identify properties.

Using the history of consecutive arm's-length, non-foreclosure transactions for each property, we compute realized housing appreciation over the holding period. Specifically, for each property i, we match the buyer and subsequent seller names to identify the purchase date t_b, sale date t_s, purchase price P_b, and sale price P_s. To minimize matching errors, we require an exact match between buyer and seller names across transactions. We further restrict the holding period to be at least six months to rule out speculative flips and to avoid extreme annualized appreciations driven by short holding durations. Appreciation is winsorized at the 1st and 99th percentiles. Finally, using longitude and latitude from property assessment records, we assign each property to a census tract and merge in tract-level characteristics from the American Community Survey (ACS) 5-year estimates to account for potential hedonic pricing effects.

By merging voter records – which include voting propensity and partisanship – with property-level appreciation data, we associate housing appreciation with voters' levels of political participation and assess how democratic participation relates to wealth accumulation through housing. We drop observations in which voters purchase properties before age 18. Summary statistics for the resulting dataset are reported in Table 1.

We further merge this voting-property dataset with detailed individual-level financial histories from one of the three major U.S. credit bureaus. These data include borrowers' credit scores, liabilities (e.g., auto loans, installment loans, and credit card balances), and performance measures (e.g., defaults, foreclosures, and bankruptcy events). Access to these data was facilitated by the

credit bureau under strict federal privacy regulations, with all personally identifying information removed prior to delivery.

To construct this merged dataset at feasible cost, we focus on a large U.S. state – North Carolina. The credit bureau matched our voter-property records to individual credit files using name, date of birth, and address. Following the match, all identifying information was stripped, and we received an anonymized research subsample.

Finally, we link voting-property records to income at the time of purchase using HMDA data. HMDA requires financial institutions to report detailed information on mortgage applications and originations at the loan level. Following standard procedures in the literature (e.g., Bayer, Casey, Ferreira, and McMillan 2017; Bartlett, Morse, Stanton, and Wallace 2022), we merge HMDA records based on transaction year, census tract, lender name, and loan amount rounded to the nearest thousand.

3.2 Empirical Specification

We begin with a fairly standard reduced-form asset-pricing model for the annualized appreciation of home i from a purchase at time t_1 to a sale at time t_2:

$$g_{i,t_1,t_2} \equiv \frac{1}{t_2 - t_1} \log\left(\frac{Price_{t_2}}{Price_{t_1}}\right) = \delta_{t_2-t_1} + \lambda_{j(i),t_2} + \psi Z_i + \epsilon_{i,t_1,t_2}, \tag{1}$$

where $\delta_{t_2-t_1}$ is a vector of fixed effects for the length of the holding period, $t_2 - t_1$, and $\lambda_{j(i),t_2}$ is a vector of fixed effects for bins defined by surrounding geography $j(i)$ and sale year t_2.

Including location fixed effects $\lambda_{j(i),t_2}$ allows us to interpret the residual, ϵ_{i,t_1,t_2}, as the excess price appreciation on home i relative to a benchmark portfolio of homes sold in the same geography and year. The fixed effects $\delta_{t_2-t_1}$ further accommodate asset-level illiquidity and, in particular, the well-documented fact that real estate appreciation depend on the length of the holding period (e.g., Giacoletti 2021; Sagi 2021). A combination of $\lambda_{j(i),t_2}$ and $\delta_{t_2-t_1}$ also encodes the specific time period over which the property was held and thus absorbs aggregate shocks to housing appreciation common across assets (e.g., CPI inflation).

In some specifications, we allow the rate of appreciation to depend on additional hedonic characteristics Z_i, although in our baseline specification Z_i is empty. Because the outcome in equation (1) is specified in changes, any time-invariant capitalization of these characteristics into prices is differenced out.

Our empirical analysis tests whether the asset-pricing residual ϵ_{i,t_1,t_2} varies systematically with the degree of political participation of the individual who owns property i over the holding period

from t_1 to t_2. More precisely, we estimate the following extension of equation (1):

$$g_{i,k,t_1,t_2} = \beta \cdot f\left(PoliticalParticipation_k\right) + \gamma X_k + \delta_{t_2-t_1} + \lambda_{j(i),t_2} + u_{i,t_1,t_2}, \tag{2}$$

where k indexes the owner of property i during the holding period.

The key independent variable, $PoliticalParticipation_k$, captures an individual's degree of participation in the democratic process. Conceptually, this includes repeated engagement in electoral activities such as voter registration, turnout, and political contributions. While this is a latent construct, our empirical strategy focuses on observable manifestations of participation that reflect sustained political mobilization rather than one-off engagement.

3.3 Measuring Political Participation

Political participation is a latent construct capturing an individual's sustained inclusion in democratic institutions. Conceptually, it reflects durable political visibility rather than episodic or election-specific participation, encompassing repeated engagement in activities such as voter registration, turnout, and political contributions over time.

Because political participation is not directly observable, we rely on empirical proxies that capture sustained engagement with the electoral system. Our analysis focuses on two complementary measures. The first captures persistence in voter registration. Registration represents a forward-looking decision to enter the electorate, lowering future participation costs and enabling subsequent political activity. Unlike election-by-election turnout, which may reflect short-run mobilization, active decisions not to cast a vote on election day, or idiosyncratic shocks, registration reflects a stable institutional threshold: individuals must register before they can vote, and registration confers durable political visibility within the electorate that enables systematic campaign mobilization and fundraising. As a result, the number of years an individual remains registered captures the persistence of their incorporation into the democratic system.

The second measure captures realized electoral participation through voting behavior. Specifically, we measure the number of presidential elections in which an individual is observed voting since 2000. Whereas registration reflects potential participation and institutional incorporation into the electorate, voting behavior captures realized engagement in national elections. Together, these measures capture two closely related but distinct dimensions of sustained political participation: continued presence in the electorate and repeated exercise of the franchise.

These measures are strongly correlated and yield similar gradients in housing appreciation across participation levels. In addition, we verify that our results are robust to alternative indicators of sustained political engagement, including political donation activity (see Section 4 and

Appendix C). Whenever an analysis needs to be performed on a subsample (e.g., credit analyses), we reestimate Eqn. 1 within the subsample before proceeding to compare estimates across specifications with different controls.

3.4 Original Survey Evidence

We complement the administrative data with original survey evidence designed to measure dimensions of engagement, beliefs, and behavior that are not observable in voter or housing records. The survey was administered online during the summer of 2025 through the Prolific platform to a sample of U.S. homeowners over the age of 30. The instrument focuses on respondents' housing histories and self-assessed housing appreciation, effort and investment in housing markets, civic and political engagement, beliefs about economic and democratic institutions, personality traits, perceived agency, and financial literacy. Respondents report the year and price at which they purchased their current home, its current estimated market value based on online real estate platforms, time spent on home maintenance, capital expenditures on non-routine repairs, and the extent of housing search activity. These measures allow us to construct self-reported housing appreciation and to directly observe margins of engagement that cannot be recovered from transaction data alone.

In addition to housing-related measures, the survey elicits multiple indicators of political and civic engagement, including political participation since 2000, recent civic activities such as contacting elected officials or participating in community events, and normative beliefs about citizenship. The survey further includes standard tests capturing personality traits (Big Five), financial risk preferences, financial literacy, and perceived personal and community agency. These data are used to assess whether personality traits, beliefs, and perceptions of agency are jointly associated with political participation and housing outcomes, and to distinguish these channels from explanations based on education, income, or wealth.

4 Baseline Relationship: Political Participation and Housing Appreciation

This section establishes the baseline empirical relationship between political participation and housing appreciation. We introduce our primary participation measure and empirical specification and use them to characterize how housing appreciation varies across levels of political participation. This relationship serves as the empirical benchmark against which the analyses in subsequent sections are organized and clarifies the object of interest that those sections seek to explain.

Political Participation–Appreciation Gradient. Our core specification follows Equation 1, which relates annualized housing appreciation to an individual's degree of political participation, measured by either the timing and persistence of voter registration or by actual voting. The specification flexibly controls for holding-period effects, geography-by-year fixed effects, and birth-cohort fixed effects, thereby isolating variation in housing returns within local housing markets and among otherwise comparable homeowners. This specification establishes the baseline empirical relationship between political participation and housing appreciation, against which all subsequent analyses in the paper are benchmarked.

Tables 2 and 3, column (1) report the main results. Across all specifications, we find a positive and strictly monotonic relationship between political participation and housing appreciation. Homeowners who are more politically engaged for a larger number of elections experience systematically higher realized housing returns. Individuals with minimal political engagement earn the lowest appreciation, while those engaged throughout the full sample period earn the highest appreciation. When comparing homeowners with high and low levels of electoral registration, we find that there is a 1.7–2.1 percentage difference between a homeowner who has been registered for seven years relative to a homeowner registered once in the 2014–2020 period. When comparing homeowners with high and low levels of voting, we find that there is a 0.7–0.8 percentage difference between a homeowner who has voted in five presidential elections relative to a homeowner who has voted none during the 2000–2016 preceding presidential electoral cycle (2020 being the reference year). We refer to this monotonic, ordered relationship between political participation and housing appreciation as the political participation-appreciation gradient.

The magnitude of this gradient is economically meaningful. Moving from low to high levels of political participation is associated with an increase in annual housing appreciation of roughly 1.5–2 percentage points, depending on the specification. The monotonic nature of the relationship is apparent visually. Figure 2 plots the point estimates from the baseline specification by political participation level, showing an ordered increase in housing appreciation as participation rises.

Scope of the Political Participation–Appreciation Gradient. Tables 2 and 3, columns (2)–(4) report estimates of the participation–appreciation relationship separately by partisan affiliation. Across all partisan groups, higher levels of political participation are associated with higher housing appreciation. While the magnitude of the gradient differs across affiliations, the ordering of returns by participation level is preserved. The gradient is largest among voters who do not identify as either Republican or Democrat and is also pronounced among Republican voters. Democratic

voters exhibit a slightly smaller but still economically meaningful and statistically positive gradient. Importantly, in no partisan group do we observe evidence that higher participation is associated with lower housing appreciation. These results indicate that the baseline relationship is not driven by a single partisan constituency and does not reflect well-documented party-specific housing dynamics (McCartney et al. 2024).

Figure 3 examines the participation–appreciation gradient across geographic units. The figure shows that the relationship is present in the vast majority of states (Panels (a) and (b)) and counties (Panels (c) and (d). Although the estimated magnitude varies across locations, the gradient is positive in nearly all cases, with only a small number of exceptions. The geographic pattern suggests that the results are not driven by a narrow set of high-growth housing markets or by idiosyncratic local conditions. Instead, the participation–appreciation relationship appears across heterogeneous housing markets, including areas with markedly different price levels, growth rates, and demographic compositions.

Robustness to Alternative Measures of Political Participation. While voter registration timing serves as our baseline measure of political participation, participation is inherently a latent construct, and no single observable variable captures all of its dimensions. We therefore complement our registration-based measure with alternative proxies that reflect realized electoral engagement along different margins. Specifically, we consider voting frequency – measured as both the number and the share of eligible elections in which an individual casts a ballot – as well as political donation activity, which represents a higher-cost and more expressive form of participation.

These alternative measures capture different dimensions of political engagement, varying in when participation occurs, how costly it is, and how intensive it is. Voting frequency captures repeated participation conditional on registration, while donation behavior reflects discretionary political engagement beyond voting. If our baseline results reflect a broader dimension of sustained political participation rather than mechanical features of registration timing, similar patterns should emerge across these measures.

Figure IA1 illustrates the correspondence between registration timing and these alternative proxies. Individuals who register earlier are substantially more likely to vote consistently and to make political donations, indicating that our baseline measure aligns closely with other manifestations of long-run political engagement.

Table IA11 provides additional validation. Panel A shows that donation intensity – the share of elections in which an individual makes a political contribution – increases steadily with political

participation. Individuals who participate in the largest number of elections donate in approximately 12 percent of those elections, while individuals who participate only twice donate no more frequently than one-time participants. This pattern holds across partisan groups, with a particularly steep gradient among Republican voters. Panel B reports analogous results for voting percentage, which also rises monotonically with political participation.

Table IA10 replicates our main results using two continuous measures of participation: the share of eligible elections in which an individual votes and total political donations. In both cases, housing appreciation increases monotonically with political participation, closely mirroring the pattern obtained measuring political participation by registration or voting. Across all alternative measures, higher political participation is associated with higher housing appreciation.

5 Ruling Out Place-Based and Structural Explanations

This section evaluates explanations emphasized in the literature that could jointly shape housing appreciation and political participation, and therefore potentially account for the political participation–appreciation gradient. We find no evidence that place-based exposure, traditional demographic cleavages, or socioeconomic resources explain the relationship.

5.1 Ruling Out Location-Based Factors and Neighborhood-Level Correlates

A natural concern is that the relationship between housing appreciation and political participation reflects where individuals live rather than how they interact with housing markets. To assess this possibility, we ask whether the relationship persists when comparisons are made among homeowners located in the same neighborhood and exposed to the same local housing market conditions. In the limiting case, if location-based factors – such as neighborhood desirability, local economic growth, or policy environments – drive the relationship, then nearby properties subject to the same local shocks should exhibit similar appreciation regardless of owners' political participation.

We approximate this comparison by conditioning on successively finer geographic units, ranging from counties to census tracts, congressional districts, and block groups. This approach allows us to assess whether the political participation–appreciation gradient attenuates once increasingly granular location fixed effects absorb local housing market dynamics.

Revisiting tables 2 and 3 shows that conditioning on progressively finer geographic units leaves the estimated relationship between political participation and housing appreciation essentially unchanged. Unlike many determinants of housing appreciation, for which location explains a

substantial share of variation, neighborhood characteristics such as local growth, school quality, or infrastructure investment do not account for the observed gradient. Appendix Table IA1 presents estimates at the county-level without conditioning on finer geographic units and finds virtually identical results.

Likewise, voter participation itself is often spatially correlated and linked to neighborhood-level environments or election administration that could explain the results. But as our results show, controlling for increasingly granular geography does not attenuate the estimates, indicating that location-specific participation conditions are unlikely to drive the relationship.

Taken together, these results rule out exposure to location-based factors as the primary explanation and leave only factors that cut across individuals, including traditional political cleavages, individual economic resources, and individual dispositions. In the next subsection, we address the first case.

5.2 Ruling Out Traditional Demographic Cleavages

Demographic Traits. We next examine whether the political participation–appreciation gradient reflects traditional political or demographic cleavages. Table IA3 shows that partisan affiliation does not explain the relationship. Across party groups, a higher degree of political participation is consistently associated with higher housing appreciation.

Similarly, comparing Table IA1 with Table IA5 shows that controlling for race leaves the political participation–appreciation estimates largely unchanged. Despite well-documented racial disparities in housing appreciation (e.g., Kermani and Wong 2024), race does not account for the gradient. That said, Table IA5 indicates some heterogeneity at low participation levels, where Black homeowners experience larger gains when participating in two or three elections.

Table IA6 shows that controlling for gender likewise preserves the core relationship, though it modestly attenuates the estimates. Male homeowners earn additional annual appreciation relative to female homeowners (0.43%) regardless of political participation, with particularly large gains among Democratic men (0.38%) and men affiliated with other parties (0.52%). Republican men exhibit smaller and statistically insignificant average appreciation (0.08%). In addition, the appreciation to increased political participation are larger for men, especially at higher participation levels. In Section 6, we show that electorally engaged individuals make systematically different housing decisions – particularly with respect to purchase prices and market timing – mechanisms that have been shown to underlie gender gaps in housing appreciation (Goldsmith-Pinkham and Shue, 2023).

5.3 Resources Do Not Explain the Relationship

Economic Traits of the Electorally Incorporated. Tables IA25 and IA27 examine how political participation relates to income and wealth. Columns (1)–(4) of Table IA25 show that higher political participation is associated with lower income, though the magnitude of this relationship attenuates as controls are added. In baseline specifications, participating in more elections is associated with progressively lower income; this pattern persists, albeit more weakly, after controlling for transaction year, tract, holding period, race, and gender. Table IA27 reports a similar pattern for wealth.

Income and the Political Participation–Appreciation Gradient. Differences in income could plausibly account for both political participation and housing appreciation (see, e.g., Schafer et al. 2022; Aneja and Avenancio-Leon 2019; Gupta, Hansman, and Mabille 2024). To assess this explanation, Columns (1) and (2) of Table IA9 estimate the political participation–appreciation relationship within the subsample for which individual income is observed, with Column (6) explicitly controlling for income. The estimates are virtually unchanged. Controlling for income does not attenuate the relationship between political participation and housing appreciation, indicating that the gradient is not driven by household earnings.

Wealth and the Political Participation–Appreciation Gradient. Wealth is likewise unlikely to explain the results. Columns (5) and (6) of Table IA9 show that controlling for individual wealth leaves the political participation–appreciation relationship intact. While wealthier individuals generally have more access to investment opportunities and financial resources, our findings suggest that the connection between political participation and housing appreciation is not simply a consequence of wealth. When we examine heterogeneity by wealth quartile (Figure 4), the gradient is strongest among households in the lower half of the wealth distribution. This pattern is difficult to reconcile with explanations based on financial capacity alone.

Credit. Table IA28 shows that higher political participation is associated with better credit outcomes, including fewer bankruptcies and foreclosures and substantially higher credit scores. Individuals who voted seven times have credit scores more than 22 points higher on average. However, Columns (7) and (8) of Table IA9 show that controlling for individual credit scores does not affect the political participation–appreciation relationship. Credit constraints therefore do not explain the observed gradient. We relate appreciation to financial literacy and human capital in the next

section.

5.4 Does Housing Appreciation Cause an Increase in Participation?

A remaining concern is reverse causality: homeowners who experience unusually high appreciation may subsequently become more politically mobilized. Because Section 5.1 shows that most variation in appreciation operates within neighborhoods, we address this concern by constructing synthetic appreciation that purge idiosyncratic, individual-level factors leaving only market-driven appreciation.

Specifically, we construct a Bartik-style synthetic appreciation based on national trends in the valuation of structural housing characteristics, excluding the homeowner's county. For each year t and county i, we estimate a leave-one-county-out hedonic regression that relates transaction prices to structural characteristics, controlling for county fixed effects. Using the resulting coefficients, we predict counterfactual purchase and sale prices, P_b^H and P_s^H, and define the synthetic appreciation as

$$r_i^S = \left(\frac{P_s^H}{P_b^H} \right)^{\frac{1}{t_s - t_b}} - 1.$$

These synthetic appreciation combine national price trends (the "shift") with each property's fixed characteristics (the "share"). Their validity relies on two key assumptions: that national trends are exogenous to individual-level factors influencing political participation, and that homeowners' home structural characteristics do not reflect political participation preferences. We emphasize that the goal of synthetic-appreciation is not to generate results to be interpreted causally. What synthetic appreciation do allow us to do, however, is remove idiosyncratic factors from the findings, such that the relationship between synthetic-appreciation and political participation can only be mechanically correlated with the individual political-economic engagement relationship through systematic factors (e.g., sorting). A finding of no correlation or negative correlation could then be interpreted as evidence that appreciation themselves don't drive the individual-level political-economic engagement relationship, even when a positive correlation cannot be interpreted causally without further inquiry.

Said a different way, the exercise serves as a falsification test. If realized housing appreciation mechanically increase participation, we would expect synthetic appreciation to exhibit a similar relationship with political participation.

Table 4 shows that they do not. Synthetic appreciation are generally uncorrelated – or weakly negatively correlated – with political participation across multiple measures. We find no statistically

significant relationship with voter registration or turnout, and only limited negative associations with donation intensity, which indicates that systematic market-driven appreciation do not generate the political participation–appreciation gradient we document. In the next section, we evaluate specific individual dispositions that are different among the highly electorally incorporated and, in subsection 6.2, in particular, we show how they achieve higher housing appreciation than their local market's systematic appreciation.

6 Active Engagement and Housing Wealth Accumulation

This section investigates why electorally incorporated homeowners earn systematically higher housing appreciation. Building on the prior sections, we proceed in two steps. First, we show that explanations based on human capital and individual psychological and cognitive dispositions do not explain the relationship between political participation and housing appreciation. Second, we document that electorally incorporated homeowners behave differently in housing markets along concrete margins of decision-making. We document these behavioral margins using multiple data sources, including our main administrative transaction data, the Understanding America Study, the American Housing Survey, and original survey data.

6.1 Accounting Characterization of Active Engagement

A stylized framework helps clarify the mechanisms through which electorally incorporated homeowners realize higher housing appreciation. The setup parallels a simple dynamic investment problem. Consider a homeowner who purchases H_t units of housing quality at time t. Denote the quality-adjusted price of housing at time t by Q_t, and denote the next-period quality-adjusted price by Q_{t+1}. Housing quality evolves according to

$$H_{t+1} = H_t(1 - \delta) + I_t, \tag{3}$$

where δ is the depreciation rate and I_t represents investment in housing quality. Because housing is indivisible, we interpret I_t not as the acquisition of additional properties, but as improvements that augment the value of an existing home.

This formulation implies a simple accounting expression for expected appreciation. The expected value of next-period housing, relative to current quality, is

$$\frac{\mathbb{E}[Q_{t+1}H_{t+1}]}{Q_tH_t} = \frac{\mathbb{E}[Q_{t+1}]}{Q_t}\left(1 - \delta + \frac{I_t}{H_t}\right). \tag{4}$$

6.2 Evidence of Active Engagement in Housing Markets

Equation (4) summarizes the key margins through which a homeowner can actively engage. In this section, we examine whether electorally incorporated homeowners take systematically different actions in housing markets. Here, the evidence points to a consistent pattern of active engagement.

First of all, are they making different choices? Yes, they are. Electorally engaged homeowners purchase smaller and lower-priced homes, conditional on location and time. In Equation (4), for a given level of investment, lower initial housing quantity mechanically raises proportional gains, as the term I_t/H_t is larger. Table 5 shows that higher political participation is associated with purchasing homes with fewer rooms, fewer amenities, and lower assessed values. Despite purchasing less expensive properties, these homeowners realize higher subsequent appreciation, consistent with targeting properties where marginal improvements translate into larger proportional returns.

Second, households may sort into markets with higher expected growth in quality-adjusted prices, $\frac{\mathbb{E}[Q_{t+1}]}{Q_t}$. Differences along this margin reflect expectations about variation in local demand, amenities, and policy environments that shape price dynamics. Empirically, this can be reflected in two forms, the purchase of undervalued properties and in timing the market:

Undervalued Properties. Second, electorally incorporated homeowners buy at relative discounts and sell at relative premia. Table 6 compares transaction prices to assessment values within tract-years and shows that more incorporated individuals acquire properties below assessed value at purchase and sell at prices above assessed value. These patterns are consistent with superior transaction selection, bargaining, or information rather than differential exposure.

Market timing. Third, these homeowners exhibit better market timing. Table 7, columns (1) and (2), decomposes the analysis into their purchase and sale price components. political participation is negatively related to both purchase and sale prices, indicating that more frequent voters transact at lower prices on both margins. Column (1) shows that higher political participation is associated with lower purchase prices, while column (2) shows a similar but weaker relationship for sale prices.

The difference between purchase and sale prices – the net gain from the transaction – increases monotonically with political participation. Homeowners who were electorally incorporated only twice experience relatively small gains, whereas those who were electorally incorporated seven

times realize substantially larger gains. The fact the participation gradient is stronger at purchase than at sale is consistent with appreciation arising from transaction selection, market timing, or bargaining, rather than uniformly higher resale prices.

Capital Expenditures/Investments. Third, homeowners may actively invest in their properties. Higher I_t directly increases the effective growth rate of housing quality and, therefore, realized appreciation. This channel encompasses both observable investments, such as renovations, and unobserved improvements that are capitalized into transaction prices. Using American Housing Survey data, Table 8 shows that more engaged individuals undertake greater capital expenditures on home improvements. Differences in capital expenditures explain approximately 25–40 percent of the observed appreciation gap, though they do not fully eliminate it.

Risk taking. Finally, households may differ in their exposure to housing market risk through the distribution of Q_{t+1}. While the expression in Equation (4) depends on $\mathbb{E}[Q_{t+1}]$, realized returns also reflect variation in the dispersion of price outcomes. Households that select into markets or properties with higher variance in Q_{t+1} will, on average, may experience higher realized appreciation if these risks are compensated. Consistent with this mechanism, Table 9 shows that the variance of residual housing appreciation increases monotonically with political participation, indicating that higher returns among electorally incorporated homeowners are accompanied by greater exposure to housing market risk rather than safer investment choices.

The evidence presented in this section suggests that differences in housing wealth accumulation do not originate in conventional cognitive or psychological dispositions – such as human capital or personality traits – but from how homeowners engage with housing markets. Electorally incorporated homeowners make more active and consequential decisions – selecting properties strategically, timing transactions effectively, investing more in housing capital, and assuming greater risk – yielding systematically higher appreciation. In the next section, we examine how the relationship between political participation and housing wealth accumulation scales up to shape the distribution of housing wealth and political representation at the aggregate level.

6.3 What's Behind Active Engagement? Psychological and Cognitive Dispositions

Education and Human Capital Are Insufficient. Education is a natural candidate mechanism linking political participation and economic outcomes. More electorally incorporated individuals are modestly more educated: participating in seven elections is associated with roughly seven

additional months of schooling relative to minimal participation. This relationship is robust to controls for demographics and geography (Table IA26).

However, education does not explain the participation–appreciation gradient. Columns (3) and (4) of Table IA9 show that conditioning on years of schooling leaves the estimated relationship between political participation and housing appreciation essentially unchanged. Moreover, once political participation is accounted for, education is weakly negatively associated with housing appreciation.

We next assess whether other individual dispositions – such as personality traits, beliefs about economic and political institutions, or financial literacy – account for the observed gradient. These factors are frequently associated with both economic decision-making and civic engagement, raising the possibility that the participation–appreciation gradient reflects deeper psychological or behavioral characteristics rather than differences in how homeowners engage with housing markets.

We first draw on the Understanding America Study (UAS) to examine the role of personality traits in homeownership decisions. Figure 6 presents variance decomposition results showing that while education appears predictive of homeownership, its explanatory power largely disappears once personality traits and behavioral factors are included – and that personality traits explain a substantially larger share of the variation in homeownership decisions than education once income and wealth are accounted for.

To examine whether the same logic extends to housing appreciation, we field an original survey that jointly measures homeowners' housing histories, political participation, and a broad set of psychological and cognitive traits (Appendix B). The survey allows us to observe dimensions of engagement unavailable in administrative data, including financial literacy, Big Five personality traits, beliefs about markets and democracy, and perceived personal agency.

Table 10 examines whether the participation–appreciation gradient in the survey data is explained by observable characteristics. Column (1) shows that homeowners who vote more frequently report significantly higher annual appreciation: the difference between full participation in elections and no participation (a one-unit increase in *TimesVotedNormalized*) is associated with roughly 2.0 percentage points higher annual returns. This relationship remains stable as controls are added sequentially in Columns (2)–(4): income, demographic characteristics, financial literacy, and flexible demographic fixed effects leave the coefficient essentially unchanged, ranging between 2.0 and 2.2 percentage points and remaining statistically significant. Demographic and financial characteristics therefore do not account for the gradient, consistent with the administrative data

results.

Column (5) adds psychographic fixed effects incorporating respondents' Big Five personality traits and beliefs about the economy, democracy, and personal agency to ask whether they account for the appreciation gradient itself. The coefficient on *TimesVotedNormalized* declines from 0.020–0.022 to 0.014 and loses statistical significance, a reduction of roughly 30–36 percent. Psychological traits and beliefs therefore account for a meaningful share of the participation–appreciation relationship. Since a large portion of the point estimate remains, the relevant psychographic profile of jointly engaged individuals may reflect complex, nonlinear interactions across traits or extend beyond the standard psychographic measures.

To shed further light on which attitudes and dispositions characterize these individuals, Table 11 examines the relationship between political participation, housing returns, and a range of beliefs and psychological traits. The results point to civic and democratic norms as the primary differentiator. Individuals who both participate more in elections and also experience higher housing appreciation are more likely to view voting as a civic duty and to believe in the importance of democracy. By contrast, financial prudence, views about the economy, and perceived personal or community agency do not significantly distinguish this group. Among psychological traits, the picture is similar. The interaction between voting frequency and housing returns is unrelated to most Big Five personality traits, risk aversion, and financial literacy. Two traits, however, do stand out: the interaction is negatively associated with conscientiousness and positively associated with neuroticism. These results suggest that beliefs and personality matter for joint political and economic engagement, though which traits and how they combine likely vary across individuals in ways our linear specifications cannot fully capture.

7 Discussion

Our results show that politically-engaged homeowners systematically experience higher house price appreciation than less-engaged homeowners. We discuss the implications of this political-economic alignment for housing policy and democratic responsiveness. Our discussion is organized around three statistics that follow from our main empirical results.

The first statistic summarizes the extent to which politically-engaged homeowners value policies that foster growth in the value of housing. Specifically, we use the estimates from Tables 2 and 3 to calculate the difference in lifetime housing wealth accumulation between the most and least politically engaged groups summarized in Table 1. If we consider a 40-year horizon and hold all other observed characteristics of the person, the property, and the market fixed, then this difference

equals $e^{40\times[\beta_{Most}-\beta_{Least}]}$. Taking the baseline estimates in column (1) of Panel A, this calculation implies that the homeowners who register the most would have accumulated 77% more housing wealth compared to homeowners who register the least. Likewise, the homeowners who vote the most would have accumulated 22% more housing wealth compared to homeowners who vote the least. Given the high average growth rate in home values of around 8% shown in Table 1, this difference can be quite large in dollar terms, implying, for example, that a $100,000 home purchase yields a nominal difference in wealth of $539,715 to $1.9 million over 40 years.

The second statistic summarizes the extent to which the engaged could exert disproportionate influence over pro-housing-wealth policies by participating at a higher intensity. We specifically calculate the share of political participation accounted for by each group in Table 1. Accordingly, those who register the most account only 63% of people but 77% of registrations, while those who vote the most account for only 51% of people but 73% of votes.[1] So, in practice, the principle of one-person-one-vote appears not to hold. While this finding is well-known in the political economy literature, our contribution is to link a disproportionate share of political participation to a disproportionate share of wealth accumulation.

The third statistic forms a bridge from our in-sample implications to implications for the entire U.S. electorate, and it implies that the effects we document could, when scaled, be large enough to move aggregate policy outcomes. Specifically, we use the facts that the homeowners who register the most account for 63% of our sample, as mentioned above, and that homeowners themselves account for around two-third of households since 1980, on average (Housing Vacancy and Homeownership Survey). Combining these two statistics implies that the most-engaged homeowners would account for roughly 41% of population. However, as already mentioned, the most-engaged also account for 77% of registrations in our sample of homeowners, and, moreover, homeowners themselves make up 75.23% of all registered voters (2020 CPS Voting and Registration Supplement). So, putting things together, the most-engaged homeowners account for 58% of all registrations, which is around one-and-a-half times their population share.

Recapping, our results show that homeowners who are more electorally engaged capture a disproportionate share of aggregate housing wealth growth, while less electorally represented homeowners – despite participating in the same housing markets – experience persistently lower appreciation. This divergence is not explained by income, wealth, race, partisanship, neighborhood characteristics, or local housing market conditions. As a result, the effective housing constituency

[1] Explicitly, let p denote the probability that a person participates politically over any given time period. Let w_p denote the share of people who participate with intensity p. Then the share of participation accounted for by group p is $\frac{w_p \cdot p}{\sum_p w_p \cdot p}$, which yields the statistics described in the text.

that policymakers observe and respond to is skewed toward households who grow their housing wealth faster.

Specific Implications for Housing Policy

Our findings may help explain why policies that protect or enhance housing wealth – such as restrictive land-use regulations, opposition to density, or homeowner-focused tax advantages – remain politically durable even in contexts of widespread affordability pressures. Because political participation is associated with more effective housing market behavior – such as purchasing undervalued properties, timing transactions more successfully, and investing in housing capital – policies that disproportionately respond to engaged constituencies may further widen gaps in housing wealth accumulation. Over time, this dynamic risks entrenching housing wealth as a latent political cleavage, where those who benefit most from housing markets are also those most able to shape the rules governing them.

The findings also suggest that housing policy debates framed purely around tenure status – such as homeowners versus renters – miss an important dimension of inequality within homeownership itself. Less electorally represented homeowners resemble renters in that they experience lower housing appreciation and are less likely to influence local housing decisions. Yet they are often assumed to share the same interests as higher-return, politically engaged homeowners. This misalignment may contribute to policy designs that inadequately address within-tenure disparities, such as differential exposure to housing market volatility or unequal access to information and support during housing transactions.

From a policy perspective, these findings underscore the importance of broadening political participation in housing-relevant decision-making. Interventions that lower barriers to participation – such as simplifying voter registration, expanding civic outreach in housing-vulnerable communities, or institutionalizing channels for resident input beyond traditional public meetings – may alter not only democratic representation but also the distributional consequences of housing policy. More fundamentally, recognizing political participation as a determinant of housing outcomes suggests that housing policy cannot be fully effective without addressing disparities in political voice.

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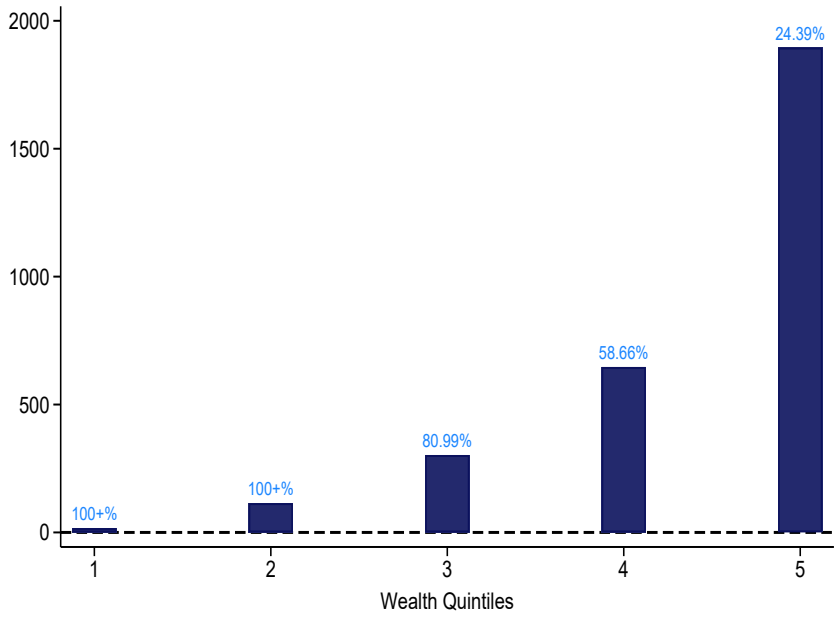
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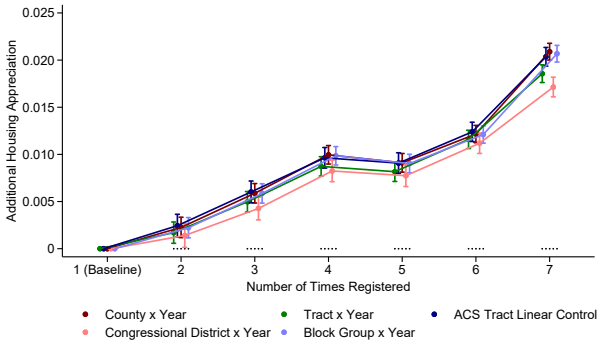
Figures and Tables

Figure 1. Net Housing Wealth and Net Wealth of Households

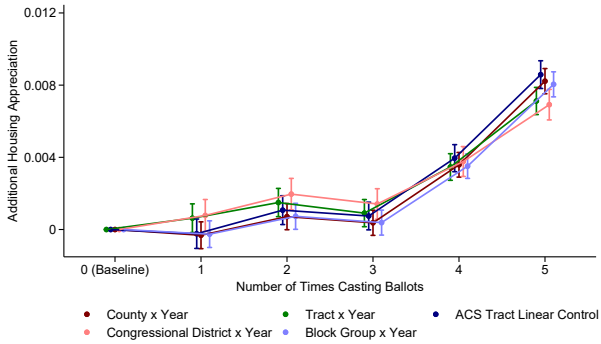


Note: This figure reports the differences in net wealth across wealth quintiles with the data from Survey of Consumer Finances in 2022. The fraction of net housing wealth in net wealth of households is presented on top of each bar.

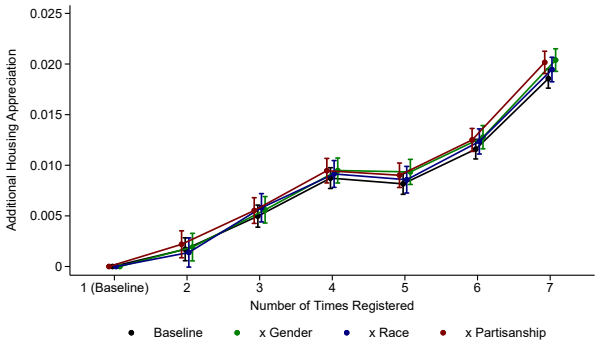
Figure 2. Relationship between Electoral Participation and Annual Housing Appreciation



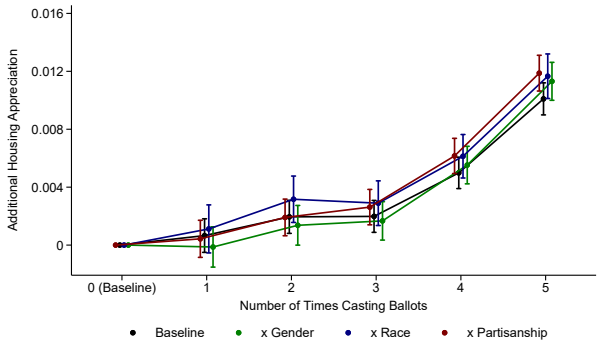
(a) Controlling for Spatial Factors



(b) Controlling for Spatial Factors



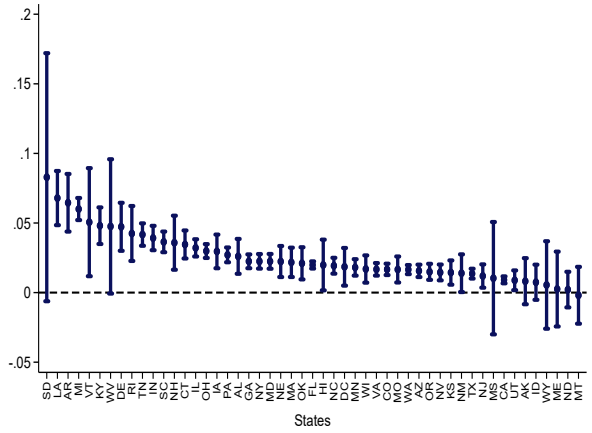
(c) Controlling for Standard Demographic Cleavages



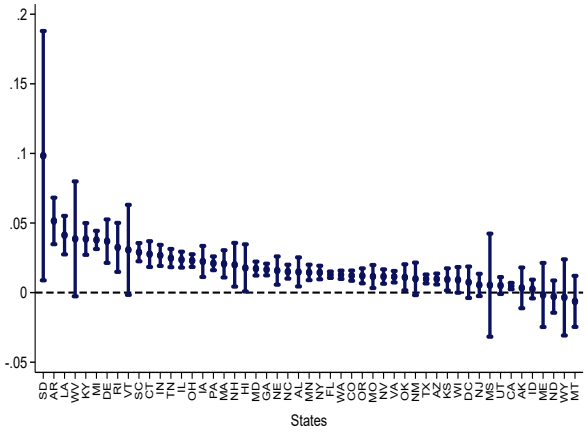
(d) Controlling for Standard Demographic Cleavages

Note: This figure plots coefficient estimates from regressions of annualized housing appreciation on measures of electoral participation, defined by the number of elections in which a homeowner is incorporated into the electorate. Panel A reports estimates drawn from Tables IA1 and 3, which quantify the baseline relationship between electoral participation and realized annual housing appreciation. The plotted coefficients correspond to indicators for the number of elections in which an individual is incorporated, relative to the omitted reference group. All specifications condition on birth-year fixed effects, holding-period fixed effects, and location-by-sale-year fixed effects, so the estimates reflect excess appreciation relative to other homes sold in the same geography and year and held for the same duration. Panel B reports estimates from Tables IA3, IA5, and IA6, which assess the robustness of the baseline electoral participation–appreciation gradient to the inclusion of additional controls capturing traditional political and demographic cleavages. Specifically, Table IA3 adds controls for partisan affiliation, Table IA5 adds controls for race and ethnicity, and Table IA6 adds controls for gender. In Panel B, the baseline estimates reproduced for comparison correspond to Table 3, Panel A, which includes the full set of baseline controls but excludes these additional demographic characteristics. Across both panels, coefficients represent differences in annual housing appreciation (in percentage points) associated with each level of electoral participation, relative to the reference category. Error bars indicate 95 percent confidence intervals, with standard errors clustered at the tract level.

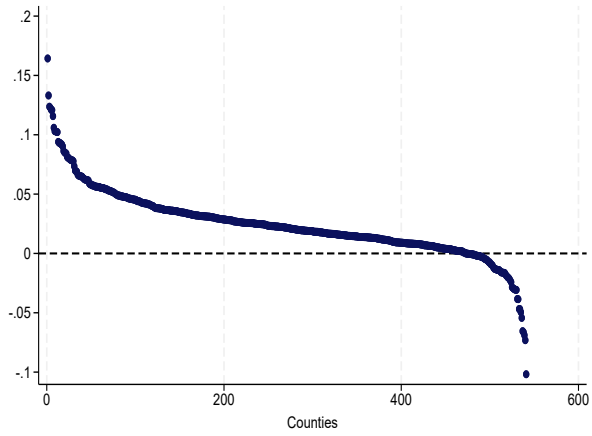
Figure 3. Coefficients of Baseline Results by State and County



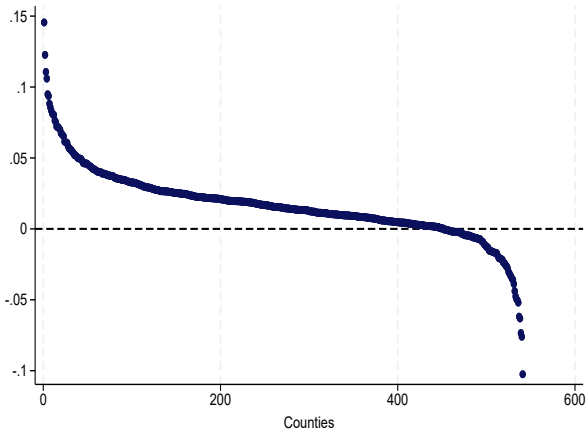
(a) State: Highest political participation (7 Times)



(b) State: Average Across All Participation Levels



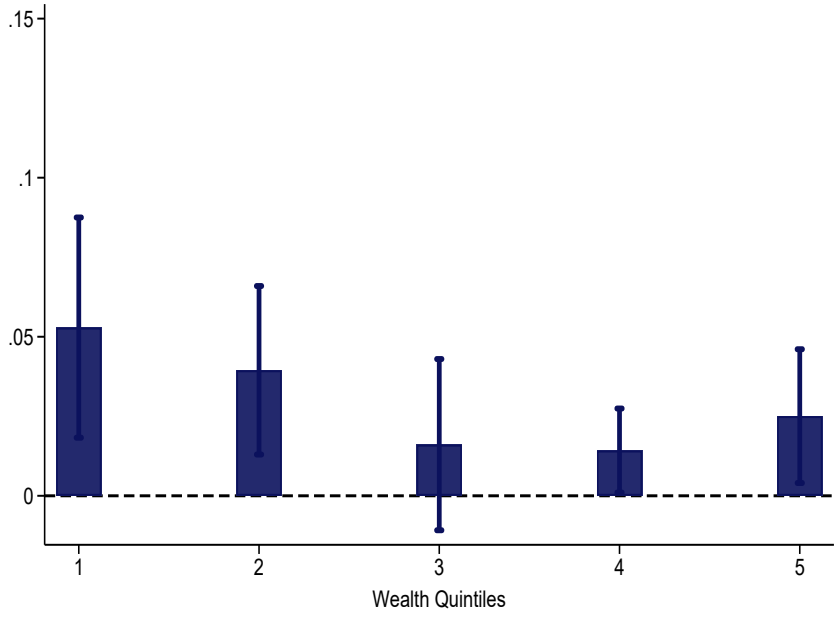
(c) County: Highest political participation (7 Times)



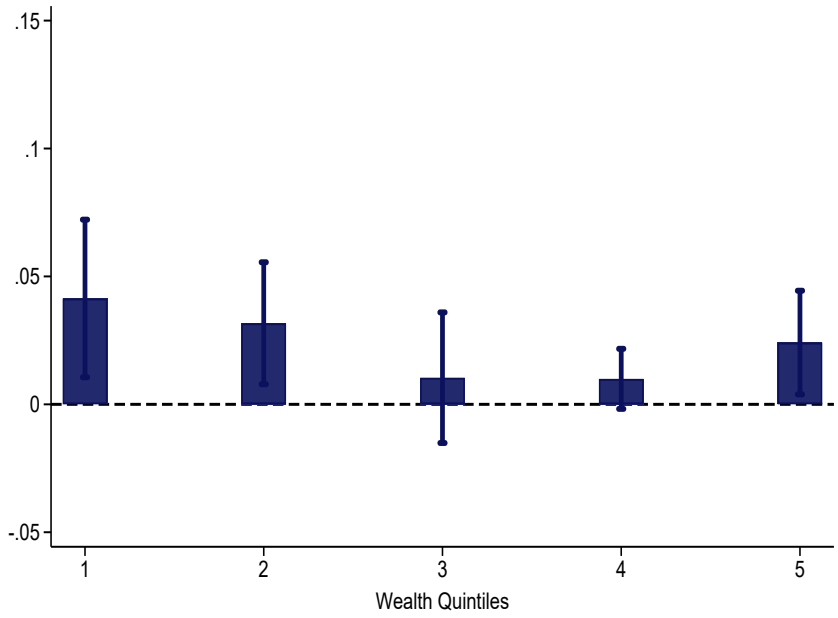
(d) County: Average Across All Participation Levels

Note: This figure reports appreciation gain of high political participation by state. We run baseline regression in Table IA1 for each state and retrieve the result for highest political participation in panel (a). The state-average appreciation is the inner product of the vector of fractions of voters in different elecotral participation level $\vec{p}$ and the vector of coefficients of appreciation gains. $\vec{\beta}$ and the result is presented in panel (b). We also run the same regression for each county. As our baseline regression involves multiple fixed effects, we only run it on counties with over 750 observations to avoid errors of insufficient observations. Panel (c) presents the result for highest political participation (7 times) from 2014 to 2020. Panel (d) presents the county-average appreciation gain, following the same specification as Panel (b).

Figure 4. Coefficients of Regression by Wealth Quintiles



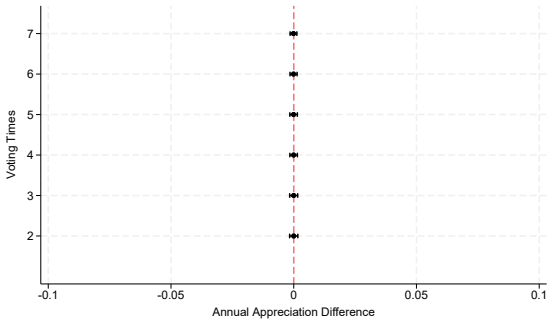
(a) Highest political participation (7 Times)



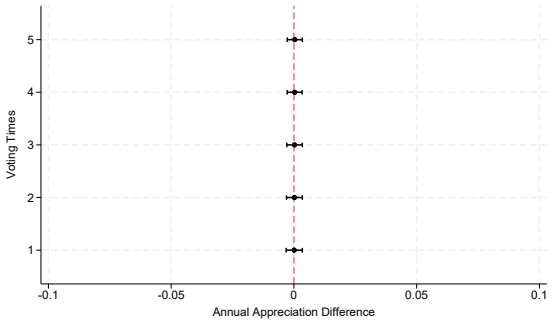
(b) Average Across All Participation Levels

Note: This figure reports the result of appreciation differentials of different intensity of election participations across different levels of net wealth. We split the data into 5 quintiles and run the same specification as on column (5) of Table IA9 for each quantile. Panel (a) reports the coefficient of highest political participation (7 times). Panel (b) reports the group-average return, which is the inner product of the vector of fractions of voters in different political participation level $\vec{p}$ and the vector of coefficients of appreciation gains $\vec{\beta}$.

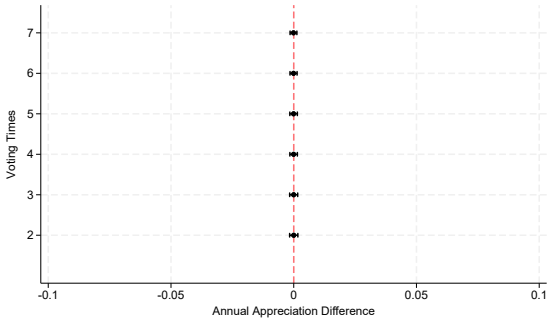
Figure 5. Comparison Between Coefficients with and without Controls



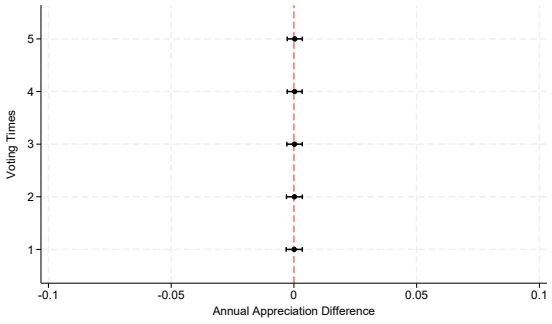
(a) Income Results with Registration



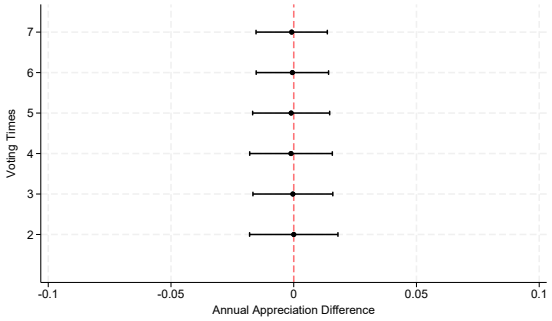
(b) Income Results with Voting



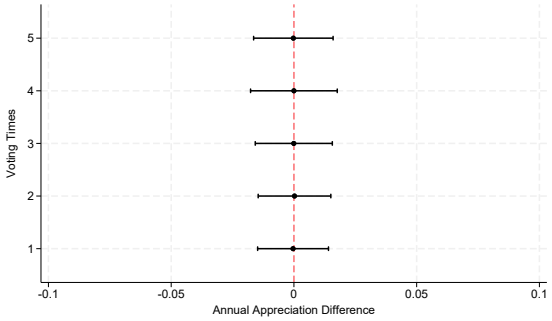
(c) Education Results with Registration



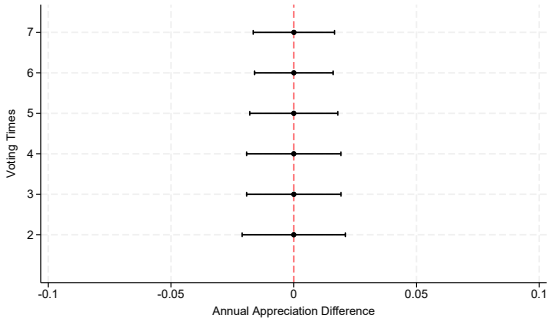
(d) Education Results with Voting



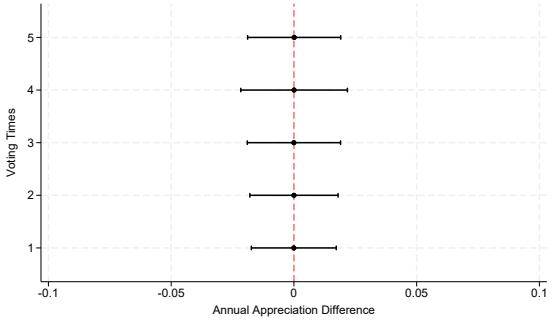
(e) Wealth Results with Registration



(f) Wealth Results with Voting

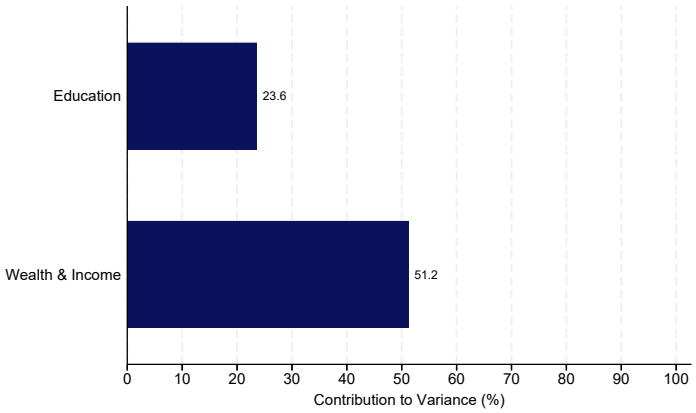


(g) Credit Results with Registration

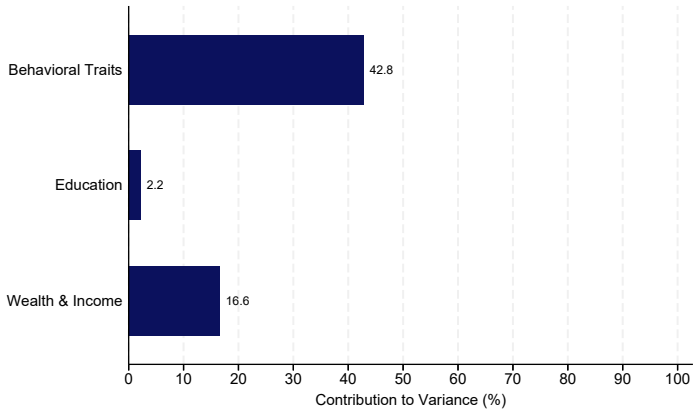


(h) Credit Results with Voting

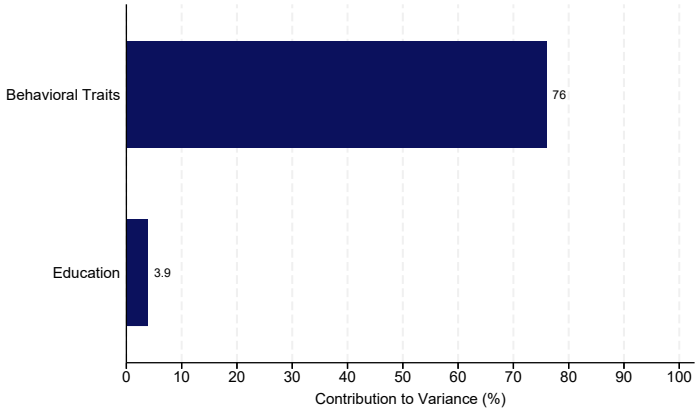
Figure 6. Variance Decomposition of Homeownership



(a) Decomposition without Behavioral Traits



(b) Decomposition with Behavioral Traits



(c) Decomposition Beyond Income & Wealth

Note: This figure reports the result of variance decomposition result of home ownership for three set of components: behavioral factors, education, wealth & income. The charts below show how much variance in home ownership is explained by each component by inferring the R-squared from each corresponding regressions. Panel (a) presents the decomposition result without adding personality traits. Panel (b) presents the similar specification of panel (a) but adding personality traits. Panel (c) presents the decomposition of variance over wealth.

Table 1. Summary Statistics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Measurement with Registration				Measurement with Voting			
	Low $\in \{1,2\}$	Medium$\in \{3,4,5\}$	High $\in \{6,7\}$	Overall	Low $\in \{0,1\}$	Medium$\in \{2,3\}$	High $\in \{4,5\}$	Overall
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Panel A: Chracteristics of Voters								
Age of Buyers	42.760	41.460	41.001	41.309	42.134	41.219	43.118	42.362
Male	0.681	0.674	0.699	0.691	0.710	0.703	0.691	0.698
White	0.627	0.637	0.649	0.643	0.550	0.616	0.674	0.632
Black	0.029	0.028	0.029	0.029	0.028	0.032	0.031	0.030
Hispanic	0.057	0.061	0.058	0.059	0.083	0.071	0.050	0.063
Democrat	0.261	0.230	0.256	0.250	0.188	0.235	0.292	0.254
Republican	0.301	0.271	0.305	0.296	0.215	0.270	0.362	0.306
N	273,671	660,576	1,612,421	2,546,668	328,420	493,685	845,766	1,667,871
Panel B: Chracteristics of Transaction Records								
Log(Sale Price)	12.402	12.453	12.405	12.417	12.482	12.466	12.377	12.424
Log(Purchase Price)	12.137	12.164	12.063	12.097	12.186	12.165	12.015	12.093
Winsorized Annual Return	0.084	0.086	0.095	0.091	0.083	0.076	0.081	0.080
Holding Years	6.111	6.277	7.480	7.020	6.030	6.737	7.943	7.206
N	336,005	821,881	1,991,554	3,149,440	415,727	629,237	1,063,483	2,108,447

Note: This table presents the summary statistics for the sample used to estimate how political participation relates to housing appreciation throughout the paper. Panel A reports the demographic features of the dataset, retrieved from the L2 data. Panel B reports the characteristics of transaction records from CoreLogic. The minimum holding year is set as 0.5 year while the annual appreciation is winsorized at the 1% tail. We identify the intensity of democratic participation by both voter registration observed from 2014 to 2020 and the frequency of casting ballots at the presidential general election from 2000 to 2016, retrieved from the voting history dataset of L2 as of 2020. Columns (1)–(4) report the summary statistics for different levels of registration, while columns (5)–(8) report the statistics for voting. For measurement of participation by registration, noting that we will observe 1-7 times of voter registration during our observation period, we classify the levels of participation into low, medium and high. If the participation times are 1 to 2, the agent will be identified as low participation and if the participation times is 3 to 5, the agent will be classified as medium participation. The rest of the voters are highly participating voters. Similarly, for measurement with voting, we adopt the same low, medium and high classifications, where casting a ballot 0-1 time is identified as low, while casting a ballot 2 to 3 times is classified as medium. The rest of the agents are classified as high participation.

Table 2. Annual Housing Appreciation Along Different Levels of political participation: Different Spatial Levels

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Panel A: Regression Results with Tract-Level Fixed Effects				
$1(TimesRegistered = 2)$	0.00170***	0.00154	0.00121	0.00341***
	(0.00058)	(0.00143)	(0.00141)	(0.00091)
$1(TimesRegistered = 3)$	0.00497***	0.00455***	0.00296**	0.00721***
	(0.00056)	(0.00139)	(0.00133)	(0.00087)
$1(TimesRegistered = 4)$	0.00873***	0.00685***	0.00755***	0.01104***
	(0.00052)	(0.00127)	(0.00127)	(0.00083)
$1(TimesRegistered = 5)$	0.00816***	0.00602***	0.00762***	0.01129***
	(0.00053)	(0.00132)	(0.00127)	(0.00083)
$1(TimesRegistered = 6)$	0.01159***	0.01019***	0.01142***	0.01462***
	(0.00049)	(0.00121)	(0.00118)	(0.00078)
$1(TimesRegistered = 7)$	0.01856***	0.01518***	0.01812***	0.02063***
	(0.00048)	(0.00115)	(0.00113)	(0.00078)
N	3,231,474	552,068	738,211	1,223,904
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes
Panel B: Regression Results with Congressional District Level Fixed Effects				
$1(TimesRegistered = 2)$	0.00222***	0.00143	0.00137	0.00339***
	(0.00055)	(0.00106)	(0.00113)	(0.00080)
$1(TimesRegistered = 3)$	0.00586***	0.00409***	0.00373***	0.00795***
	(0.00052)	(0.00103)	(0.00108)	(0.00076)
$1(TimesRegistered = 4)$	0.00985***	0.00764***	0.00985***	0.01112***
	(0.00050)	(0.00095)	(0.00104)	(0.00072)
$1(TimesRegistered = 5)$	0.00903***	0.00731***	0.00805***	0.01090***
	(0.00050)	(0.00099)	(0.00104)	(0.00072)
$1(TimesRegistered = 6)$	0.01211***	0.00986***	0.01160***	0.01423***
	(0.00047)	(0.00090)	(0.00095)	(0.00068)
$1(TimesRegistered = 7)$	0.02068***	0.01674***	0.02128***	0.02294***
	(0.00045)	(0.00085)	(0.00091)	(0.00067)
N	2,736,367	443,259	600,734	1,042,304
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Congressional District × Sale Year FE	Yes	Yes	Yes	Yes
Panel C: Regression Results with Block Group Level Fixed Effects				
$1(TimesRegistered = 2)$	0.00140**	-0.00047	0.00103	0.00346***
	(0.00064)	(0.00186)	(0.00170)	(0.00107)
$1(TimesRegistered = 3)$	0.00427***	0.00206	0.00259	0.00685***
	(0.00062)	(0.00181)	(0.00163)	(0.00102)
$1(TimesRegistered = 4)$	0.00824***	0.00453***	0.00662***	0.01096***
	(0.00058)	(0.00162)	(0.00155)	(0.00097)
$1(TimesRegistered = 5)$	0.00774***	0.00546***	0.00668***	0.01163***
	(0.00059)	(0.00169)	(0.00156)	(0.00097)
$1(TimesRegistered = 6)$	0.01118***	0.00823***	0.01098***	0.01439***
	(0.00055)	(0.00159)	(0.00145)	(0.00092)
$1(TimesRegistered = 7)$	0.01714***	0.01291***	0.01588***	0.01969***
	(0.00053)	(0.00148)	(0.00140)	(0.00091)
N	2,208,476	268,695	397,437	739,600
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Block Group × Sale Year FE	Yes	Yes	Yes	Yes

Note: This table reports the regression results of the same specification as the baseline, yet with higher spatial granularity to better look at how the choice of neighborhood relates to the appreciation differential on political participation. Panel A adds an extra sale year intersecting tract fixed effect, while Panel B looks as congressional district. Panel C adds block group-sale year fixed effect. Standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table 3. Annual Housing Appreciation Along Different Levels of Electoral Participation: Different Spatial Levels

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Panel A: Regression Results with Tract-Level Fixed Effects				
$1(TimesVoted = 1)$	0.00063	0.00086	0.00274**	0.00088
	(0.00041)	(0.00126)	(0.00113)	(0.00059)
$1(TimesVoted = 2)$	0.00150***	0.00073	0.00529***	0.00155***
	(0.00040)	(0.00124)	(0.00110)	(0.00059)
$1(TimesVoted = 3)$	0.00091**	-0.00090	0.00451***	0.00142**
	(0.00038)	(0.00117)	(0.00105)	(0.00058)
$1(TimesVoted = 4)$	0.00346***	0.00204*	0.00747***	0.00312***
	(0.00038)	(0.00114)	(0.00103)	(0.00059)
$1(TimesVoted = 5)$	0.00712***	0.00413***	0.01088***	0.00502***
	(0.00038)	(0.00114)	(0.00102)	(0.00061)
N	1,982,227	288,478	404,038	703,016
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes
Panel B: Regression Results with Congressional District Level Fixed Effects				
$1(TimesVoted = 1)$	-0.00026	0.00033	0.00136	-0.00094*
	(0.00038)	(0.00085)	(0.00086)	(0.00048)
$1(TimesVoted = 2)$	0.00073**	0.00211**	0.00303***	-0.00055
	(0.00037)	(0.00084)	(0.00084)	(0.00047)
$1(TimesVoted = 3)$	0.00038	-0.00032	0.00340***	0.00013
	(0.00035)	(0.00079)	(0.00079)	(0.00047)
$1(TimesVoted = 4)$	0.00351***	0.00274***	0.00754***	0.00269***
	(0.00035)	(0.00077)	(0.00077)	(0.00047)
$1(TimesVoted = 5)$	0.00804***	0.00625***	0.01321***	0.00657***
	(0.00035)	(0.00077)	(0.00077)	(0.00049)
N	2,318,554	541,849	675,042	1,051,486
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Congressional District × Sale Year FE	Yes	Yes	Yes	Yes
Panel C: Regression Results with Block Group Level Fixed Effects				
$1(TimesVoted = 1)$	0.00078*	0.00111	0.00151	0.00212***
	(0.00045)	(0.00149)	(0.00130)	(0.00073)
$1(TimesVoted = 2)$	0.00196***	0.00197	0.00529***	0.00232***
	(0.00044)	(0.00149)	(0.00128)	(0.00071)
$1(TimesVoted = 3)$	0.00141***	0.00016	0.00382***	0.00254***
	(0.00043)	(0.00141)	(0.00123)	(0.00071)
$1(TimesVoted = 4)$	0.00377***	0.00295**	0.00636***	0.00348***
	(0.00042)	(0.00139)	(0.00119)	(0.00071)
$1(TimesVoted = 5)$	0.00692***	0.00540***	0.00855***	0.00555***
	(0.00043)	(0.00139)	(0.00119)	(0.00075)
N	1,513,759	168,948	260,686	453,384
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Block Group × Sale Year FE	Yes	Yes	Yes	Yes

Note: This table reports the regression results of the same specification as the baseline, yet with higher spatial granularity to better look at how the choice of neighborhood relates to the appreciation differential on electoral participation. Panel A adds an extra sale year intersecting tract fixed effect, while Panel B looks as congressional district. Panel C adds block group-sale year fixed effect. Standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table 4. The Effect of Synthetic Housing Appreciation on political participation.

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Participation	Participation	Participation	Participation
Panel A: political participation measured by Number of Elections Registered				
Synthetic Appreciation	-0.23402**	-0.27958	-0.14593	-0.16640
	(0.10418)	(0.35123)	(0.30447)	(0.22529)
N	411,955	52,026	71,567	103,988
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes
Panel B: political participation Measured by Donation Intensity				
Synthetic Return	-0.03599	-0.16250**	0.04450	-0.11977**
	(0.02478)	(0.07885)	(0.07261)	(0.05349)
N	411,955	52,026	71,567	103,988
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes
Panel C: political participation Measured by Voting Percent				
Synthetic Return	-0.00015	-0.02928	-0.07325	0.01735
	(0.01935)	(0.06129)	(0.05447)	(0.04632)
N	316,291	35,479	49,145	77,738
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes

Note: The table follows the same regression specification of Table 18 and reports the result of synthetic appreciation on political participation. The difference is that in Table 18, we use the data from 1990 to 2020. Here, we use the data from 1990 to 2014 since we start to have our political participation observation in 2014. Here, we look at the realized appreciation in hedonic prices before 2014 to isolate the past appreciation and present political participation, which can indicate whether realized appreciation leads to voters more actively engaging in democratic activities. Panel A reports the result in voting registrations. Panel B reports the result for donation intensity and panel C reports the result for percentage of voting in the past general elections. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table 5. House Features by Political Participation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	House Features						Assessed Value
	Living Sq.feet	Room	Bedrooms	Bathrooms	Fireplace	Pool	log(House Value)
Panel A: House Features Differences, Measurement with Registration							
$1(TimesRegistered = 2)$	14.29082	-0.02291	-0.00230	-0.01348***	-0.00033	-0.00010	-0.00639**
	(8.90948)	(0.01778)	(0.00685)	(0.00506)	(0.00197)	(0.00141)	(0.00315)
$1(TimesRegistered = 3)$	-5.78252	-0.03115*	-0.00166	-0.01029**	0.00366*	0.00133	-0.00373
	(8.50200)	(0.01701)	(0.00653)	(0.00483)	(0.00188)	(0.00135)	(0.00301)
$1(TimesRegistered = 4)$	-19.56573**	-0.02524	-0.00994	-0.02823***	-0.00165	-0.00078	-0.01230***
	(7.92085)	(0.01582)	(0.00607)	(0.00450)	(0.00175)	(0.00126)	(0.00280)
$1(TimesRegistered = 5)$	-19.02812**	-0.04003**	-0.01826***	-0.01964***	-0.00107	-0.00087	-0.01255***
	(7.99500)	(0.01602)	(0.00613)	(0.00454)	(0.00177)	(0.00127)	(0.00283)
$1(TimesRegistered = 6)$	-19.50442***	-0.03130**	-0.01322**	-0.01961***	-0.00096	-0.00183	-0.01348***
	(7.42254)	(0.01490)	(0.00569)	(0.00422)	(0.00165)	(0.00118)	(0.00263)
$1(TimesRegistered = 7)$	-58.74882***	-0.08054***	-0.02932***	-0.04490***	-0.00746***	-0.00862***	-0.03372***
	(7.04506)	(0.01411)	(0.00541)	(0.00400)	(0.00156)	(0.00112)	(0.00250)
N	1,576,357	734,690	1,239,831	1,442,290	1,733,770	1,733,770	1,718,831
Panel B: House Features Differences, Measurement with Voting							
$1(TimesVoted = 1)$	-34.64459***	0.03838**	0.00525	0.00778	0.00295	0.00152	-0.00069
	(7.32011)	(0.01809)	(0.00730)	(0.00484)	(0.00190)	(0.00150)	(0.00311)
$1(TimesVoted = 2)$	-23.65122***	0.04126**	0.00830	0.01105**	0.00361*	-0.00265*	0.00159
	(7.24254)	(0.01786)	(0.00720)	(0.00478)	(0.00188)	(0.00149)	(0.00309)
$1(TimesVoted = 3)$	-29.02962***	0.01790	0.00432	-0.00114	0.00283	-0.00512***	0.00454
	(6.96209)	(0.01707)	(0.00693)	(0.00460)	(0.00181)	(0.00143)	(0.00297)
$1(TimesVoted = 4)$	-33.76968***	0.00035	-0.00381	-0.00814*	0.00352**	-0.00708***	0.00245
	(6.81979)	(0.01671)	(0.00679)	(0.00450)	(0.00178)	(0.00140)	(0.00291)
$1(TimesVoted = 5)$	-29.77311***	-0.01622	-0.00940	-0.00867*	0.00321*	-0.00999***	0.00044
	(6.87552)	(0.01700)	(0.00682)	(0.00454)	(0.00179)	(0.00141)	(0.00294)
N	933,647	400,084	729,390	851,371	1,013,274	1,013,274	1,005,322
Birth Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This tables presents the results for house features across voters with different levels of political participation. The house feature is identified by linking the house appreciation data with the house assessment record from CoreLogic and limiting the observation year being the same as the year of sale. Panel A reports the results using voter registration frequency between 2014 and 2020 as the measurement of democratic participation, while Panel B reports the results using frequencies of casting a ballot at the presidential election from 2000 to 2016 as the measurement of participation. Columns (1)–(6) presents the regression results for specific house features, including square feet of living space (1), total number of rooms (2), number of bedrooms (3), number of bathrooms (4), indicator of fireplace (5) and indicator of swimming pools (6). Column (7) presents the result for log(House Value) as an aggregate measure of house features. The standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table 6. Assessment Value and Gap of Purchase and Selling across Groups

	(1)	(2)	(3)	(4)
	Purchase		Sell	
	Assessed Every Year	All States	Assessed Every Year	All States
Panel A: Market-Assessment Gap, Measurement with Registration				
$1(TimesRegistered = 2)$	-0.00432	0.00017	0.00823**	0.00350*
	(0.01083)	(0.00681)	(0.00354)	(0.00199)
$1(TimesRegistered = 3)$	-0.01546	-0.01408**	0.01717***	0.00739***
	(0.00982)	(0.00604)	(0.00332)	(0.00188)
$1(TimesRegistered = 4)$	-0.00810	-0.01386**	0.01572***	0.00738***
	(0.00928)	(0.00586)	(0.00313)	(0.00176)
$1(TimesRegistered = 5)$	-0.01334	-0.01153**	0.02612***	0.01232***
	(0.00915)	(0.00577)	(0.00317)	(0.00181)
$1(TimesRegistered = 6)$	-0.01677*	-0.01295**	0.03060***	0.01672***
	(0.00884)	(0.00538)	(0.00306)	(0.00171)
$1(TimesRegistered = 7)$	-0.04032***	-0.03821***	0.03324***	0.01860***
	(0.00870)	(0.00533)	(0.00300)	(0.00170)
N	161,984	494,190	175,285	533,035
Panel B: Market-Assessment Gap, Measurement with Voting				
$1(TimesVoted = 1)$	0.02431**	0.00468	0.00800**	0.00266
	(0.01087)	(0.00761)	(0.00340)	(0.00214)
$1(TimesVoted = 2)$	0.02433**	0.00571	0.03048***	0.01417***
	(0.01040)	(0.00758)	(0.00359)	(0.00227)
$1(TimesVoted = 3)$	0.00841	-0.00767	0.02788***	0.01239***
	(0.01065)	(0.00763)	(0.00357)	(0.00222)
$1(TimesVoted = 4)$	-0.00211	-0.01291*	0.03338***	0.01360***
	(0.01079)	(0.00735)	(0.00358)	(0.00220)
$1(TimesVoted = 5)$	0.00833	-0.00801	0.03178***	0.01352***
	(0.01123)	(0.00777)	(0.00362)	(0.00224)
N	78,009	221,394	88,095	246,328
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Tract Sale Year FE	Yes	Yes	Yes	Yes

Note: The table presents regression results on assessment gap and assessment value to check whether the high-participating voters are able to purchase at a lower price and sell at a higher price, conditional on the same assessed value derived from CoreLogic assessment records. We further select a subsample in which assessments are done annually to rule out the possibility of the frequency of assessment affecting assessment value and eventually confounding the assessment value and assessment gaps. Panel A reports the results using voter registration frequency between 2014 and 2020 as the measurement of democratic participation, while Panel B reports the results using frequencies of casting a ballot at the presidential election from 2000 to 2016 as the measurement of participation. Columns (1)–(2) present the result at the time of purchase, and column (1) reports the result for states where assessments are done annually, while column (2) reports the result of the full sample. Columns (3)–(4) present the result at the time of sale, with column (3) reporting the result of the sample with annual assessment and column (4) reporting the full sample. The standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table 7. Market Timing Effects

	(1)	(2)	(3)
	Purchase and Selling Prices		Excess Appreciation
	Purchase Price	Sell Price	Excess Appreciation
Panel A: Market Timing Effects, Measurement with Registration			
$1(TimesRegistered = 2)$	0.00029	0.00262	0.00323***
	(0.00217)	(0.00199)	(0.00065)
$1(TimesRegistered = 3)$	-0.00308	0.00315*	0.00569***
	(0.00206)	(0.00188)	(0.00063)
$1(TimesRegistered = 4)$	-0.01214***	0.00013	0.00934***
	(0.00194)	(0.00177)	(0.00060)
$1(TimesRegistered = 5)$	-0.01016***	0.00141	0.00841***
	(0.00197)	(0.00179)	(0.00059)
$1(TimesRegistered = 6)$	-0.01285***	0.00506***	0.01127***
	(0.00183)	(0.00167)	(0.00056)
$1(TimesRegistered = 7)$	-0.04061***	-0.01465***	0.01622***
	(0.00174)	(0.00159)	(0.00055)
N	2,140,329	2,140,329	1,526,917
Panel B: Market Timing Effects, Measurement with Voting			
$1(TimesVoted = 1)$	0.01333***	0.01128***	0.00135**
	(0.00215)	(0.00195)	(0.00065)
$1(TimesVoted = 2)$	0.01575***	0.01753***	0.00289***
	(0.00209)	(0.00191)	(0.00063)
$1(TimesVoted = 3)$	0.01363***	0.01928***	0.00477***
	(0.00203)	(0.00186)	(0.00061)
$1(TimesVoted = 4)$	0.00831***	0.01649***	0.00554***
	(0.00199)	(0.00183)	(0.00061)
$1(TimesVoted = 5)$	-0.00153	0.01424***	0.00798***
	(0.00202)	(0.00184)	(0.00063)
N	1,317,284	1,317,284	895,118
Birth Year FE	Yes	Yes	Yes
Race FE	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes
County × Transaction Year-Month FE	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes

Note: This table examines whether housing investment outcomes differ with political participation. Columns (1) and (2) report estimated effects on purchase and selling prices. Column (3) reports excess appreciation, defined as realized appreciation net of average annual local house price index growth. Standard errors (in parentheses) are clustered by tract. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 8. The Effect of Capital Expenditure on Housing Appreciation Differential

	(1)	(2)	(3)	(4)	(5)	(6)
	Annual Appreciation		Capital Expenditure		Annual Appreciation Minus CapEx	
Civic Group	0.00446***		0.00119**		0.00285	
	(0.00170)		(0.00058)		(0.00178)	
Aggregate Engagement		0.00176***		0.00070***		0.00101*
		(0.00055)		(0.00018)		(0.00057)
Controls						
Income	Y	Y	Y	Y	Y	Y
Race and Education	Y	Y	Y	Y	Y	Y
Property Characteristics	Y	Y	Y	Y	Y	Y
N	12,113	12,068	12,113	12,068	12,113	12,068
SMSA FE	Y	Y	Y	Y	Y	Y
Birth Year FE	Y	Y	Y	Y	Y	Y
Holding Period FE	Y	Y	Y	Y	Y	Y

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The table reports the results of how capital expenditure in properties affect appreciation differentials across different levels of political participation from American Housing Survey. The variable civic group is the indicator on whether a person is a member of a civic group and aggregate engagement is the number of activities that the person engages in, including speaking to a local politician, engaging in neighborhood meetings, speaking with the groups causing neighborhood problems etc. These activities reflect different aspects of civic engagement and aggregating these activities together might show the intensity of an individual's engagement. Column (1)–(2) report the result for winsorized annual return. Column (3)–(4) report the result for winsorized capital expenditure ratio, measured by total amount of money invested in house repairs divided by the current value of property. Column (5)–(6) report the difference of annual appreciation and capital expenditure ratio to indicate how much appreciation is driven by capital expenditure. The difference is first computed then winsorized and thus might not be the same as the difference of the previous two independently winsorized variables. The controls include the demographic features of individuals including income, race, education level and also include hedonic characteristics of the properties including the number of rooms, the size of the house and the indicators for fireplace. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table 9. Difference in Appreciation Residuals across Participation Levels

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	$(r_t - \hat{r}_t)^2$	$(r_t - \hat{r}_t)^2$	$(r_t - \hat{r}_t)^2$	$(r_t - \hat{r}_t)^2$
Panel A: Realized Risk Taking Behavior, Measurement with Registration				
$1(TimesRegistered = 2)$	0.00172***	0.00237	0.00215	0.00330***
	(0.00065)	(0.00155)	(0.00159)	(0.00098)
$1(TimesRegistered = 3)$	0.00373***	0.00483***	0.00231	0.00517***
	(0.00062)	(0.00152)	(0.00151)	(0.00093)
$1(TimesRegistered = 4)$	0.00635***	0.00525***	0.00555***	0.00800***
	(0.00059)	(0.00141)	(0.00146)	(0.00089)
$1(TimesRegistered = 5)$	0.00515***	0.00499***	0.00513***	0.00730***
	(0.00059)	(0.00145)	(0.00143)	(0.00089)
$1(TimesRegistered = 6)$	0.00788***	0.00735***	0.00733***	0.00994***
	(0.00055)	(0.00135)	(0.00135)	(0.00083)
$1(TimesRegistered = 7)$	0.01611***	0.01275***	0.01572***	0.01664***
	(0.00054)	(0.00128)	(0.00131)	(0.00083)
N	2,736,367	443,259	600,734	1,042,304
Panel B: Realized Risk Taking Behavior, Measurement with Voting				
$1(TimesVoted = 1)$	-0.00007	-0.00069	0.00085	0.00002
	(0.00025)	(0.00081)	(0.00072)	(0.00036)
$1(TimesVoted = 2)$	0.00042*	-0.00116	0.00232***	0.00010
	(0.00025)	(0.00078)	(0.00070)	(0.00036)
$1(TimesVoted = 3)$	0.00142***	-0.00043	0.00312***	0.00143***
	(0.00024)	(0.00074)	(0.00068)	(0.00035)
$1(TimesVoted = 4)$	0.00174***	0.00027	0.00321***	0.00132***
	(0.00024)	(0.00072)	(0.00066)	(0.00036)
$1(TimesVoted = 5)$	0.00341***	0.00110	0.00515***	0.00227***
	(0.00024)	(0.00072)	(0.00066)	(0.00037)
N	1,707,987	249,725	356,217	583,974
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes

Note: The table presents the result of second-order moments for property appreciation differences across different levels of political participation. The second moment is measured by $(r_t - \hat{r}_t)^2$ where $\hat{r}_t$ is the property appreciation estimated by the model shown in Table 3. The second-order moments show the differences in risk-taking across different levels of political participation. Panel A reports the results using voter registration frequency between 2014 and 2020 as the measurement of democratic participation, while Panel B reports the results using frequencies of casting a ballot at the presidential election from 2000 to 2016 as the measurement of participation. Column (1) reports the result for all voters. Column (2)–(4) report the result for partisan voters: column (2) reports the result for democrac voters. Column (3) reports the result for republican voters and column (4) reports the result for other voters. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table 10. Annual Housing Appreciation and political participation in an Online Survey

	(1)	(2)	(3)	(4)	(5)
	Annual Appreciation				
TimesVotedNormalized	0.020**	0.021**	0.021**	0.022**	0.014
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Controls					
FinancialLiteracy			-0.002	-0.009	-0.002
			(0.007)	(0.007)	(0.007)
log(Income)		-0.006**	-0.006**		-0.005*
		(0.002)	(0.003)		(0.003)
CollegeEducated		0.000	0.000		0.000
		(0.004)	(0.004)		(0.004)
Male		-0.001	-0.000		-0.000
		(0.004)	(0.004)		(0.005)
Black		-0.006	-0.007		-0.009
		(0.011)	(0.011)		(0.012)
Hispanic		-0.021	-0.022		-0.009
		(0.013)	(0.013)		(0.009)
N	1195	1195	1195	1195	1195
R-squared	0.189	0.200	0.201	0.315	0.293
State FE	Y	Y	Y	Y	Y
Birth Year Group FE	Y	Y	Y	Y	Y
Holding Period Group FE	Y	Y	Y	Y	Y
Demographic FE				Y	
Psychographic FE					Y

Note: The table reports results from an online survey assessing the external validity of the baseline results and heterogeneity by homeowners' psychological traits. The unit of observation is the survey respondent, each a U.S. homeowner at least 27 years old as of August 2025. The outcome variable is the annualized percent change between the home's current value and purchase price, where current value is based on imputed values from Redfin, Zillow, or other online real estate brokers as described in Section 3.4 and Appendix B. The key independent variable, TimesVotedNormalized, is the share of potential presidential elections over 2000–2024 in which the respondent could have voted, based on age. Columns (1)–(5) include fixed effects for state of residence, birth year (five-year increments), and holding period (five-year increments). Columns (2)–(4) sequentially add as controls: log income and other demographic indicators (CollegeEducated, Male, Black, Hispanic); an indicator for maximum score on the financial literacy quiz (FinancialLiteracy); fixed effects for bins defined by deciles of income and the aforementioned demographic indicators (Demographic FE); and fixed effects for combinations of psychographic characteristics, including the Big-5 personality traits, views on American economy and democracy, and views on self-agency. Respondents are weighted by survey completion time. The standard errors in the parentheses are heteroskedasticity robust. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 11. Psychographic Characteristics of those Exhibiting Political and Economic Coengagement

Panel A: Attitudes							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Voting As Civic Duty	Financial Prudence	Democracy Important	Economy Important	Financial Agency	Community Agency	Happiness Agency
TimesVotedNormalized × Annual Return	0.361*	-0.040	0.501***	0.127	-0.369	0.403	-0.070
	(0.186)	(0.215)	(0.194)	(0.205)	(0.279)	(0.370)	(0.237)
Annual Return	-0.075	-0.151**	-0.012	-0.046	-0.041	0.005	0.073
	(0.056)	(0.072)	(0.062)	(0.070)	(0.103)	(0.102)	(0.088)
TimesVotedNormalized	0.158***	0.043**	0.107***	0.057***	-0.013	-0.024	-0.020
	(0.018)	(0.020)	(0.016)	(0.017)	(0.020)	(0.024)	(0.019)
N	1355	1356	1356	1356	1356	1355	1356
Panel B: Psychological and Cognitive Dispositions							
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Risk Aversion	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness	Financial Literacy
TimesVotedNormalized × Annual Return	-0.602	-0.041	-0.133	-0.995***	0.790***	-0.345	-0.069
	(1.552)	(0.250)	(0.309)	(0.327)	(0.305)	(0.302)	(0.254)
Annual Return	0.042	-0.278***	-0.044	-0.133	0.025	0.178**	-0.138*
	(0.489)	(0.087)	(0.095)	(0.116)	(0.115)	(0.086)	(0.078)
TimesVotedNormalized	0.176*	0.009	-0.000	-0.012	0.024	0.038*	0.047***
	(0.096)	(0.022)	(0.023)	(0.023)	(0.024)	(0.021)	(0.018)
N	1356	1349	1351	1354	1350	1352	1356

Note: This table reports OLS estimates from regressions examining which attitudes and psychological dispositions characterize homeowners who are jointly politically and economically engaged. The unit of observation is the survey respondent, each a U.S. homeowner at least 27 years old as of August 2025. The data come from the original survey described in in Section 3.4 and Appendix B. Panel A examines respondents' attitudes toward civic participation, economic behavior, and personal agency. The dependent variables are standardized measures capturing views about voting as a civic duty, financial prudence, the importance of democracy and the economy, and perceived financial, community, or personal agency. Panel B examines psychological and cognitive traits, including risk aversion, the Big Five personality traits (extraversion, agreeableness, conscientiousness, neuroticism, openness), and financial literacy. The key independent variables are TimesVotedNormalized, defined as the share of presidential elections over 2000–2024 in which the respondent could have voted and did vote, and Annual Return, defined as the respondent's self-reported annualized percent change between the current value of their home (obtained from Redfin, Zillow, or other online real estate brokers) and its purchase price. The coefficient on TimesVotedNormalized × Annual Return captures whether individuals who both participate more frequently in elections and experience higher housing appreciation differ systematically in their attitudes or psychological traits. All specifications include the main effects of TimesVotedNormalized and Annual Return. The standard errors in the parentheses are heteroskedasticity robust. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

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A Detailed Data Section

The dataset used in our analysis is generated by two major steps: we first construct a dataset of property-level house appreciation, then we link it with voter registration data to identify the levels of political participation. The location of properties is identified by the longitude and latitude coordinates recorded in the tax assessment records, and then we pin down the spatial features, including county, tract, block group and congressional districts with GIS tools. The detailed description of the data generation process is shown below.

A.1 Construction of Housing Appreciation

We used property-level transaction records of transactions from CoreLogic. Each observation contains the unique identifier for the property, the name of the buyer and seller, the transaction amount and the types of properties and transactions. We limited our analysis to arms-length transactions of four types of residential properties: single-family home, duplex, apartment and condominium. To guarantee the transactions are arms-length, we dropped the transactions with corporate or investor buyers. We also dropped the observations labelled as inter-family-related transactions. Finally, we removed the foreclosure sales. Out of 190,179,043 observations in CoreLogic deeds data, there are 113,883,972 eligible transactions for the construction of appreciation data.

We then further trimmed the data with the following procedure. As we aimed to generate the holding period appreciation of properties, one property had to appear at least twice in the dataset for us to observe the price and the time of purchasing the property P_b, t_b, and the corresponding price and time of sale P_s, t_s. The holding period return of a property is then computed by:

$$r = \frac{\log(P_s) - log(P_t)}{t_s - t_b}$$

We also discarded the transaction records when there are multiple records for one property on the same day, resulting in 77,794,157 eligible transaction records. Finally, we looked at the properties whose buyers become sellers in subsequent transactions, linking the buyer's name and the seller's name, controlling the identifier of properties, and we generated a dataset of holding period appreciation for properties with 22,756,742 observations.

A.2 Identifying Political Engagement

We used L2 data to identify political participation. Our L2 data is generated by putting the 7-year panel of L2 data from 2014 to 2020, with 115,538,767 observations. The panel of each year contains the registered voters of that year. Each observation contains the unique L2 data identifier, name of

the voter, political partisanship of each year, whether the voter appears in the L2 record for each year, and other forms of political participation, including the percentage of voting and a dummy for FEC donation each year.

The voters' political participation level is defined by the frequency of the agent's appearances in the L2 data over these years, and the partisanship is aggregated by partisan affiliation documented by the L2 data over these years. A voter will be identified as Democrat (or Republican) only if the voter's partisan affiliation is Democrat (or Republican) for all the years when the voters are present in the L2 voter registration data.

A.3 Record Linkage Details: Housing Appreciation and Engagement

Record linkage between appreciation and political participation is possible with the CoreLogic-L2 crossover, which consists of three datasets: clean-match buyer, clean-match seller, and CoreLogic-short. We merge the L2 data to CoreLogic's Deeds records through owners' first name, last name, and longitude and latitude of an address, since these variables appear in both the L2 voter and CoreLogic databases. CoreLogic-short is a shortened version of the CoreLogic transaction records, with each record having a unique index and the other two datasets contain the information of the buyer/seller and the corresponding L2 identifier.

We first merge the clean-match buyer and CoreLogic-short, then we have a dataset containing 14,877,689 unique observations of links between L2 identifier of L2 Data and the name of CoreLogic data. We then merge the clean-match seller and CoreLogic-short, then we have a dataset containing 6,618,100 observations for the same linkage of L2 identifier and CoreLogic name. For both buyer and seller, we only keep the first person recorded in the transaction to identify the political participation level associated with the name. After putting the two files together, dropping the duplicate L2 identifier and name pairs, and dropping the names associated with multiple L2 identifiers (different people may have the same names) for robustness, we eventually obtain 17,926,164 unique pairs of L2 identifier and CoreLogic names. Finally, we use the linkage file to link the appreciation data and L2 panel described above, and we have the baseline dataset for analysis, with a total number of observations being 3,149,440.

A.4 Other Data Linkage Details

Based on the data for our baseline analysis, we further link the data with multiple other datasets for more extensive analysis. These data linkages include:

- Home Mortgage Disclosure Act Dataset: to test the effect of income on our baseline empirical

results

- North Carolina Credit Data: to test the effect of wealth on our baseline empirical results
- Tract-level House Price Index: to test the effect of market timing on our baseline empirical results
- CoreLogic Property Tax Assessment Records: to test the effect of house features and renovations on our baseline empirical results
- American Housing Survey 2013: robustness checks from independent dataset
- L2 Voting History - robustness checks by using actual voting records instead of L2 occurence

B Survey Appendix

This appendix provides additional detail on the survey evidence used in the analysis. We describe the administration of the survey and its structure, and we transcribe and explain the main classes of questions used to measure housing behavior, political and civic engagement, beliefs, personality traits, agency, and financial literacy.

B.1 Survey Administration

We designed and administered an original online survey to complement the administrative data used in the main analysis. The survey was implemented using Qualtrics and fielded in August 2025 through Prolific, an online recruitment platform that specializes in academic research and allows for targeted sampling based on prescreened demographic characteristics. We restricted recruitment to U.S. residents who report owning their home and being at least 27 years old, ensuring that respondents have meaningful exposure to both housing markets and political participation. Our raw sample includes 1,500 respondents, which falls to 1,352 after dropping who: are not homeowners; have owned their home for over 50 years; and for whom we do not answer the questions that provide us with the dependent and independent variables used in our analysis.

Participation was voluntary and anonymous. Respondents first viewed an informed consent statement describing the purpose of the study – understanding the relationship between engagement in democratic institutions and engagement in economic decision-making – and were informed that the survey would take approximately ten minutes to complete. Respondents were free to skip any question and could exit the survey at any time without penalty. All procedures were approved by the UCSD's institutional review board.

B.2 Survey Structure and Measures

The survey is organized into thematic blocks covering housing outcomes and effort, civic and political engagement, beliefs about institutions, personality traits, perceived agency, financial risk preferences, financial literacy, and background characteristics.

Housing outcomes and effort. Respondents report the year and price at which they purchased their current home (*"In what year did you buy your current home?" "What price did you pay for your home?"*) and the home's current estimated market value as reported by online real estate platforms such as Zillow or Redfin (*"What is the current estimated value of your home according to an online real estate brokerage, such as Redfin or Zillow?"*). Using these responses, we construct self-reported measures of housing appreciation. The survey also collects detailed information on engagement with the property or housing markets more broadly, including weekly time spent on home maintenance (*"In a typical week, how many hours do you spend on home maintenance?"*), total spending on non-routine repairs and improvements over the past two years (*"Over the past two years, how much did you spend in total on non-routine home repairs or home improvements?"*), and the number of homes viewed during the search for the current residence (*"How many homes did you look at when searching for your current home?"*). These questions are designed to capture active housing market behavior and investment effort that cannot be inferred from transaction data alone.

Civic and political engagement. To measure political participation, respondents report the number of general elections in which they participated between 2000 and 2024 (*"How many general elections did you participate in from 2000 through 2024?"*). In addition, respondents indicate whether they engaged in other civic activities over the past year, including contacting elected officials, attending protests or rallies, or participating in community service events (*"Did you do any of the following over the past year? Please check all that apply."*). These measures are used to relate housing outcomes to sustained political participation as well as to broader forms of civic engagement.

Beliefs, personality, and agency. The survey includes questions eliciting beliefs about the relationship between citizenship, the economy, and democratic institutions, such as whether voting or prudent financial decision-making is part of being a good citizen and whether ordinary people benefit from a strong economy or a functioning democracy. Personality traits are measured using a short Big Five battery, capturing openness, conscientiousness, extraversion, agreeableness, and emotional stability. Perceived agency is measured through agreement with statements empha-

sizing personal control over financial outcomes, community well-being, and overall happiness. These measures are used to assess whether subjective beliefs and perceptions of agency are jointly associated with political participation and housing outcomes.

Financial risk preferences and literacy. We assess financial risk tolerance using a standard self-reported risk-aversion question widely used in the literature. Financial literacy is measured using canonical questions on compound interest, inflation, and risk diversification.

Demographic characteristics. Respondents also report age, household income, state of residence, and educational attainment, as well as confirming homeownership status. These variables are used for descriptive purposes and as controls in the survey-based analyses.

C Measuring Political Participation

This appendix provides additional detail on how we operationalize political participation and assesses the robustness of our baseline measure to alternative definitions. Because political participation is a latent construct that cannot be directly observed, empirical analysis necessarily relies on observable manifestations of sustained political engagement. Our goal in this appendix is twofold: first, to clarify the rationale for our baseline measure; and second, to show that the core empirical patterns are not sensitive to how participation is proxied.

C.1 Political Participation Against Other Measures

Our baseline measure of political participation is based on the timing and persistence of voter registration between 2014 and 2020. Specifically, we categorize individuals according to the number of elections in which they are observed as registered voters, which captures sustained entry into the electorate rather than episodic participation. This measure reflects a forward-looking decision to engage with political institutions, lowers future participation costs, and aligns with how electoral systems define the relevant electorate for mobilization and outreach.

To assess whether this proxy captures broader political engagement rather than administrative artifacts of registration timing, we compare it to alternative measures of electoral behavior that reflect realized participation. Table IA11 presents two such comparisons.

First, Panel A relates our registration-based measure to political donation intensity, defined as the share of elections in which an individual makes a political contribution. Donation activity is a higher-cost and more expressive form of participation than registration or turnout, and

therefore provides a stringent test of whether our baseline measure captures meaningful political participation. Donation intensity increases monotonically with the number of elections in which an individual is registered, mirroring the gradient observed in housing appreciation. Individuals who are incorporated into the electorate across more elections are substantially more likely to donate, while those with minimal participation rarely do so.

Second, Panel B compares registration-based participation to voting percentage, measured as the share of eligible elections in which an individual casts a ballot. Voting frequency likewise increases monotonically with our participation measure. This correspondence indicates that earlier and more persistent registration reflects sustained electoral engagement rather than one-time administrative events.

C.2 Participation through Local Issues

The administrative measures of political participation focus on formal political participation. Using the 2013 American Housing Survey (AHS), we show that the accumulation of housing wealth is also correlated with civic engagement in local issues. Table IA13 relates annualized housing appreciation for AHS homeowners to several indicators of local civic engagement, including: membership in a civic group, contacting local politicians about neighborhood issues, gathering with neighbors to address local problems, speaking directly to the group causing those problems, attending neighborhood meetings, and engaging in volunteer service.

Across these different engagement margins, homeowners who are civically active around local issues systematically experience higher appreciation. Each engagement indicator enters with a positive coefficient, and several are statistically significant even after controlling for household income, race and education, property characteristics, and fixed effects for metropolitan area, birth year, and holding period. The "Aggregate Engagement" index, which summarizes whether the homeowner engaged in any of the local-problem activities, is also positively and significantly associated with appreciation: homes owned by households that report any such engagement appreciate more quickly than those owned by otherwise similar but civically inactive households.

Column (8) in Table IA13 further distinguishes the intensity of local participation by counting how many distinct civic activities respondents report. The estimated appreciation premium is close to zero for households that engage in at most one activity, but it grows as civic involvement deepens: homeowners reporting two activities see modestly higher appreciation, those reporting three or four activities experience appreciably larger gains, and the premium remains elevated for those engaged in five activities. This gradient in housing returns with the intensity of local civic

engagement mirrors the electoral-participation monotonic relationship that is the main object of the paper and further suggests that the housing-appreciation electoral divide is about the individual, rather than the context.

C.3 Participation through Administrative Processes

Excluding States with Automatic Registration. One concern is that variation in registration timing may reflect administrative changes rather than genuine political participation. To address this, we re-estimate the baseline specification after excluding states that adopted automatic voter registration during the sample period. Table IA14 shows that the participation–appreciation gradient remains virtually unchanged in both magnitude and monotonicity, indicating that the results are not driven by institutional changes in voter registration procedures.[1]

Voter Purges. A related consideration is whether observed variation in registration timing reflects administrative voter purges rather than differences in sustained political participation. Voters may be removed from registration rolls for reasons such as inactivity or address changes and later re-register, potentially introducing mechanical variation in observed registration histories. To assess the relevance of such administrative processes, we examine the role of voter purges in the political participation–housing appreciation relationship (Table IA15). Accounting for purge-related registration disruptions leaves both the magnitude and the monotonic structure of the participation–appreciation relationship essentially unchanged, suggesting that voter list maintenance does not account for the main results.

D Additional Neighborhood-Level Robustness

D.1 Directly Controlling for Neighborhood Attributes

In Table IA20 we take a different approach and instead directly examine whether the political participation-appreciation relationship is accounted for by tract-level demographic correlates, including racial composition of the neighborhood. Column (2) augments the baseline specification with a comprehensive set of tract-level controls drawn from the ACS, including the Black population share, along with measures of ethnicity, labor market conditions, age structure, transfer

[1] No state had implemented automatic registration until 2016. The following states were removed in the robustness results presented in Table IA14: Alaska (2017), California (2018), Colorado (2017), Connecticut (2016), District of Columbia (2018), Georgia (2016), Illinois (2018), Maryland (2019), Massachusetts (2020), Michigan (2019), New Jersey (2018), New Mexico (2020), Nevada (2020), Oregon (2016), Rhode Island (2018), Vermont (2017), Virginia (2020), and Washington (2019).

receipt, homeownership, and income. As expected, all measures are correlated with appreciation at the tract level, but their inclusion does not materially affect the estimated participation coefficients: both their magnitudes and monotonic pattern remain essentially unchanged relative to the baseline. Like Table 3, this supports that the participation gradient is not subsumed by racial composition or other tract-level characteristics, and that the main results are not driven by differential exposure to neighborhoods characteristics, including Black population shares. Instead, the estimates in Table IA20 suggest that the political participation-appreciation relationship persists within tracts after flexibly accounting for observable neighborhood demographics.

D.2 Neighborhood-level Home Values and Income

In Table IA17, we assess whether the political participation-appreciation relationship reflects spatial sorting into neighborhoods with systematically higher house values or incomes. We augment the baseline specification with tract-level log house values and median incomes from the ACS, and further allow their effects to vary flexibly across participation groups. Although both house values and incomes are strongly correlated with appreciation at the tract level, accounting for these factors does not materially alter the participation gradient. Estimated participation coefficients remain monotonic and economically similar to the baseline, indicating that the higher appreciation associated with greater political participation is not driven by residence in richer or higher-valued neighborhoods.

D.3 Neighborhood-level Education

Building on this, Table IA18 examines whether neighborhood human capital provides an alternative explanation for the participation gradient. The table introduces tract-level average years of education as an additional control and allows its association with appreciation to vary across participation groups, while progressively absorbing finer geographic fixed effects. As expected, tract-level education is strongly related to housing appreciation, and returns differ across more- and less-educated neighborhoods. Nonetheless, the participation coefficients remain stable in both magnitude and ordering. These results suggest that the political participation-appreciation relationship persists within tracts after flexibly accounting for neighborhood educational composition.

D.4 Partisan Neighborhoods

Finally, Table IA21 considers whether the participation gradient reflects differential exposure to partisan neighborhood environments rather than individual political participation. We compare

appreciation across Democratic- and Republican-leaning tracts and estimate participation gradients separately by voter affiliation. While Republican-leaning neighborhoods exhibit significantly lower appreciation on average, the positive and monotonic relationship between participation and appreciation remains within each partisan group. The similarity of participation coefficients across voter affiliations indicates that the main results are not driven by sorting into partisan neighborhoods, but instead reflect differences operating within partisan environments.

E Before and After Recovery from Great Recession

This appendix examines whether the baseline relationship between political participation and housing appreciation is externally valid to periods disconnected from the Great Recession. To assess this possibility, we split the sample based on whether the property sale occurred before or after the national housing market recovery. We define the post-recovery period as transactions occurring after 2012, when national house price indices had largely stabilized and begun to recover. We then re-estimate our baseline specification separately for pre-recovery and post-recovery subsamples.

Table IA22 reports the results. In both periods, housing appreciation increases monotonically with the degree of political participation. While overall appreciation levels differ across macroeconomic regimes, the relative ordering and magnitude of the participation coefficients remain remarkably stable. The estimated participation premium is slightly larger in the post-recovery period, consistent with a greater role for active market engagement when housing markets are expanding, but the core pattern is present even during the more volatile pre-recovery years.

These findings indicate that the political participation–appreciation gradient is externally valid to different holding periods.

F Excess Housing Appreciation over Neighborhood

This appendix examines whether the participation gradient reflects excess appreciation relative to local housing markets rather than differences in exposure to high-growth neighborhoods. While the main specifications already condition on fine-grained geographic fixed effects, we further assess whether electorally incorporated homeowners outperform neighborhood benchmarks directly.

Specifically, we construct a measure of *excess* appreciation defined as the difference between a property's realized annual appreciation and the average appreciation of other properties sold in the same census tract and year, matched on holding period length. This transformation isolates relative performance within narrowly defined local markets and removes any remaining influence

of tract-level housing trends.

Table IA23 presents the results. Excess appreciation increases monotonically with political participation, closely mirroring the baseline gradient. Homeowners with higher levels of political participation consistently earn returns above their local benchmarks, while those with lower participation underperform relative to neighbors selling in the same market conditions.

The magnitude of excess appreciation is economically meaningful and statistically significant across specifications. Importantly, this pattern confirms that the participation–appreciation relationship does not arise from sorting into faster-growing neighborhoods, but instead reflects differential performance within the same local housing markets, and it is broadly consistent with the analysis presented in Section 5.4.

G Underrepresentation of non-homeowners

Table IA24 extends the analysis beyond heterogeneity within homeownership to consider political participation among individuals characterized by a lack of homeownership. Because the data are constructed by merging a homeowner transaction dataset with voter records, non-homeownership is necessarily inferred from non-appearance in the housing data, and thus measured with error and, as such, we consider this analysis suggestive. With this caveat in mind, the table nevertheless reveals a clear pattern. Individuals inferred to lack homeownership exhibit substantially lower levels of political participation, including later entry into voter registration, less consistent participation across elections, and weaker engagement along other margins of democratic activity, even after conditioning on birth cohort, demographics, and detailed geographic fixed effects. These differences are not simply a mirror image of the participation gradients observed among homeowners, but instead point to a qualitatively distinct position in the political process. Whereas variation within homeownership reflects differences in engagement that map onto differential exposure to housing wealth accumulation, the lack of homeownership is associated with both minimal exposure to housing appreciation and persistently weaker political voice. This combination suggests that individuals outside homeownership are not merely less invested in housing markets, but are also less incorporated into the institutional channels through which housing-related interests are represented. As a result, the effective housing constituency observed by policymakers is doubly selected: it is skewed toward homeowners, and within that group toward those with higher levels of sustained political participation, leaving individuals lacking homeownership structurally underrepresented in debates over housing costs, stability, and supply.

H Supplementary Results

Figures 2 and 5 presented visual results showing that demographic cleavages and economic resources do not explain the relationship between political participation and housing appreciation. This appendix summarizes in tabular form how socioeconomic and demographic characteristics relate to political participation. We present patterns for both measures of participation used in the paper: persistence in voter registration and realized electoral participation through voting.

Income. Tables IA25 and IA9 report the relationship between political participation and income. Individuals with higher levels of participation tend to have lower observed income at the time of home purchase. This relationship is robust to the inclusion of demographic controls for race and gender as well as geographic fixed effects at the county and tract level. The magnitude of this relationship attenuates as demographic and geographic controls are added but remains visible across specifications. Importantly, income does not explain the participation–appreciation gradient. When individual income is included as a control in the housing appreciation regressions, the estimated relationship between political participation and housing appreciation remains essentially unchanged. These results indicate that differences in household earnings do not account for the higher appreciation observed among electorally incorporated homeowners.

Education. Tables IA26 and IA9 report results for years of schooling. Political participation is positively associated with education: individuals with higher participation levels are modestly more educated on average. This relationship is robust to the inclusion of demographic controls for race and gender as well as geographic fixed effects at the county and tract level. Despite this positive association, education does not account for the appreciation gradient. When years of schooling are included as a control in the appreciation regressions, the estimated relationship between political participation and housing appreciation remains stable. In some specifications, years of schooling are weakly negatively associated with housing appreciation once political participation is accounted for.

Wealth. Tables IA27 and IA9 examine the relationship between political participation and wealth. Similar to income, individuals with higher levels of participation tend to have slightly lower observed wealth on average. This relationship is robust to the inclusion of demographic controls for race and gender as well as geographic fixed effects at the county and tract level, though the magnitude of the difference declines once additional controls are included. As with income

and education, including wealth directly in the appreciation regressions does not attenuate the participation–appreciation gradient. The estimated relationship between political participation and housing appreciation remains stable across specifications that control for wealth.

Credit Outcomes. Tables IA28 and IA9 report results for credit characteristics. Higher levels of political participation are associated with better credit outcomes, including higher credit scores and fewer indicators of financial distress. This relationship is robust to the inclusion of demographic controls for race and gender as well as geographic fixed effects at the county and tract level. These patterns suggest that the electorally incorporated have somewhat stronger financial profiles along this dimension – yet this advantage does not drive their higher housing returns. When credit scores are included as controls in the appreciation regressions, the estimated relationship between political participation and housing appreciation remains unchanged. Credit constraints therefore do not account for the participation–appreciation gradient.

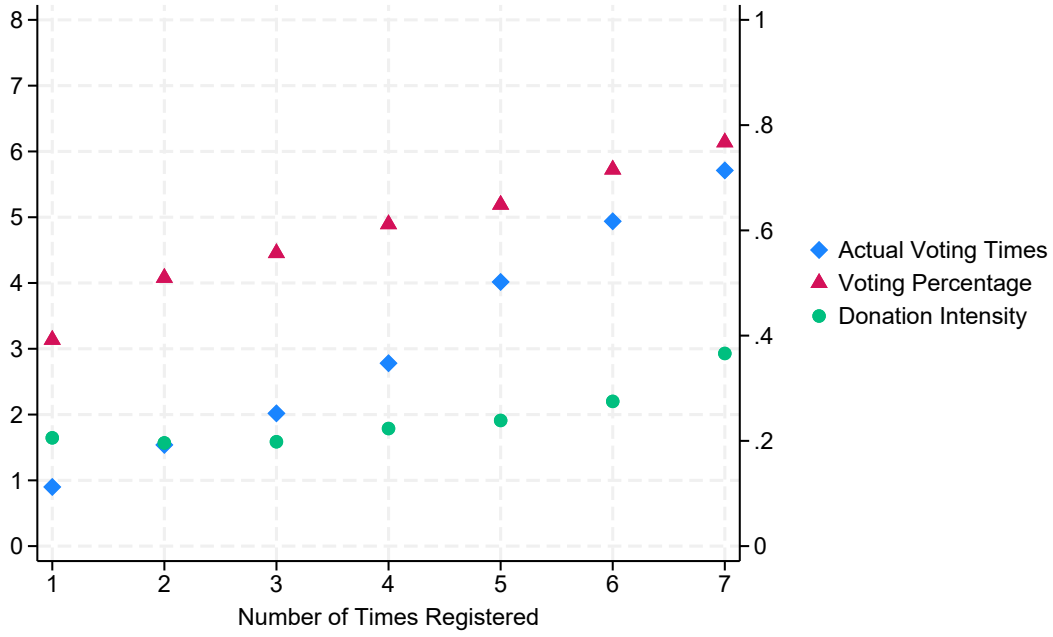
Heterogeneity by Gender. While controlling for gender does not change the core relationship we document, it is still informative to know if there is heterogeneity by gender. Table IA6 estimates our core relationship for men and women. Male homeowners experience slightly higher housing appreciation than female homeowners on average, a difference corresponding to approximately 0.43 percentage points higher annual appreciation for men, conditional on controls. Nevertheless, the participation–appreciation gradient remains present for both genders. Higher levels of political participation are associated with higher housing appreciation for both men and women, with somewhat larger returns to participation among men.

Heterogeneity by Race. Likewise, it is informative to know whether the participation–appreciation gradient is the same across racial groups. Table IA5 examines heterogeneity by race. Although racial disparities in housing appreciation are well documented, the estimated relationship between political participation and housing appreciation is virtually identical for Black homeowners.

Taken together, the results in this appendix are consistent with the paper's main conclusion: across all specifications, socioeconomic and demographic characteristics – including income, education, wealth, credit outcomes, gender, and race – do not explain the relationship between political participation and housing appreciation. While some of these characteristics correlate with participation, controlling for them does not materially attenuate the participation–appreciation gradient.

Appendix Figures and Tables

Figure IA1. Correspondence Across Measures of Political Participation



Note: This figure presents scatterplot estimates depicting the relationship between other forms of political participation and number of times registered – our base measure of political participation. We present the results for: (1) actual voting history for even-year general elections from 2004 to 2018, (2) the percentage of voting over the same period of time, and (3) the intensity of making political donations over the period of time that we observe the political participation.

Table IA1. Annual Housing Appreciation Across Levels of Political Participation: Baseline Results

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Panel A: Baseline Results, Measurement with Registration				
$1(TimesRegistered = 2)$	0.00226***	0.00159	0.00125	0.00371***
	(0.00055)	(0.00106)	(0.00115)	(0.00082)
$1(TimesRegistered = 3)$	0.00587***	0.00432***	0.00360***	0.00818***
	(0.00053)	(0.00103)	(0.00109)	(0.00078)
$1(TimesRegistered = 4)$	0.00995***	0.00780***	0.00993***	0.01148***
	(0.00050)	(0.00095)	(0.00105)	(0.00074)
$1(TimesRegistered = 5)$	0.00911***	0.00744***	0.00789***	0.01112***
	(0.00050)	(0.00099)	(0.00104)	(0.00074)
$1(TimesRegistered = 6)$	0.01216***	0.00998***	0.01157***	0.01443***
	(0.00047)	(0.00089)	(0.00096)	(0.00070)
$1(TimesRegistered = 7)$	0.02089***	0.01694***	0.02140***	0.02260***
	(0.00045)	(0.00085)	(0.00092)	(0.00069)
N	3,066,602	711,934	878,402	1,346,972
Panel B: Baseline Results, Measurement with Voting				
$1(TimesVoted = 1)$	-0.00032	0.00038	0.00142	-0.00060
	(0.00038)	(0.00087)	(0.00088)	(0.00050)
$1(TimesVoted = 2)$	0.00071*	0.00226***	0.00319***	0.00014
	(0.00037)	(0.00086)	(0.00086)	(0.00049)
$1(TimesVoted = 3)$	0.00037	-0.00023	0.00353***	0.00006
	(0.00036)	(0.00081)	(0.00081)	(0.00048)
$1(TimesVoted = 4)$	0.00359***	0.00290***	0.00770***	0.00248***
	(0.00035)	(0.00078)	(0.00079)	(0.00048)
$1(TimesVoted = 5)$	0.00822***	0.00661***	0.01363***	0.00586***
	(0.00036)	(0.00078)	(0.00080)	(0.00050)
N	2,032,695	474,770	593,581	858,144
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes

Note: The table presents the baseline result of housing appreciation for voters with different levels of political participation, measured by the number of voter registrations from 2014 to 2020 and the number of times casting a ballot at the presidential election from 2000 to 2016. Panel A reports the results using voter registration frequency between 2014 and 2020 as the measurement of democratic participation, while Panel B reports the results using frequencies of casting a ballot at the presidential election from 2000 to 2016 as the measurement of participation. Column (1) reports the appreciation differentials for all voters, while in columns (2)–(4) there are results for different party affiliations. Democrat voters and republican voters are identified by a voter's party affiliation history: if a voter always votes for democratic party (or republican party), then that voter's affiliation will be identified a democrat (or republican). If a voter votes for a third party or switches party, such voter will be identified as 'Other Voters'. To rule out potential effect of geographic feature, transaction time and preference difference of investor of different age group, we add fixed effects for the intersection of year-month of sale (when the appreciation is realized) and FIPS, birth year and length of holding. Standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA2. Party Affiliation and Political Participation

	(1)	(2)	(3)	(4)	(5)
	Voter Fraction			Appreciation	
	Democrat	Republican	Other	All Voters	Two-Party Voters
	Voter Fraction	Voter Fraction	Voter Fraction	Annual Appreciation	Annual Appreciation
Democrat				0.00131	-0.00182
				(0.00107)	(0.00141)
1($TimesRegistered$ = 2)	-0.01893***	-0.01683***	-0.04445***	0.00423***	0.00304**
	(0.00225)	(0.00240)	(0.00252)	(0.00076)	(0.00132)
1($TimesRegistered$ = 3)	-0.02776***	-0.02206***	-0.08802***	0.00792***	0.00655***
	(0.00214)	(0.00228)	(0.00245)	(0.00072)	(0.00128)
1($TimesRegistered$ = 4)	-0.03395***	-0.02211***	-0.14007***	0.01258***	0.01170***
	(0.00203)	(0.00217)	(0.00234)	(0.00069)	(0.00122)
1($TimesRegistered$ = 5)	-0.04600***	-0.03232***	-0.20586***	0.01237***	0.01126***
	(0.00205)	(0.00217)	(0.00237)	(0.00069)	(0.00122)
1($TimesRegistered$ = 6)	-0.03859***	-0.01779***	-0.23358***	0.01565***	0.01461***
	(0.00194)	(0.00208)	(0.00230)	(0.00065)	(0.00113)
1($TimesRegistered$ = 7)	-0.03153***	-0.00057	-0.24952***	0.02137***	0.02083***
	(0.00187)	(0.00202)	(0.00226)	(0.00065)	(0.00111)
	(0.00115)	(0.00123)	(0.00132)	(0.00043)	(0.00073)
1($TimesRegistered$ = 2) × Democrat				-0.00217	0.00007
				(0.00141)	(0.00184)
1($TimesRegistered$ = 3) × Democrat				-0.00277**	0.00058
				(0.00134)	(0.00176)
1($TimesRegistered$ = 4) × Democrat				-0.00373***	-0.00125
				(0.00126)	(0.00165)
1($TimesRegistered$ = 5) × Democrat				-0.00413***	-0.00049
				(0.00129)	(0.00171)
1($TimesRegistered$ = 6) × Democrat				-0.00482***	-0.00192
				(0.00118)	(0.00154)
1($TimesRegistered$ = 7) × Democrat				-0.00708***	-0.00494***
				(0.00114)	(0.00149)
N	1,818,766	1,818,766	1,818,766	1,818,766	841,331
Birth Year FE	Yes	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes	Yes

Note: The table presents 1) how the distribution of political affiliation varies with political participation 2) the partisanship relationship with annual housing returns. Table (1)–(3) shows the differential of the democratic voters, republican voters and other voters' fraction across different levels of political participation. Table (4)–(5) presents evidence on whether political party affiliation affects housing return, where table (4) compares democratic voters with all voters and table (5) illustrates democratic and republican voter comparison. The regression specification follows the specification of Table 3 Panel A to absorb effect of tract-level feature. Standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA3. Party Affiliation and Electoral Participation

	(1)	(2)	(3)	(4)	(5)
	Voter Fraction			Appreciation	
	Democrat	Republican	Other	All Voters	Two-Party Voters
	Voter Fraction	Voter Fraction	Voter Fraction	Annual Appreciation	Annual Appreciation
Democrat				-0.00319***	-0.00188
				(0.00081)	(0.00115)
1($TimesVoted = 1$)	0.00909***	0.01468***	-0.13622***	0.00099	-0.00062
	(0.00169)	(0.00176)	(0.00201)	(0.00102)	(0.00142)
1($TimesVoted = 2$)	0.02144***	0.03871***	-0.20853***	0.00055	-0.00178
	(0.00168)	(0.00178)	(0.00201)	(0.00100)	(0.00138)
1($TimesVoted = 3$)	0.06537***	0.07901***	-0.26849***	-0.00105	-0.00304**
	(0.00168)	(0.00174)	(0.00202)	(0.00093)	(0.00130)
1($TimesVoted = 4$)	0.08338***	0.12398***	-0.31431***	-0.00224**	-0.00464***
	(0.00166)	(0.00177)	(0.00205)	(0.00091)	(0.00126)
1($TimesVoted = 5$)	0.10620***	0.17520***	-0.36384***	-0.00309***	-0.00585***
	(0.00174)	(0.00189)	(0.00210)	(0.00089)	(0.00123)
1($TimesVoted = 1$) × Democrat				0.00099	-0.00062
				(0.00102)	(0.00142)
1($TimesVoted = 2$) × Democrat				0.00055	-0.00178
				(0.00100)	(0.00138)
1($TimesVoted = 3$) × Democrat				-0.00105	-0.00304**
				(0.00093)	(0.00130)
1($TimesVoted = 4$) × Democrat				-0.00224**	-0.00464***
				(0.00091)	(0.00126)
1($TimesVoted = 5$) × Democrat				-0.00309***	-0.00585***
				(0.00089)	(0.00123)
N	1,707,987	1,707,987	1,707,987	1,707,987	809,829
Birth Year FE	Yes	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes	Yes

Note: The table presents 1) how the distribution of political affiliation varies with electoral participation 2) the partisanship relationship with annual housing returns. Table (1)–(3) shows the differential of the democratic voters, republican voters and other voters' fraction across different levels of electoral participation. Table (4)–(5) presents evidence on whether political party affiliation affects housing return, where table (4) compares democratic voters with all voters and table (5) illustrates democratic and republican voter comparison. The regression specification follows the specification of Table 3 Panel A to absorb effect of tract-level feature. Standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA4. Annual Housing Appreciation of Different Holding Period: Different Races

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Black	-0.00844***	-0.01011**	0.01883	-0.00297
	(0.00282)	(0.00460)	(0.01963)	(0.00506)
1($TimesRegistered = 2$)	0.00138*	0.00363*	0.00088	0.00432***
	(0.00074)	(0.00218)	(0.00174)	(0.00130)
1($TimesRegistered = 3$)	0.00580***	0.00538**	0.00355**	0.00937***
	(0.00071)	(0.00218)	(0.00162)	(0.00124)
1($TimesRegistered = 4$)	0.00914***	0.00633***	0.00875***	0.01105***
	(0.00067)	(0.00195)	(0.00153)	(0.00117)
1($TimesRegistered = 5$)	0.00857***	0.00625***	0.00772***	0.01197***
	(0.00067)	(0.00202)	(0.00154)	(0.00117)
1($TimesRegistered = 6$)	0.01235***	0.00942***	0.01237***	0.01602***
	(0.00063)	(0.00182)	(0.00143)	(0.00111)
1($TimesRegistered = 7$)	0.01946***	0.01593***	0.01840***	0.02198***
	(0.00062)	(0.00177)	(0.00138)	(0.00110)
1($TimesRegistered = 2$) × Black	0.01081***	0.00395	0.01207	0.01456**
	(0.00378)	(0.00619)	(0.02489)	(0.00697)
1($TimesRegistered = 3$) × Black	0.00431	0.00618	-0.03995*	-0.00084
	(0.00365)	(0.00608)	(0.02315)	(0.00669)
1($TimesRegistered = 4$) × Black	0.00343	0.00712	-0.02924	0.00487
	(0.00335)	(0.00552)	(0.02174)	(0.00607)
1($TimesRegistered = 5$) × Black	0.00050	0.00248	-0.01355	-0.00046
	(0.00335)	(0.00553)	(0.02190)	(0.00616)
1($TimesRegistered = 6$) × Black	0.00212	0.00899*	-0.03200	-0.00039
	(0.00311)	(0.00508)	(0.02136)	(0.00555)
1($TimesRegistered = 7$) × Black	0.00085	0.00653	-0.01601	-0.00311
	(0.00297)	(0.00474)	(0.02021)	(0.00539)
N	1,702,234	213,256	383,254	582,126
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes

Note: The table presents the result of races' effect on housing appreciation across different levels of political participation to check whether the result if driven by race. Noting that the race is missing for around 30% of the observations in our appreciation data, the number of observation is smaller than that of Table 2. Column (1) reports the result for all voters while in columns (2)–(4) there are results for different party affiliations. Column (2) reports the heterogeneity effect of race on appreciation differentials for democrat voters. Column (3) reports the result for republican voters and column (4) reports the result for other voters. Here, other voters mean the voter being neither democrat voters nor republican voters. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA5. Annual Housing Appreciation of Different Holding Period: Different Races

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Black	-0.00581***	-0.00221	0.01023	-0.00189
	(0.00211)	(0.00433)	(0.01872)	(0.00403)
1($TimesVoted = 1$)	0.00091	0.00299	0.00428***	0.00088
	(0.00058)	(0.00223)	(0.00145)	(0.00093)
1($TimesVoted = 2$)	0.00234***	0.00273	0.00736***	0.00161*
	(0.00056)	(0.00220)	(0.00142)	(0.00091)
1($TimesVoted = 3$)	0.00146***	0.00076	0.00626***	0.00109
	(0.00054)	(0.00202)	(0.00134)	(0.00089)
1($TimesVoted = 4$)	0.00419***	0.00520***	0.00864***	0.00294***
	(0.00053)	(0.00194)	(0.00132)	(0.00087)
1($TimesVoted = 5$)	0.00814***	0.00705***	0.01214***	0.00519***
	(0.00054)	(0.00191)	(0.00133)	(0.00091)
1($TimesVoted = 1$) and Black	0.00371	-0.00067	-0.00985	-0.00175
	(0.00267)	(0.00529)	(0.02170)	(0.00501)
1($TimesVoted = 2$) and Black	0.00175	-0.00096	-0.00528	-0.00550
	(0.00258)	(0.00542)	(0.02164)	(0.00475)
1($TimesVoted = 3$) and Black	0.00076	0.00038	-0.00105	-0.00642
	(0.00245)	(0.00470)	(0.02004)	(0.00462)
1($TimesVoted = 4$) and Black	0.00025	-0.00238	-0.00475	0.00037
	(0.00246)	(0.00476)	(0.02003)	(0.00477)
1($TimesVoted = 5$) and Black	-0.00367	-0.00148	-0.02080	-0.00202
	(0.00242)	(0.00459)	(0.02005)	(0.00526)
N	1,012,449	110,186	217,613	295,549
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes

Note: The table presents the result of races' effect on housing appreciation across different levels of electoral participation to check whether the result if driven by race. Noting that the race is missing for around 30% of the observations in our appreciation data, the number of observation is smaller than that of Table 2. Column (1) reports the result for all voters while in columns (2)–(4) there are results for different party affiliations. Column (2) reports the heterogeneity effect of race on appreciation differentials for democrat voters. Column (3) reports the result for republican voters and column (4) reports the result for other voters. Here, other voters mean the voter being neither democrat voters nor republican voters. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA6. Annual Housing Appreciation of Different Holding Period: Different Genders

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Female	-0.00515***	-0.00323	-0.00012	-0.00769***
	(0.00096)	(0.00205)	(0.00280)	(0.00150)
1($TimesRegistered = 2$)	0.00191***	0.00114	0.00212	0.00238**
	(0.00069)	(0.00196)	(0.00154)	(0.00111)
1($TimesRegistered = 3$)	0.00560***	0.00559***	0.00391***	0.00680***
	(0.00067)	(0.00190)	(0.00142)	(0.00107)
1($TimesRegistered = 4$)	0.00948***	0.00860***	0.00872***	0.01038***
	(0.00063)	(0.00170)	(0.00136)	(0.00101)
1($TimesRegistered = 5$)	0.00934***	0.00898***	0.00886***	0.01073***
	(0.00063)	(0.00180)	(0.00137)	(0.00101)
1($TimesRegistered = 6$)	0.01277***	0.01262***	0.01320***	0.01429***
	(0.00059)	(0.00163)	(0.00125)	(0.00095)
1($TimesRegistered = 7$)	0.02039***	0.01840***	0.01990***	0.02083***
	(0.00057)	(0.00153)	(0.00120)	(0.00094)
1($TimesRegistered = 2$) × Female	-0.00072	0.00202	-0.00402	0.00292
	(0.00125)	(0.00285)	(0.00360)	(0.00194)
1($TimesRegistered = 3$) × Female	-0.00178	-0.00176	-0.00413	0.00131
	(0.00119)	(0.00276)	(0.00349)	(0.00183)
1($TimesRegistered = 4$) × Female	-0.00201*	-0.00338	-0.00526	0.00224
	(0.00113)	(0.00244)	(0.00320)	(0.00174)
1($TimesRegistered = 5$) × Female	-0.00326***	-0.00564**	-0.00504	0.00186
	(0.00113)	(0.00258)	(0.00320)	(0.00174)
1($TimesRegistered = 6$) × Female	-0.00326***	-0.00447*	-0.00771**	0.00143
	(0.00106)	(0.00234)	(0.00300)	(0.00164)
1($TimesRegistered = 7$) × Female	-0.00616***	-0.00692***	-0.00824***	-0.00108
	(0.00101)	(0.00215)	(0.00289)	(0.00157)
N	2,714,649	437,963	596,995	1,031,508
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes

Note: The table presents the result of the effect of gender on housing appreciation across different levels of political participation to check whether the observed appreciation differential is driven by genders. Column (1) reports the result for all voters while in columns (2)–(4) there are results for different party affiliations. Column (2) reports the result for democrat voters. Column (3) reports the result for republican voters and column (4) reports the result for other voters. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA7. Annual Housing Appreciation of Different Holding Period: Different Genders

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Female	-0.00729***	-0.00659***	-0.00135	-0.00757***
	(0.00071)	(0.00207)	(0.00247)	(0.00096)
1($TimesVoted = 1$)	0.00000	0.00122	0.00335***	-0.00015
	(0.00049)	(0.00166)	(0.00122)	(0.00071)
1($TimesVoted = 2$)	0.00109**	0.00103	0.00600***	0.00072
	(0.00048)	(0.00161)	(0.00119)	(0.00071)
1($TimesVoted = 3$)	0.00076*	-0.00072	0.00526***	0.00061
	(0.00046)	(0.00152)	(0.00114)	(0.00070)
1($TimesVoted = 4$)	0.00398***	0.00215	0.00836***	0.00318***
	(0.00045)	(0.00151)	(0.00109)	(0.00071)
1($TimesVoted = 5$)	0.00812***	0.00574***	0.01207***	0.00518***
	(0.00045)	(0.00148)	(0.00109)	(0.00073)
1($TimesVoted = 1$) and Female	0.00226**	-0.00016	-0.00344	0.00354***
	(0.00089)	(0.00263)	(0.00292)	(0.00125)
1($TimesVoted = 2$) and Female	0.00151*	-0.00003	-0.00361	0.00248**
	(0.00087)	(0.00248)	(0.00285)	(0.00123)
1($TimesVoted = 3$) and Female	0.00115	0.00073	-0.00348	0.00304**
	(0.00083)	(0.00234)	(0.00276)	(0.00120)
1($TimesVoted = 4$) and Female	-0.00116	0.00112	-0.00447*	0.00020
	(0.00081)	(0.00227)	(0.00264)	(0.00118)
1($TimesVoted = 5$) and Female	-0.00275***	-0.00233	-0.00548**	-0.00020
	(0.00079)	(0.00221)	(0.00261)	(0.00119)
N	1,693,472	246,598	353,827	577,195
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes

Note: The table presents the result of the effect of gender on housing appreciation across different levels of electoral participation to check whether the observed appreciation differential is driven by genders. Column (1) reports the result for all voters while in columns (2)–(4) there are results for different party affiliations. Column (2) reports the result for democrat voters. Column (3) reports the result for republican voters and column (4) reports the result for other voters. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA8. Annual Housing Appreciation of Different Holding Period: Different Socioeconomic Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Income		Education		Wealth		Credit	
	Annual Appreciation		Annual Appreciation		Annual Appreciation		Annual Appreciation	
1($TimesRegistered = 2$)	-0.00034	-0.00036	0.00183*	0.00188**	0.01956*	0.02015*	0.01956*	0.01957*
	(0.00093)	(0.00093)	(0.00096)	(0.00096)	(0.01079)	(0.01084)	(0.01079)	(0.01081)
1($TimesRegistered = 3$)	0.00187**	0.00183**	0.00333***	0.00343***	0.01114	0.01133	0.01114	0.01116
	(0.00088)	(0.00088)	(0.00094)	(0.00094)	(0.00983)	(0.00977)	(0.00983)	(0.00987)
1($TimesRegistered = 4$)	0.00429***	0.00422***	0.00559***	0.00573***	0.01474	0.01371	0.01474	0.01475
	(0.00083)	(0.00083)	(0.00090)	(0.00090)	(0.00977)	(0.00972)	(0.00977)	(0.00977)
1($TimesRegistered = 5$)	0.00369***	0.00364***	0.00547***	0.00567***	0.01207	0.01200	0.01207	0.01209
	(0.00084)	(0.00084)	(0.00090)	(0.00090)	(0.00898)	(0.00888)	(0.00898)	(0.00899)
1($TimesRegistered = 6$)	0.00639***	0.00631***	0.00784***	0.00811***	0.01344*	0.01310*	0.01344*	0.01346*
	(0.00079)	(0.00079)	(0.00084)	(0.00084)	(0.00795)	(0.00785)	(0.00795)	(0.00796)
1($TimesRegistered = 7$)	0.01080***	0.01069***	0.01353***	0.01392***	0.02011**	0.01992**	0.02011**	0.02015**
	(0.00076)	(0.00076)	(0.00080)	(0.00080)	(0.00842)	(0.00834)	(0.00842)	(0.00845)
log(Income)		-0.00649***						
		(0.00022)						
Education Years				-0.00063***				
				(0.00009)				
Wealth (in $10,000)						-0.00041***		
						(0.00010)		
Credit Score								-0.00000
								(0.00003)
N	1,468,244	1,468,244	758,231	758,231	21,165	21,165	21,165	21,165
Birth Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gender FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sale Year × Tract	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Holding Month	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents the result of the effect of socioeconomic characteristics, including income, education, wealth and credit score, on the observed appreciation differential. Income is identified by HMDA data. Education is observed in L2 data. Wealth and credit score are observed in North Carolina Credit Performance records, and the number of observations shrinks significantly as a result. For each socioeconomic characteristic, our dataset for research is matched to a different dataset and thus the baseline in Table IA1 or Table 3 no longer serves as a comparable baseline. Therefore, we first run the regression with the same specification in Table 3, then we run the regression again with linear control of the socioeconomic characteristic. Column (1)–(2) report the result for income. Column (3)–(4) report the result of education. Column (5)–(6) report the effect of wealth. Column (7)–(8) report the effect of credit score. Column (5) and column (7) are the results estimated with the same data and the same specification, and thus the results are the same. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA9. Annual Housing Appreciation of Different Holding Period: Different Socioeconomic Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Income		Education		Wealth		Credit	
	Annual Appreciation		Annual Appreciation		Annual Appreciation		Annual Appreciation	
$1(TimesVoted = 1)$	-0.00025	-0.00022	-0.00183**	-0.00171**	-0.01243**	-0.01279**	-0.01243**	-0.01243**
	(0.00058)	(0.00058)	(0.00082)	(0.00082)	(0.00520)	(0.00521)	(0.00520)	(0.00520)
$1(TimesVoted = 2)$	0.00050	0.00053	0.00006	0.00027	-0.00155	-0.00131	-0.00155	-0.00155
	(0.00056)	(0.00056)	(0.00080)	(0.00080)	(0.00532)	(0.00536)	(0.00532)	(0.00529)
$1(TimesVoted = 3)$	-0.00069	-0.00065	0.00174**	0.00198**	-0.00203	-0.00208	-0.00203	-0.00203
	(0.00053)	(0.00053)	(0.00077)	(0.00078)	(0.00565)	(0.00567)	(0.00565)	(0.00563)
$1(TimesVoted = 4)$	0.00229***	0.00235***	0.00244***	0.00274***	-0.00380	-0.00381	-0.00380	-0.00381
	(0.00053)	(0.00053)	(0.00074)	(0.00075)	(0.00637)	(0.00637)	(0.00637)	(0.00633)
$1(TimesVoted = 5)$	0.00541***	0.00551***	0.00509***	0.00544***	-0.00527	-0.00550	-0.00527	-0.00528
	(0.00053)	(0.00053)	(0.00075)	(0.00076)	(0.00584)	(0.00585)	(0.00584)	(0.00578)
log(Income)		-0.00431***						
		(0.00019)						
Education Years				-0.00044***				
				(0.00009)				
Wealth (in $10,000)						-0.00035***		
						(0.00006)		
Credit Score								0.00000
								(0.00002)
N	1,090,318	1,090,318	420,451	420,451	18,484	18,484	18,484	18,484
Birth Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gender FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sale Year × Tract	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Holding Month	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents the result of the effect of socioeconomic characteristics, including income, education, wealth and credit score, on the observed appreciation differential. Income is identified by HMDA data. Education is observed in L2 data. Wealth and credit score are observed in North Carolina Credit Performance records, and the number of observations shrinks significantly as a result. For each socioeconomic characteristic, our dataset for research is matched to a different dataset and thus the baseline in Table IA1 or Table 3 no longer serves as a comparable baseline. Therefore, we first run the regression with the same specification in Table 3, then we run the regression again with linear control of the socioeconomic characteristic. Column (1)–(2) report the result for income. Column (3)–(4) report the result of education. Column (5)–(6) report the effect of wealth. Column (7)–(8) report the effect of credit score. Column (5) and column (7) are the results estimated with the same data and the same specification, and thus the results are the same. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA10. Alternative Forms of Political Participation

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Panel A: Intensity of Donation to a Political Party				
Donation Intensity	0.00613***	0.00511***	0.00486***	0.00725***
	(0.00029)	(0.00075)	(0.00065)	(0.00050)
N	2,180,002	324,126	462,683	801,627
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Race	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes
Panel B: Intensity of Voting in General Election				
Voting Percent	0.00273***	-0.00481***	0.00788***	0.00050
	(0.00046)	(0.00142)	(0.00126)	(0.00068)
N	1,991,837	280,360	403,410	718,662
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Race	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes

Note: Our main result uses voter registration as a measure of political participation. The table reports the result for the effect of political participation on housing appreciation measured by other forms of participation. Panel A reports the result of donation to a certain political party and Panel B reports the result the result of voting in general election. Note that we can only observe whether a voter donates or not when a voter registers to vote, the donation times can be confounded by the frequency of voter registration. We establish the measure of donation intensity by letting $DI = \frac{\sum 1(Donation=1)}{\sum 1(VoterReg=1)}$, which measures the likelihood of additionally donating to a certain party conditional on registering to vote. For voting in general election, the voting percentage is measured by $VP = \frac{\sum 1(Voted)}{\sum 1(Eligible)}$, where $1(Voted)$ is the indicator of the voter voted and $1(Eligible)$ the indicator of a voter being eligible to vote. Column (1) reports the result for all voters, while column (2)–(4) report the result for voters of different political affiliations: column (2) report the result for democratic voters, column (3) reports the result for republican voters and column (4) report the result for other voters.

Table IA11. Other Forms of Political Participation: Validity of Measure

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Participation	Participation	Participation	Participation
Panel A: political participation Measured by Donation Intensity				
$1(TimesRegistered = 2)$	0.00427**	0.00765	0.00586	0.00936***
	(0.00194)	(0.00558)	(0.00492)	(0.00320)
$1(TimesRegistered = 3)$	0.00825***	0.00702	0.01597***	0.01291***
	(0.00184)	(0.00534)	(0.00462)	(0.00304)
$1(TimesRegistered = 4)$	0.02677***	0.02549***	0.03560***	0.02959***
	(0.00174)	(0.00495)	(0.00436)	(0.00289)
$1(TimesRegistered = 5)$	0.04294***	0.03625***	0.06182***	0.04470***
	(0.00175)	(0.00504)	(0.00454)	(0.00288)
$1(TimesRegistered = 6)$	0.06581***	0.05584***	0.08696***	0.06416***
	(0.00166)	(0.00471)	(0.00418)	(0.00278)
$1(TimesRegistered = 7)$	0.11569***	0.10479***	0.13734***	0.10453***
	(0.00161)	(0.00445)	(0.00398)	(0.00272)
N	2,180,002	324,126	462,683	801,627
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Race	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes
Panel B: political participation Measured by Voting Percentage				
$1(TimesRegistered = 2)$	0.11533***	0.12385***	0.10151***	0.13325***
	(0.00541)	(0.01659)	(0.01348)	(0.00917)
$1(TimesRegistered = 3)$	0.16357***	0.17948***	0.18231***	0.17568***
	(0.00504)	(0.01550)	(0.01229)	(0.00861)
$1(TimesRegistered = 4)$	0.21596***	0.20476***	0.23225***	0.23118***
	(0.00483)	(0.01468)	(0.01167)	(0.00834)
$1(TimesRegistered = 5)$	0.23304***	0.19783***	0.25224***	0.24767***
	(0.00477)	(0.01462)	(0.01151)	(0.00830)
$1(TimesRegistered = 6)$	0.28532***	0.24918***	0.30853***	0.28747***
	(0.00474)	(0.01438)	(0.01134)	(0.00823)
$1(TimesRegistered = 7)$	0.31933***	0.27308***	0.33739***	0.32069***
	(0.00473)	(0.01431)	(0.01130)	(0.00821)
N	1,057,391	133,758	202,416	409,236
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Race	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes

Note: The table reports the result for 'balance test' of other forms of political participation across different participation levels of voting registration. Column (1) reports the result for all voters. Column (2) reports the result for democratic voters. Column (3) reports the result for republican voters and column (4) reports the result for other voters. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA12. Psychographic Fixed Effects on Specific Characteristics.

	Fixed Effect
"Good Citizens Vote"	0.047***
	(0.009)
"Good Citizens are Financially Prudent"	-0.005
	(0.005)
"Economy Benefits the Avg American"	-0.017
	(0.011)
"Democracy Benefits the Avg American"	0.005***
	(0.001)
Extroverted	-0.006***
	(0.001)
Agreeable	-0.002
	(0.002)
Conscientious	-0.010***
	(0.004)
Neurotic	-0.004***
	(0.001)
Openness	0.009***
	(0.002)
AgencyOverFinances	-0.008
	(0.005)
AgencyOverCommunity	0.001
	(0.002)
AgencyOverHappiness	0.013*
	(0.007)
N	1195
R-squared	0.127

Note: This table reports a regression of the psychographic fixed effects from Table 10 on psychographic characteristics elicited in the online survey. The characteristics are binary indicators that, respectively, encode whether the respondent: agrees at least 50% with the statements "voting is part of being a good citizen","voting is part of being a good citizen" or "making prudent financial decisions is part of being a good citizen", "making prudent financial decisions is part of being a good citizen", or "the Average American benefits from a [strong economy or functioning democracy]"; scores above 50% for the the Big-5 personality traits (Extroverted, Agreeable, Conscientious, Neurotic, Openness); or agrees at least 50% that they have agency over their financial condition, community, or overall happiness. Each observation is a survey respondent. The remaining notes are the same as in Table 10. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA13. Appreciation and Civic Engagement in American Housing Survey

	$AnnualizedAppreciation_i$							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Civic Engagement	0.00428***	0.00429***	0.00452***	0.00378*	0.00220	0.00285**		
	(0.00160)	(0.00163)	(0.00163)	(0.00222)	(0.00166)	(0.00142)		
Aggregate Engagement							0.00173***	
							(0.00051)	
Engaging in 1 Activity								-0.00010
								(0.00185)
Engaging in 2 Activities								0.00251
								(0.00198)
Engaging in 3 Activities								0.00484**
								(0.00242)
Engaging in 4 Activities								0.00830***
								(0.00285)
Engaging in 5 Activities								0.00786*
								(0.00448)
Controls								
Income	Y	Y	Y	Y	Y	Y	Y	Y
Race and Education	Y	Y	Y	Y	Y	Y	Y	Y
Property Characteristics	Y	Y	Y	Y	Y	Y	Y	Y
N	12,113	12,095	12,096	12,094	12,101	12,095	12,068	12,068
SMSA FE	Y	Y	Y	Y	Y	Y	Y	Y
Birth Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Holding Period FE	Y	Y	Y	Y	Y	Y	Y	Y

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The table presents estimates of the relation between housing appreciation and civic engagement using the 2013 American Housing Survey. Each observation is a housing unit in 2013. The variable $CivicEngagement_i$ indicates the status of a respondent's civic engagement level. Column (1) corresponds to whether the respondent is a member of a civic group. In column (2) it corresponds to whether the respondent talks to a local politician on local issues. In column (3), it reflects whether the households gathered with neighbors to fix neighborhood problems. Column (4) reflects whether the households talked to the group causing the neighborhood problems and column (5) corresponds to whether the respondent attended the neighborhood meeting on neighborhood issues. Column (6) shows whether the household engages volunteer services. Column (7) reports the aggregate engagement from column (2) to (6) as they reflect different dimensions of engagement in solving local problems while column (8) present the differential in appreciation for different engagement intensity levels. All specifications include fixed effects for SMSA (i.e., "metro"), birth year of the householder, and holding period, in years since purchase. The sets of controls are: log household income (Income); indicators for whether the householder is black, is hispanic, has a high school diploma, has a bachelor's degree, or has a master's degree (Race and Education); and log square feet of the home (Property Characteristics). Heteroskedasticity robust standard errors are in parentheses. ***, ** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA14. Annual Housing Appreciation Along Different Levels political participation: Excluding States Adding Automatic Registration

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Panel A: Regression Results with Tract-Level Fixed Effects				
$1(TimesRegistered = 2)$	0.00350***	0.00402*	0.00128	0.00696***
	(0.00081)	(0.00223)	(0.00172)	(0.00139)
$1(TimesRegistered = 3)$	0.00768***	0.00827***	0.00579***	0.01003***
	(0.00079)	(0.00216)	(0.00164)	(0.00135)
$1(TimesRegistered = 4)$	0.01122***	0.01062***	0.01017***	0.01354***
	(0.00075)	(0.00200)	(0.00156)	(0.00127)
$1(TimesRegistered = 5)$	0.01106***	0.01100***	0.01097***	0.01418***
	(0.00074)	(0.00204)	(0.00155)	(0.00127)
$1(TimesRegistered = 6)$	0.01498***	0.01535***	0.01466***	0.01874***
	(0.00070)	(0.00187)	(0.00146)	(0.00122)
$1(TimesRegistered = 7)$	0.02210***	0.02113***	0.02169***	0.02378***
	(0.00069)	(0.00180)	(0.00142)	(0.00121)
N	1,361,200	198,850	349,484	472,906
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Sale Year × Tract FE	Yes	Yes	Yes	Yes
Panel B: Regression Results with Congressional District Level Fixed Effects				
$1(TimesRegistered = 2)$	0.00298***	0.00200	0.00049	0.00545***
	(0.00074)	(0.00157)	(0.00136)	(0.00109)
$1(TimesRegistered = 3)$	0.00782***	0.00602***	0.00608***	0.01042***
	(0.00071)	(0.00154)	(0.00134)	(0.00105)
$1(TimesRegistered = 4)$	0.01148***	0.00973***	0.01208***	0.01213***
	(0.00068)	(0.00144)	(0.00126)	(0.00099)
$1(TimesRegistered = 5)$	0.01072***	0.00962***	0.00980***	0.01322***
	(0.00067)	(0.00147)	(0.00125)	(0.00098)
$1(TimesRegistered = 6)$	0.01436***	0.01214***	0.01388***	0.01708***
	(0.00063)	(0.00134)	(0.00116)	(0.00094)
$1(TimesRegistered = 7)$	0.02292***	0.01923***	0.02397***	0.02512***
	(0.00062)	(0.00128)	(0.00112)	(0.00093)
N	1,605,664	339,333	512,367	715,303
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Sale Year × FIPS × Congressional District FE	Yes	Yes	Yes	Yes
Panel C: Regression Results with Block Group Level Fixed Effects				
$1(TimesRegistered = 2)$	0.00364***	0.00325	0.00206	0.00606***
	(0.00089)	(0.00289)	(0.00203)	(0.00163)
$1(TimesRegistered = 3)$	0.00717***	0.00594**	0.00574***	0.00966***
	(0.00088)	(0.00274)	(0.00196)	(0.00158)
$1(TimesRegistered = 4)$	0.01075***	0.00849***	0.00946***	0.01366***
	(0.00083)	(0.00249)	(0.00189)	(0.00147)
$1(TimesRegistered = 5)$	0.01097***	0.00938***	0.01105***	0.01436***
	(0.00082)	(0.00254)	(0.00187)	(0.00148)
$1(TimesRegistered = 6)$	0.01474***	0.01375***	0.01441***	0.01762***
	(0.00078)	(0.00238)	(0.00175)	(0.00142)
$1(TimesRegistered = 7)$	0.02087***	0.01865***	0.01961***	0.02224***
	(0.00077)	(0.00225)	(0.00173)	(0.00140)
N	1,093,096	122,853	239,633	337,971
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
Sale Year × Block Group	Yes	Yes	Yes	Yes

Note: This table reports the regression results of the same specification as the baseline, yet with higher spatial granularity to better look at how the choice of neighborhood affects the appreciation differential on political participation. We only look at the states where automatic voter registration was not implemented before 2010 to rule out the problem that the engagement measure could be affected by automatic voter registration. The states excluded are: Alaska, California, Colorado, Connecticut, DC, Georgia, Illinois, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, Nevada, Oregon, Rhode Island, Vermont, Virginia, and Washington. Panel A adds an extra sale year intersecting the tract fixed effect, while Panel B looks at the congressional district. Panel C adds block group-sale year fixed effect. Standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA15. Robustness Checks: Are the Results Driven by Voter Purging

	(1)	(2)	(3)
		Difference Across Voter Roll Management	
	All States	Slow Purge States	Fast Purge States
	Annual Appreciation	Annual Appreciation	Annual Appreciation
$1(TimesRegistered = 2)$	0.00170***	0.00163**	0.00469***
	(0.00058)	(0.00064)	(0.00153)
$1(TimesRegistered = 3)$	0.00497***	0.00498***	0.00776***
	(0.00056)	(0.00062)	(0.00150)
$1(TimesRegistered = 4)$	0.00873***	0.00860***	0.01311***
	(0.00052)	(0.00058)	(0.00139)
$1(TimesRegistered = 5)$	0.00816***	0.00812***	0.01154***
	(0.00053)	(0.00059)	(0.00138)
$1(TimesRegistered = 6)$	0.01159***	0.01172***	0.01382***
	(0.00049)	(0.00055)	(0.00129)
$1(TimesRegistered = 7)$	0.01856***	0.01852***	0.02108***
	(0.00048)	(0.00054)	(0.00128)
N	2,736,367	2,208,298	416,084
Sale YM × FIPS FE	Yes	Yes	Yes
Birth Year FE	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes

Note: The table presents the result for the same specification in Table 3 Panel A. The difference is that now we consider whether each state's difference in voter purging process affects the empirical patterns we observe, since if a state doesn't actively purge the inactive voters from the voter roll, the voter may appear multiple times in the L2 data, leading to the measure of registration being biased upward. Each state sets up its own voter purge schedule. If a person fails to cast a vote for certain number of years, a voter will be labeled as inactive, following subsequent purges. Our criteria of fast purge is that a vote will be purged after not casting a vote for less than 5 consecutive years. The states include Massachusetts, Illinois, Idaho, Wisconsin, Wyoming, Maine, Missouri, Montana, North Carolina, Ohio, and Virginia. North Dakota doesn't have a formal voter registration system, and a voter's eligibility to vote is determined each year as long as the voter lived in North Dakota 30 days before the election, and thus is also identified as a fast-purge state. (Equivalent to purging the voter roll every year.) The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA16. The Tract-Level Feature Effect on Housing Appreciation

	(1)	(2)	(3)	(4)
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
$1(TimesRegistered = 2)$	0.00258***	0.02514	0.00255***	-0.01085
	(0.00062)	(0.01646)	(0.00062)	(0.02199)
$1(TimesRegistered = 3)$	0.00605***	0.03073*	0.00601***	-0.00060
	(0.00059)	(0.01593)	(0.00059)	(0.02204)
$1(TimesRegistered = 4)$	0.00968***	0.08259***	0.00962***	0.02098
	(0.00056)	(0.01513)	(0.00056)	(0.02050)
$1(TimesRegistered = 5)$	0.00907***	0.05626***	0.00891***	0.00716
	(0.00056)	(0.01509)	(0.00056)	(0.02045)
$1(TimesRegistered = 6)$	0.01232***	0.07387***	0.01220***	-0.00166
	(0.00052)	(0.01414)	(0.00052)	(0.01947)
$1(TimesRegistered = 7)$	0.02044***	0.10717***	0.02020***	0.01248
	(0.00050)	(0.01358)	(0.00050)	(0.01832)
log(House Value)	-0.02686***	0.00000		
	(0.00051)	(.)		
log(Median Income)			-0.03377***	0.00000
			(0.00051)	(.)
$1(TimesRegistered = 2) \times$ log(House Value)		-0.00190		
		(0.00131)		
$1(TimesRegistered = 3) \times$ log(House Value)		-0.00209*		
		(0.00127)		
$1(TimesRegistered = 4) \times$ log(House Value)		-0.00595***		
		(0.00120)		
$1(TimesRegistered = 5) \times$ log(House Value)		-0.00390***		
		(0.00120)		
$1(TimesRegistered = 6) \times$ log(House Value)		-0.00502***		
		(0.00112)		
$1(TimesRegistered = 7) \times$ log(House Value)		-0.00714***		
		(0.00108)		
$1(TimesRegistered = 2) \times$ log(Median Income)				0.00111
				(0.00196)
$1(TimesRegistered = 3) \times$ log(Median Income)				0.00047
				(0.00197)
$1(TimesRegistered = 4) \times$ log(Median Income)				-0.00115
				(0.00183)
$1(TimesRegistered = 5) \times$ log(Median Income)				0.00003
				(0.00183)
$1(TimesRegistered = 6) \times$ log(Median Income)				0.00116
				(0.00174)
$1(TimesRegistered = 7) \times$ log(Median Income)				0.00049
				(0.00164)
N	2,512,764	2,179,555	2,512,764	2,179,555
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes	Yes
Tract× Sale Year	No	Yes	No	Yes
Race FE	Yes	Yes	Yes	Yes

Note: The table presents evidence that tract-level house value and median income are not driving factors of the phenomena that housing appreciation increases with political participation, ruling out the spatial sorting scenario - higher appreciation is observed in neighborhood with higher house value or income. Column (1)–(2) presents the effect of house value and column (3)–(4) presents the effect of median income. We present the effect of house value and income in general (since house value and median income are tract-level statistics from ACS, tract-level fixed effects are not absorbed) in column (1) and (3), while the heterogeneity of effects across groups is presented in column (2) and (4). standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA17. The Tract-Level Feature Effect on Housing Appreciation

	(1)	(2)	(3)	(4)	(5)	(6)
	Annual Return	Annual Return	Annual Return	Annual Return	Annual Return	Annual Return
1($TimesVoted = 1$)	-0.00126**	-0.00079	-0.00073	-0.00043	-0.00128**	0.00041
	(0.00062)	(0.00061)	(0.00062)	(0.00061)	(0.00062)	(0.00067)
1($TimesVoted = 2$)	0.00045	0.00102*	0.00119**	0.00159***	0.00042	0.00203***
	(0.00060)	(0.00060)	(0.00060)	(0.00060)	(0.00060)	(0.00066)
1($TimesVoted = 3$)	0.00089	0.00152***	0.00177***	0.00224***	0.00086	0.00176***
	(0.00058)	(0.00058)	(0.00058)	(0.00058)	(0.00058)	(0.00064)
1($TimesVoted = 4$)	0.00467***	0.00526***	0.00561***	0.00622***	0.00470***	0.00481***
	(0.00057)	(0.00057)	(0.00057)	(0.00057)	(0.00057)	(0.00063)
1($TimesVoted = 5$)	0.01118***	0.01168***	0.01221***	0.01292***	0.01123***	0.00988***
	(0.00058)	(0.00058)	(0.00058)	(0.00058)	(0.00058)	(0.00064)
Tract Average Education Years		-0.03551***				
		(0.00061)				
Tract Average Home Value			-0.02740***			
			(0.00059)			
Tract Average Education Years				-0.01366***		
				(0.00022)		
Property Locating in Urban Area					-0.02445***	
					(0.00075)	
N	1,669,422	1,669,422	1,669,422	1,669,422	1,669,422	1,348,146
Sale YM × FIPS FE	Yes	Yes	Yes	Yes	Yes	Yes
Sale Year × Tract FE	N/A	N/A	N/A	N/A	N/A	Yes
Birth Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: The table presents evidence that tract-level house value and median income are not driving factors of the phenomena that housing appreciation increases with electoral participation, ruling out the spatial sorting scenario - higher appreciation is observed in neighborhood with higher house value or income. Column (1)–(2) presents the effect of house value and column (3)–(4) presents the effect of median income. We present the effect of house value and income in general (since house value and median income are tract-level statistics from ACS, tract-level fixed effects are not absorbed) in column (1) and (3), while the heterogeneity of effects across groups is presented in column (2) and (4). standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA18. The Tract-Level Education Effect on Housing Appreciation

	(1)	(2)	(3)
	Annual Appreciation	Annual Appreciation	Annual Appreciation
$1(TimesRegistered = 2)$	0.00249***	0.01980**	0.00906
	(0.00062)	(0.00944)	(0.01070)
$1(TimesRegistered = 3)$	0.00599***	0.02000**	0.00316
	(0.00059)	(0.00897)	(0.01034)
$1(TimesRegistered = 4)$	0.00959***	0.03305***	0.02038**
	(0.00056)	(0.00845)	(0.00970)
$1(TimesRegistered = 5)$	0.00903***	0.01498*	0.00724
	(0.00056)	(0.00855)	(0.00964)
$1(TimesRegistered = 6)$	0.01230***	0.00787	0.00750
	(0.00052)	(0.00803)	(0.00922)
$1(TimesRegistered = 7)$	0.02037***	0.03750***	0.02075**
	(0.00050)	(0.00752)	(0.00870)
Tract Average Education Years	-0.01313***	-0.01226***	0.00000
	(0.00018)	(0.00053)	(.)
$1(TimesRegistered = 2) \times$ Tract Average Education Years		-0.00125*	-0.00055
		(0.00067)	(0.00075)
$1(TimesRegistered = 3) \times$ Tract Average Education Years		-0.00101	0.00010
		(0.00063)	(0.00073)
$1(TimesRegistered = 4) \times$ Tract Average Education Years		-0.00170***	-0.00087
		(0.00060)	(0.00068)
$1(TimesRegistered = 5) \times$ Tract Average Education Years		-0.00043	0.00002
		(0.00060)	(0.00068)
$1(TimesRegistered = 6) \times$ Tract Average Education Years		0.00032	0.00026
		(0.00057)	(0.00065)
$1(TimesRegistered = 7) \times$ Tract Average Education Years		-0.00124**	-0.00020
		(0.00053)	(0.00061)
N	2,935,537	2,935,537	2,590,682
Birth Year FE	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes
County × Sale Year-Month FE	Yes	Yes	Yes
Tract × Sale Year	No	No	Yes
Race FE	Yes	Yes	Yes

Note: The table presents the result of tract-level average education level's effect on house appreciation across different participation time with the merged appreciation data and American Consumer Survey data. Column (1) reports the baseline result of appreciation differential adding the average years of education of the tract as the additional control. Noting that years old education is a tract-level statistics, the fixed effect of sale year intersecting tract is not absorbed to avoid multicollinearity. Column (2) additional reports the heterogeneity in tract-level average years of education's effect on housing return. Column (3) reports the result adding the sale year intersecting tract fixed effect and the coefficient of tract-level average years of education becomes omitted due to perfect collinearity, yet the heterogeneity result remains. The standard errors in the parentheses are clustered by tract.***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA19. The Tract-Level Feature Effect on Housing Appreciation

	(1)	(2)
	Annual Appreciation	Annual Appreciation
1($TimesRegistered = 2$)	0.00258***	0.00244***
	(0.00062)	(0.00062)
1($TimesRegistered = 3$)	0.00604***	0.00602***
	(0.00059)	(0.00059)
1($TimesRegistered = 4$)	0.00969***	0.00964***
	(0.00056)	(0.00056)
1($TimesRegistered = 5$)	0.00886***	0.00908***
	(0.00056)	(0.00056)
1($TimesRegistered = 6$)	0.01201***	0.01239***
	(0.00052)	(0.00052)
1($TimesRegistered = 7$)	0.02053***	0.02035***
	(0.00051)	(0.00050)
Latino Fraction (0-100)		0.00022***
		(0.00002)
Black Fraction (0-100)		0.00044***
		(0.00002)
Unemployment Rate		0.00099***
		(0.00008)
Median Age		0.00030***
		(0.00003)
SNAP		0.00126***
		(0.00005)
House Owner Fraction		0.00028***
		(0.00001)
log(House Value)		0.00273***
		(0.00076)
log(Median Income)		-0.02325***
		(0.00108)
N	2,512,764	2,512,764
Birth Year FE	Yes	Yes
Holding Month FE	Yes	Yes
Race FE	Yes	Yes
County × Sale Year-Month FE	Yes	Yes
Tract× Sale Year FE	No	No

Note: The table presents the result of tract-level features' effect on house appreciation differentials. The data is the merge of our appreciation data and American Consumer Survey and the properties without tract are dropped. (This makes the result different from our benchmark estimation shown in Table 2 and 3.) Column (1) presents the baseline result for this table, following the regression specification in Table 2. Column (2) presents the result of appreciation differential controlling for tract-level features linearly. Sale Year × Tract fixed effect is omitted to avoid perfect collinearity. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA20. The Tract-Level Feature Effect on Housing Appreciation

	(1)	(2)
	Annual Appreciation	Annual Appreciation
1($TimesVoted = 1$)	-0.00126**	-0.00054
	(0.00062)	(0.00061)
1($TimesVoted = 2$)	0.00045	0.00137**
	(0.00060)	(0.00060)
1($TimesVoted = 3$)	0.00089	0.00188***
	(0.00058)	(0.00058)
1($TimesVoted = 4$)	0.00467***	0.00577***
	(0.00057)	(0.00057)
1($TimesVoted = 5$)	0.01118***	0.01224***
	(0.00058)	(0.00058)
Latino Fraction (0-100)		0.00021***
		(0.00002)
Black Fraction (0-100)		0.00048***
		(0.00003)
Unemployment Rate		0.00097***
		(0.00010)
Median Age		0.00029***
		(0.00004)
SNAP		0.00141***
		(0.00006)
House Owner Fraction		0.00031***
		(0.00002)
log(House Value)		0.00477***
		(0.00089)
log(Median Income)		-0.02596***
		(0.00129)
N	1,669,422	1,669,422
Sale YM × FIPS FE	Yes	Yes
Birth Year FE	Yes	Yes
Holding Month FE	Yes	Yes
Race FE	Yes	Yes

Note: The table presents the result of tract-level features' effect on house appreciation differentials. The data is the merge of our appreciation data and American Consumer Survey and the properties without tract are dropped. (This makes the result different from our benchmark estimation shown in Table 2 and 3.) Column (1) presents the baseline result for this table, following the regression specification in Table 2. Column (2) presents the result of appreciation differential controlling for tract-level features linearly. Sale Year × Tract fixed effect is omitted to avoid perfect collinearity. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA21. Annual Appreciation by Neighborhood Partisanship

	(1)	(2)	(3)	(4)
	All Voters	Democrat Voters	Republican Voters	Other Voters
	Annual Appreciation	Annual Appreciation	Annual Appreciation	Annual Appreciation
Black Fraction	0.00069***	0.00059***	0.00053***	0.00088***
	(0.00004)	(0.00006)	(0.00009)	(0.00007)
1($TimesRegistered = 2$)	0.00137**	0.00237*	-0.00078	0.00268***
	(0.00067)	(0.00125)	(0.00145)	(0.00103)
1($TimesRegistered = 3$)	0.00441***	0.00332***	0.00191	0.00687***
	(0.00064)	(0.00122)	(0.00135)	(0.00098)
1($TimesRegistered = 4$)	0.00919***	0.00811***	0.00668***	0.01149***
	(0.00060)	(0.00113)	(0.00130)	(0.00091)
1($TimesRegistered = 5$)	0.00875***	0.00705***	0.00685***	0.01118***
	(0.00061)	(0.00116)	(0.00130)	(0.00091)
1($TimesRegistered = 6$)	0.01210***	0.01046***	0.01120***	0.01420***
	(0.00056)	(0.00105)	(0.00118)	(0.00086)
1($TimesRegistered = 7$)	0.01936***	0.01568***	0.01811***	0.02105***
	(0.00054)	(0.00099)	(0.00112)	(0.00084)
1($TimesRegistered = 2$) × Black Frac	0.00011**	-0.00008	0.00031**	0.00012
	(0.00005)	(0.00008)	(0.00014)	(0.00009)
1($TimesRegistered = 3$) × Black Frac	0.00018***	0.00009	0.00027**	0.00015*
	(0.00005)	(0.00008)	(0.00013)	(0.00009)
1($TimesRegistered = 4$) × Black Frac	0.00010**	-0.00005	0.00051***	0.00000
	(0.00005)	(0.00007)	(0.00012)	(0.00008)
1($TimesRegistered = 5$) × Black Frac	0.00005	0.00001	0.00020*	0.00001
	(0.00005)	(0.00007)	(0.00012)	(0.00008)
1($TimesRegistered = 6$) × Black Frac	0.00002	-0.00006	0.00010	0.00004
	(0.00004)	(0.00006)	(0.00010)	(0.00007)
1($TimesRegistered = 7$) × Black Frac	0.00018***	0.00008	0.00051***	0.00019***
	(0.00004)	(0.00006)	(0.00010)	(0.00007)
N	3,061,965	710,594	876,994	1,344,991
Birth Year FE	Yes	Yes	Yes	Yes
Holding Month FE	Yes	Yes	Yes	Yes
County × Sale Year-Month	Yes	Yes	Yes	Yes

Note: The table presents the effect of the difference of tract-level black voter fraction, with black people fraction extracted from ACS 1-Year estimate of 2015. Column (1) reports the result for all voters. Column (2)–(4) report the results of voters with different political affiliation. Column (2) reports the result for Democrat voters. Column (3) reports the result for Republican voters and column (4) reports the result for other voters. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA22. Voting Intensity on Housing Appreciation: Before Voting Observation Period

	(1)	(2)
	Appreciation-to-Voting: Sell Before 2014	Voting-to-Appreciation: Buy After 2014
	Annual Appreciation	Annual Appreciation
$1(TimesRegistered = 2)$	-0.00027	0.00682***
	(0.00120)	(0.00137)
$1(TimesRegistered = 3)$	0.00284**	0.01133***
	(0.00117)	(0.00129)
$1(TimesRegistered = 4)$	0.00122	0.01842***
	(0.00105)	(0.00127)
$1(TimesRegistered = 5)$	0.00179*	0.01756***
	(0.00108)	(0.00128)
$1(TimesRegistered = 6)$	0.00366***	0.02221***
	(0.00097)	(0.00126)
$1(TimesRegistered = 7)$	0.00881***	0.03941***
	(0.00088)	(0.00128)
N	1,022,360	509,311
Birth Year FE	Yes	Yes
Holding Month FE	Yes	Yes
Race FE	Yes	Yes
County × Sale Year-Month FE	Yes	Yes
Tract × Sale Year FE	Yes	Yes

Note: The table presents the result of house appreciation differential in different period to discuss whether the appreciation differential is the result of active voters taking advantage of post Great Recession real estate market decline and whether our observations of political participation 2014-2020 is a robust way of reflecting a person's level of political participation in general. Column (1) presents the result for property sold before 2014. Column (2) presents the result for houses purchased in or after 2014, which exactly aligns of our observation of political participation with the house appreciation observations. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA23. Excess Appreciation Across Groups

	(1)	(2)	(3)
	Excess Appreciation	Excess Appreciation	Excess Appreciation
$1(TimesRegistered = 2)$	-0.00190**	-0.00114	0.00410***
	(0.00078)	(0.00087)	(0.00074)
$1(TimesRegistered = 3)$	-0.00197**	-0.00155*	0.00740***
	(0.00076)	(0.00085)	(0.00070)
$1(TimesRegistered = 4)$	-0.00032	0.00010	0.01174***
	(0.00088)	(0.00097)	(0.00068)
$1(TimesRegistered = 5)$	0.00048	0.00082	0.01175***
	(0.00074)	(0.00082)	(0.00067)
$1(TimesRegistered = 6)$	0.00000	-0.00005	0.01403***
	(0.00070)	(0.00078)	(0.00064)
$1(TimesRegistered = 7)$	0.00703***	0.00517***	0.01872***
	(0.00068)	(0.00078)	(0.00064)
N	1,731,504	1,422,546	1,167,164
Birth Year FE	No	Yes	Yes
Race FE	No	Yes	Yes
Holding Period	No	No	Yes
County FE	No	Yes	N/A
County × Sale Year-Month FE	No	No	Yes
Tract × Sale Year FE	No	No	Yes

Note: The table presents the result of excess return, measured by individual annual appreciation net of the annual appreciation suggested by tract-level house price index: $r^e = r - [(\frac{HPI^S}{HPI^B})^{\frac{1}{t^S - t^B}} - 1]$ under different fixed effect specifications. Column (1) presents the result of not absorbing any fixed effect as the baseline. Column (2) presents the results absorbing demographic fixed effects, including birth year, county and race. Column (3) presents the result with demographic fixed effects and spatial fixed effects with higher granularity, including County × Sale Year-Month, Sale Year × Tract and holding periods to control the neighborhood effects and timing of purchase. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA24. Homeownership/Merging Rate Differences Across Groups

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: Merging Rate for Appreciation Data				**Panel B: Merging Rate for CoreLogic Data**			
	Merge Rate	Merge Rate	Merge Rate	Merge Rate	Merge Rate	Merge Rate	Merge Rate	Merge Rate
$1(TimesRegistered = 2)$	0.00304***	0.00378***	0.00287***	0.00360***	0.01101***	0.01377***	0.01086***	0.01377***
	(0.00006)	(0.00007)	(0.00006)	(0.00007)	(0.00016)	(0.00017)	(0.00018)	(0.00017)
$1(TimesRegistered = 3)$	0.00556***	0.00611***	0.00547***	0.00602***	0.02116***	0.02314***	0.02090***	0.02314***
	(0.00008)	(0.00008)	(0.00008)	(0.00008)	(0.00018)	(0.00019)	(0.00020)	(0.00019)
$1(TimesRegistered = 4)$	0.00656***	0.00721***	0.00628***	0.00706***	0.03123***	0.03383***	0.03092***	0.03383***
	(0.00009)	(0.00009)	(0.00009)	(0.00009)	(0.00023)	(0.00022)	(0.00024)	(0.00022)
$1(TimesRegistered = 5)$	0.01525***	0.01425***	0.01491***	0.01387***	0.05918***	0.05396***	0.05839***	0.05396***
	(0.00014)	(0.00013)	(0.00014)	(0.00013)	(0.00063)	(0.00063)	(0.00063)	(0.00063)
$1(TimesRegistered = 6)$	0.02433***	0.02134***	0.02402***	0.02107***	0.09708***	0.08225***	0.09599***	0.08225***
	(0.00019)	(0.00016)	(0.00018)	(0.00015)	(0.00048)	(0.00034)	(0.00046)	(0.00034)
$1(TimesRegistered = 7)$	0.01238***	0.00430***	0.01134***	0.00351***	0.10493***	0.06148***	0.10150***	0.06148***
	(0.00014)	(0.00009)	(0.00013)	(0.00009)	(0.00072)	(0.00041)	(0.00067)	(0.00041)
Constant	0.01151***	0.01613***	0.01208***	0.01658***	0.06461***	0.08579***	0.06637***	0.08579***
	(0.00010)	(0.00009)	(0.00010)	(0.00008)	(0.00047)	(0.00026)	(0.00039)	(0.00026)
N	114,987,981	90,556,143	114,987,768	90,555,961	114,987,981	90,555,961	114,987,768	90,555,961
FIPS	Yes	Yes	No	No	Yes	Yes	No	No
Tract	No	No	Yes	Yes	No	No	Yes	Yes
Gender	No	Yes	No	Yes	No	Yes	No	Yes
Birth Year	No	Yes	No	Yes	No	Yes	No	Yes
Race	No	Yes	No	Yes	No	Yes	No	Yes

Note: The table reports the merging rate of L2 with CoreLogic transaction data and appreciation data to check whether the voters in L2 data with different number of participation time are merging with CoreLogic data at the rate. Panel A reports the results of how L2 data is merged with appreciation data (the observations with both valid purchase and sale records under the same name for the same property). Columns (1)–(2) report the result absorbing county fixed effects and columns (3)–(4) report the result absorbing tract fixed effects. Panel B reports the results of how L2 data is merged with CoreLogic transaction deeds data. Columns (5)–(6) report the result with county-level fixed effects and columns (7)–(8) report the result with tract-level fixed effects. The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA25. Balance Table: Income Differences Across the Electorate

	(1) log(Income)	(2) log(Income)	(3) log(Income)	(4) log(Income)
Panel A: Income Difference, Participation Measured by Registration				
$1(TimesRegistered = 2)$	0.00398	0.00502	-0.00419	-0.00360
	(0.00350)	(0.00377)	(0.00521)	(0.00584)
$1(TimesRegistered = 3)$	0.00038	0.00336	-0.01141**	-0.00944*
	(0.00331)	(0.00357)	(0.00495)	(0.00554)
$1(TimesRegistered = 4)$	-0.00555*	-0.00229	-0.01652***	-0.01274**
	(0.00306)	(0.00333)	(0.00465)	(0.00525)
$1(TimesRegistered = 5)$	-0.00508	0.00267	-0.02058***	-0.01569***
	(0.00312)	(0.00333)	(0.00467)	(0.00526)
$1(TimesRegistered = 6)$	-0.01085***	-0.00675**	-0.01930***	-0.01545***
	(0.00287)	(0.00311)	(0.00438)	(0.00498)
$1(TimesRegistered = 7)$	-0.03580***	-0.03603***	-0.01911***	-0.01901***
	(0.00268)	(0.00291)	(0.00425)	(0.00485)
N	1,901,352	1,552,890	851,904	681,356
Panel B: Education Difference, Participation Measured by Voting				
$1(TimesVoted = 1)$	0.01410***	0.01613***	0.00730**	0.01186***
	(0.00298)	(0.00324)	(0.00355)	(0.00403)
$1(TimesVoted = 2)$	0.01241***	0.01582***	0.00882**	0.01334***
	(0.00297)	(0.00324)	(0.00356)	(0.00394)
$1(TimesVoted = 3)$	-0.00024	0.00504*	0.01219***	0.01975***
	(0.00280)	(0.00303)	(0.00329)	(0.00373)
$1(TimesVoted = 4)$	-0.00777***	-0.00129	0.01098***	0.02078***
	(0.00279)	(0.00300)	(0.00324)	(0.00365)
$1(TimesVoted = 5)$	-0.00524*	0.00022	0.02343***	0.03354***
	(0.00286)	(0.00306)	(0.00335)	(0.00376)
N	1,349,460	1,105,424	1,235,551	994,743
Birth Year FE	Yes	Yes	Yes	Yes
Race FE	No	Yes	No	Yes
Gender FE	No	Yes	No	Yes
FIPS FE	Yes	Yes	N/A	N/A
Sale YM × FIPS FE	No	No	Yes	Yes
Sale Year × Tract	No	No	Yes	Yes
Holding Month	No	No	Yes	Yes

Note: The table presents the result of income differences across voters with different levels of political participation, with the merge between appreciation data and Home Mortgage Disclosure Act data, which records the income of the homeowner. Panel A reports the results using voter registration frequency between 2014 and 2020 as the measurement of democratic participation, while Panel B reports the results using frequencies of casting a ballot at the presidential election from 2000 to 2016 as the measurement of participation. Column (1) presents the result with baseline fixed effects: birth year and county ,and column (2) presents the result with extra gender and race fixed effects. Column (3) presents the result of baseline fixed effects, adding a higher granular spatial × time fixed effect to control the neighborhood effects and timing of purchase and column (4) adds extra fixed effects on race and gender, comparing with column (3). The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA26. Balance Table: Education Differences Across the Electorate

	(1) Years of Education	(2) Years of Education	(3) Years of Education	(4) Years of Education
Panel A: Education Difference, Participation Measured by Registration				
$1(TimesRegistered = 2)$	0.03242***	0.03364***	0.06155***	0.07406***
	(0.01102)	(0.01218)	(0.01704)	(0.02031)
$1(TimesRegistered = 3)$	0.11471***	0.12074***	0.14915***	0.16289***
	(0.01071)	(0.01180)	(0.01651)	(0.01975)
$1(TimesRegistered = 4)$	0.17131***	0.18315***	0.19848***	0.22362***
	(0.01009)	(0.01105)	(0.01567)	(0.01862)
$1(TimesRegistered = 5)$	0.27526***	0.29469***	0.27960***	0.30936***
	(0.01042)	(0.01145)	(0.01603)	(0.01913)
$1(TimesRegistered = 6)$	0.40740***	0.42249***	0.38264***	0.42132***
	(0.00953)	(0.01049)	(0.01472)	(0.01767)
$1(TimesRegistered = 7)$	0.60374***	0.60993***	0.56598***	0.59544***
	(0.00868)	(0.00953)	(0.01373)	(0.01641)
N	1,166,795	955,925	743,357	551,119
Panel B: Education Difference, Participation Measured by Voting				
$1(TimesVoted = 1)$	0.29504***	0.30512***	0.23464***	0.24737***
	(0.01145)	(0.01248)	(0.02008)	(0.02427)
$1(TimesVoted = 2)$	0.50747***	0.53289***	0.39215***	0.43306***
	(0.01127)	(0.01221)	(0.02003)	(0.02434)
$1(TimesVoted = 3)$	0.63758***	0.68137***	0.48102***	0.53283***
	(0.01059)	(0.01147)	(0.01891)	(0.02288)
$1(TimesVoted = 4)$	0.78243***	0.82120***	0.60127***	0.65951***
	(0.01021)	(0.01102)	(0.01841)	(0.02238)
$1(TimesVoted = 5)$	0.92345***	0.95927***	0.71024***	0.76303***
	(0.01024)	(0.01104)	(0.01834)	(0.02236)
N	759,460	623,860	395,043	283,442
Birth Year FE	Yes	Yes	Yes	Yes
Race FE	No	Yes	No	Yes
Gender FE	No	Yes	No	Yes
FIPS FE	Yes	Yes	N/A	N/A
Sale YM × FIPS FE	No	No	Yes	Yes
Tract × Sale Year FE	No	No	Yes	Yes
Holding Month	No	No	Yes	Yes

Note: The table presents the result of years of education differences across voters with different levels of political participation. Education is identified by L2 data, as it contains a variable for the level of education. It's top-encoded by levels of education and we assign the years of education accordingly. Panel A reports the results using voter registration frequency between 2014 and 2020 as the measurement of democratic participation, while Panel B reports the results using frequencies of casting a ballot at the presidential election from 2000 to 2016 as the measurement of participation. Column (1) presents the result with baseline fixed effects: birth year and county and column (2) presents the result with extra gender and race fixed effects. Column (3) presents the result of baseline fixed effects, adding a higher granular spatial × time fixed effect to control the neighborhood effects and timing of purchase and column (4) adds extra fixed effects on race and gender, comparing with column (3). The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA27. Balance Table: Wealth Differences Across the Electorate

	(1) Net Wealth (in $10,000)	(2) Net Wealth (in $10,000)	(3) Net Wealth (in $10,000)	(4) Net Wealth (in $10,000)
Panel A: Net Wealth Difference, Participation Measured by Registration				
$1(TimesRegistered = 2)$	0.47737	1.27920	-0.05332	0.79458
	(0.79325)	(0.86831)	(1.23811)	(1.38080)
$1(TimesRegistered = 3)$	0.19095	1.20534	0.30794	1.08277
	(0.81553)	(0.89977)	(1.16117)	(1.35494)
$1(TimesRegistered = 4)$	-1.08626	-0.30646	-1.87223	-2.18891*
	(0.73822)	(0.78590)	(1.24214)	(1.24471)
$1(TimesRegistered = 5)$	0.00539	0.99345	-1.44728	-0.60828
	(0.78623)	(0.87906)	(1.19394)	(1.26384)
$1(TimesRegistered = 6)$	1.07517	1.63378**	-0.61635	-0.61260
	(0.76703)	(0.82501)	(1.21719)	(1.25392)
$1(TimesRegistered = 7)$	-1.01407	-0.50624	-1.02155	-0.42697
	(0.67214)	(0.72611)	(1.08284)	(1.07692)
N	18,222	15,980	12,626	10,591
Panel B: Net Wealth Difference, Participation Measured by Voting				
$1(TimesVoted = 1)$	1.34390	1.11553	-0.70560	-0.58564
	(0.94423)	(1.07882)	(1.51687)	(1.47215)
$1(TimesVoted = 2)$	1.00096	0.81809	0.14082	0.18173
	(0.79213)	(0.84267)	(1.30852)	(1.28193)
$1(TimesVoted = 3)$	-0.17584	-0.68503	-0.51597	-0.53385
	(0.74402)	(0.82772)	(1.32289)	(1.31622)
$1(TimesVoted = 4)$	0.73423	0.55427	-0.05442	-0.01194
	(0.82498)	(0.89715)	(1.37818)	(1.36646)
$1(TimesVoted = 5)$	-0.16453	-0.68435	-0.74813	-0.70213
	(0.72732)	(0.79756)	(1.26043)	(1.27577)
N	13,352	11,810	8,086	8,086
Birth Year FE	Yes	Yes	Yes	Yes
Race FE	No	Yes	No	Yes
Gender FE	No	Yes	No	Yes
FIPS FE	Yes	Yes	N/A	N/A
Sale YM × FIPS FE	No	No	Yes	Yes
Tract × Sale Year FE	No	No	Yes	Yes
Holding Month	No	No	Yes	Yes

Note: The table presents the result of net wealth in $10,000 differences across voters with different levels of political participation, with the merge between appreciation data and North Carolina credit data. Panel A reports the results using voter registration frequency between 2014 and 2020 as the measurement of democratic participation, while Panel B reports the results using frequencies of casting a ballot at the presidential election from 2000 to 2016 as the measurement of participation. Column (1) presents the result with baseline fixed effects: birth year and county, and column (2) presents the result with extra gender and race fixed effects. Column (3) presents the result of baseline fixed effects, adding a higher granular spatial × time fixed effect to control the neighborhood effects and timing of purchase and column (4) adds extra fixed effects on race and gender, comparing with column (3). The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.

Table IA28. Balance Table: Credit Performance Differences Across the Electorate

	(1) Credit Score	(2) Liabilities	(3) In 30 Days	(4) In 60 Days	(5) In 90 Days	(6) Bankruptcies	(7) Foreclosures
Panel A: Credit Performance Difference, Participation Measured by Registration							
$1(TimesRegistered = 2)$	3.17854	-0.09540	0.00160	-0.00884	-0.01991	-0.00150	0.00715
	(4.70260)	(1.46009)	(0.03820)	(0.02652)	(0.01871)	(0.00998)	(0.02870)
$1(TimesRegistered = 3)$	9.29843*	0.69263	-0.01398	-0.00662	-0.02398	-0.01665*	-0.01119
	(4.79091)	(1.42513)	(0.03722)	(0.02360)	(0.01686)	(0.00910)	(0.03048)
$1(TimesRegistered = 4)$	5.18693	1.28991	-0.02069	-0.01532	-0.02180	0.00126	-0.02892
	(4.66905)	(1.52240)	(0.03508)	(0.02431)	(0.01777)	(0.01035)	(0.02879)
$1(TimesRegistered = 5)$	5.74789	1.18093	0.02375	0.00516	-0.01888	0.00072	-0.00788
	(4.94517)	(1.32367)	(0.03625)	(0.02435)	(0.01765)	(0.00920)	(0.02725)
$1(TimesRegistered = 6)$	9.48508**	1.12048	-0.00711	0.00150	-0.02861*	-0.00702	-0.02528
	(4.64337)	(1.46903)	(0.03558)	(0.02397)	(0.01674)	(0.00898)	(0.02698)
$1(TimesRegistered = 7)$	13.77815***	0.28873	-0.03724	-0.01367	-0.02792*	-0.01449*	-0.02136
	(4.56268)	(1.33170)	(0.03434)	(0.02254)	(0.01585)	(0.00867)	(0.02650)
N	21,165	21,165	21,165	21,165	21,165	21,165	21,165
Panel B: Credit Performance Difference, Participation Measured by Voting							
$1(TimesVoted = 1)$	0.93318	0.22719	0.03320	0.01228	-0.00361	0.01807**	-0.02404
	(3.67979)	(1.11239)	(0.02966)	(0.02107)	(0.01298)	(0.00788)	(0.02205)
$1(TimesVoted = 2)$	2.86719	1.65394	0.00147	0.00352	-0.00681	0.01169	-0.02989
	(3.52671)	(1.22224)	(0.02948)	(0.02019)	(0.01357)	(0.00799)	(0.02059)
$1(TimesVoted = 3)$	2.11687	1.00768	-0.02870	-0.01634	-0.01228	0.01502**	-0.03869*
	(3.60508)	(1.04051)	(0.02921)	(0.02038)	(0.01265)	(0.00758)	(0.02082)
$1(TimesVoted = 4)$	6.60850*	0.40487	-0.03899	-0.00063	-0.00516	0.00301	-0.01492
	(3.53851)	(1.14650)	(0.02771)	(0.02000)	(0.01350)	(0.00777)	(0.02185)
$1(TimesVoted = 5)$	10.12534***	0.18880	-0.03590	-0.02304	-0.01239	0.00812	-0.01157
	(3.58739)	(1.21655)	(0.02859)	(0.02030)	(0.01370)	(0.00787)	(0.02077)
N	8,091	8,091	8,091	8,091	8,091	8,091	8,091
Sale YM × FIPS FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tract × Sale Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Holding Month	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Race FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gender FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: The table presents the result of credit score differences across voters with different levels of political participation, with the merge between appreciation data and North Carolina credit data. Panel A reports the results using voter registration frequency between 2014 and 2020 as the measurement of democratic participation, while Panel B reports the results using frequencies of casting a ballot at the presidential election from 2000 to 2016 as the measurement of participation. Column (1) presents the result with baseline fixed effects: birth year and county, and column (2) presents the result with extra gender and race fixed effects. Column (3) presents the result of baseline fixed effects, adding a higher granular spatial × time fixed effect to control the neighborhood effects and timing of purchase and column (4) adds extra fixed effects on race and gender, comparing with column (3). The standard errors in the parentheses are clustered by tract. ***,** and * indicate significance at 1%, 5% and 10% level respectively.