

# Does Property Ownership Lead to Participation in Local Politics? Evidence from Property Records and Meeting Minutes\*

Jesse Yoder<sup>†</sup>

Department of Political Science  
Stanford University

August 21, 2019

## Abstract

Homeowners and renters have participated in politics at different rates throughout American history, but does becoming a property owner motivate an individual to access forms of political participation likely to affect policy? I combine deed-level property ownership records in California and Texas with an original dataset on individual comments in local city council meetings to study the role of property ownership in shaping costly forms of political behavior. I document inequalities in who participates at city council meetings: while homeowners are over-represented in some areas, they are under-represented in others. I also link property records to individual-level contribution records and administrative voter files and find that becoming a property owner increases an individual's political activity. Over and above voting in local elections, property ownership motivates individuals to participate in more costly ways: they become more likely to participate in local city council meetings and donate to candidates in state and federal elections. These findings illustrate how the financial stakes that accompany homeownership lead property owners to become active in local politics.

---

\*For comments and suggestions, the author thanks Justin Grimmer, Andy Hall, Zhao Li, Dan Thompson, Matt Tyler, participants in Stanford's Democracy Policy Lab meetings, and participants at the 2019 Midwest Political Science Association conference.

<sup>†</sup>Jesse Yoder is a Ph.D. Candidate in the Department of Political Science at Stanford University ([yoderj@stanford.edu](mailto:yoderj@stanford.edu); 616 Serra Mall, Stanford, CA 94305).

“It is in our national interest that more people own their own home. After all, if you own your own home, you have a vital stake in the future of our country.”

–President George W. Bush, December 16, 2003<sup>1</sup>

## 1 Introduction

Cleavages between property owners and non-owners have defined many political systems, dating back centuries.<sup>2</sup> In the United States, property ownership has long been a central component of American political thought.<sup>3</sup> In fact, until the middle of the nineteenth century, owning property was a formal prerequisite for being able to cast a ballot in many states.<sup>4</sup> On one hand, with the expansion of the franchise to non-property owners and decreasing barriers to participation, modern-day renters might have similar opportunities as homeowners to have their preferences expressed in public policy. On the other hand, the empirical reality is that property owners and non-owners participate in politics at very different rates, raising the question about how property owners might be advantaged in electoral politics.<sup>5</sup>

Despite these long-standing differences, there remains little empirical evidence about how becoming a property owner changes an individual’s political behavior in the US. While the participation of homeowners could be the result of pre-existing socioeconomic differences between homeowners and renters (Verba, Schlozman, and Brady 1995), the economic incentives associated with property ownership could also be driving part of these differences. An emerging literature on housing and political behavior uses survey experiments to understand attitudes of homeowners and renters toward local housing development (e.g., Hankinson 2018; Marble and Nall 2018; Wong 2018). Einstein, Palmer, and Glick (2018*b*) finds that

---

<sup>1</sup><https://georgewbush-whitehouse.archives.gov/news/releases/2003/12/20031216-9.html>

<sup>2</sup>See, for example, Plato’s *The Laws*, Aristotle’s *Politics*, and John Stuart Mill’s *Considerations of Representative Government*.

<sup>3</sup>For example, see James Madison’s *Federalist No. 10*.

<sup>4</sup>For a review of suffrage expansion in the United States, see Engerman and Sokoloff (2005).

<sup>5</sup>Inequality in political participation on the basis of property ownership relates to one of the longest running literatures in political economy, which explores distributional conflict between individuals with wealth and those without it (e.g., Meltzer and Richard 1981; Acemoglu and Robinson 2005).

participants in local planning and zoning board meetings are more likely to be older, male, and regular voters, on average, and they overwhelmingly oppose local housing development.<sup>6</sup> Hall and Yoder (2018) links property records to voter files in Ohio and North Carolina, finding that homeownership leads individuals to participate more in local elections, particularly when zoning issues are on the local ballot.

Adding to this burgeoning literature, I answer the following question: How does becoming a property owner shape individuals' participation in local politics? Descriptively, homeowners and renters in the United States differ on several attributes. Figure 1 illustrates a few notable differences between homeowners and renters over the last fifty or more years, using data from American National Election Studies (ANES) respondents. In the top left figure, I show that homeowners – plotted in light gray – are older on average than renters, plotted in black. This age difference has even widened slightly over the last several decades. In the top right figure, I show that homeowners are more likely than renters to report an income in the top tercile of the income distribution. Aside from compositional differences, homeowners and renters participate in politics in different rates.<sup>7</sup>

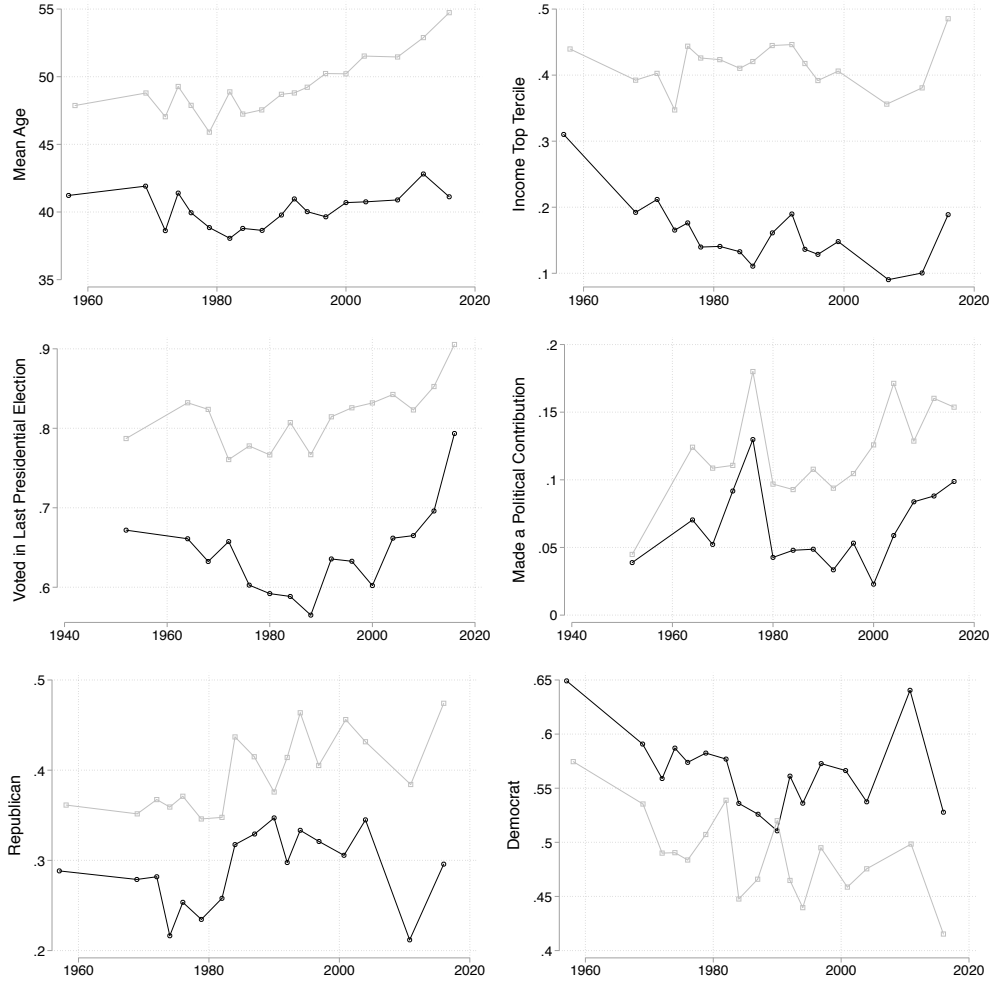
To move beyond descriptive differences and test the causal link between property ownership and political behavior, I combine individual-level administrative data on property records, voting, political contributions, and an original dataset on public statements made by individuals at local city council meetings. The analyses span from 1997 at the earliest to 2018 at the latest and include over 2.8 million unique individuals from California and Texas, which offers enormous variation across place and time. Using a series of difference-in-differences designs, I find that becoming a property owner increases many forms of political activity: individuals become more likely to participate in local city council meetings, vote in

---

<sup>6</sup>This raises concerns that the structure of local meetings presents barriers to entry for disadvantaged groups (Fung 2006). Moreover, restrictions on development also correlate with racial segregation in American cities (Trounstine 2018).

<sup>7</sup>The middle two plots in Figure 1 show that homeowners, again in light gray, are more likely to report having voted in the most recent presidential election and to report having made a political contribution. The final two plots show that homeowners and renters seem to have different political preferences, on average. Homeowners self-identify as Republicans at higher rates than renters, while they self-identify as Democrats at lower rates than renters.

**Figure 1 – Descriptive Differences between Homeowners and Renters in the United States, ANES Cumulative File.** Each plot shows a scatter plot with a linear fit, shown separately for homeowners in light gray and renters in black in each plot. Year is on the x-axis.



local elections, and donate to candidates in state and federal elections. A series of follow-up analyses suggests that these changes cannot be wholly attributed to changes in wealth or age, two important potential time-varying confounders. I also document massive inequalities in the types of individuals who participate in local political meetings compared to those who do not. Consistent with previous research, I find that participants in local meetings are more likely to be men, regular voters, and older, on average (Einstein, Palmer, and Glick 2018*b*). Contrary to previous findings, however, I find that the homeowners in local meetings are over-represented in some cities, while they are under-represented in others. I show that these

differences are likely a function of homeowners and renters prioritizing different local issues, coupled with differing topic salience across cities.<sup>8</sup>

Studying individual-level comments and donations also provides other advantages over simply examining turnout. Individuals in large electorates are unlikely to cast a pivotal vote regardless of their homeownership status, so homeownership might only increase turnout if it lowers the costs of participation (Downs 1957; Riker and Ordeshook 1968). Given that comments in local meetings are an important way constituents provide information to local politicians (Einstein, Glick, and LeBlanc 2017), it is likely a more effective and consequential form of political participation than voting (Brady, Verba, and Schlozman 1995) or making a political contribution (Ansolabehere, De Figueiredo, and Snyder 2003). The text of public comments in local meetings also sheds light on what motivates individuals to participate in local politics. Using these statements, I find that homeowners and renters focus on different local issues, even after controlling for differences in topic frequency across cities and over time. Homeowners prioritize issues related to housing, development, and traffic, while renters prioritize health services, policing, and public finance.<sup>9</sup>

Overall, the evidence suggests that becoming a property owner changes how an individual participates in local politics – and that it boosts their involvement in making costly efforts to shape local politics in the real world. Normatively, these findings illustrate an important trade-off. On one hand, it might be desirable that the structure of local politics in the US encourages homeowners – who have an important share of their wealth concentrated in an immobile asset, and therefore have a large financial stake in the local community – to participate. On the other hand, given the baseline level of wealth necessary to become a property owner, the increase in participation among those who become property owners

---

<sup>8</sup>Rising housing wealth tends to be concentrated in major coastal markets, and “it is concentrated among the richest members of older cohorts – that is, on those who already owned homes several decades ago, before binding constraints on new housing construction were imposed.” (Glaeser and Gyourko 2018).

<sup>9</sup>This also relates to a recent literature, developed mostly in economics, that maps an individual’s portfolio of assets to their political views (e.g., Jha and Shayo 2019).

seems to come at the cost of an electorate that is representative of the broader population, and that property ownership seems to lead to participatory inequalities in local politics.

## 2 Data on Homeownership and Political Behavior

To study the effect of homeownership on political behavior, I use individual-level administrative data from four sources. The first dataset has information on property ownership, collected from public records in each county in the United States and provided by CoreLogic, a private data vendor. The dataset includes information about individual properties, including property type, full name of the property’s owner(s), full address, sale date, sale price, assessed value, and other information in each year from 2000-2017. I combine this information with political behavior from three other sources: (1) an original dataset on individuals’ public statements in local city council meetings in Dallas, Texas; Houston, Texas; and Palo Alto, California; assembled from publicly available meeting transcripts, (2) administrative voter files from the entire states of California and Texas, provided by voter file vendor L2, and (3) political contributions in state and federal elections from the Database on Ideology, Money in Politics, and Elections (DIME) (Bonica 2014, 2016).

Each of these datasets provides unique advantages, which I summarize in Table 1. The voter file has individual turnout in local elections over a long period of time, from 2000-2017. That said, the disadvantage is that turnout, even in local elections, is one of the least costly observable forms of political participation, and because the probability of casting a pivotal vote in an election does not increase with property ownership, it is not obvious why homeownership should increase this form of participation – unless property ownership decreases the costs of voting (Downs 1957; Riker and Ordeshook 1968). Vote choice is also anonymous, so it is difficult to infer how individuals’ political preferences might be changing by only observing the turnout decision.

**Table 1 – Information Included in Various Data Sources.** Each column denotes a data source, and checkmarks indicate features or observable information in that data source.

	Property Records	Voter File	Contributions	Local Meetings
Individual-level	✓	✓	✓	✓
Full Name	✓	✓	✓	✓
Full Address	✓	✓	✓	✓
Statewide Coverage	✓	✓	✓	
Homeownership Status	✓			
Local Political Participation		✓		✓
National Political Participation		✓	✓	
Political Preferences			✓	✓
Date of Birth		✓		
Gender		✓		
Party Affiliation		✓		

**Local Meetings Data and Case Selection** For a more costly form of participation, I link individuals to political contribution records in state and federal elections from 2000-2014, and I also assemble an original dataset on public statements individuals make at local city council meetings. I collect city council meeting transcripts from Dallas, Texas (1997-2018), Houston, Texas (2004-2014), and Palo Alto, California (2002-2010). I chose these cities because of data availability. To be able to merge individual comments to the voter file and property records requires name and address, and most city council meeting transcripts often only include the full name of each individual who comments. Nonetheless, these cases provide some interesting variation in the salience of housing as a local issue. Palo Alto, California has become a focal point for the rise of “not in my backyard” politics, or NIMBYism, where homeowners seek to restrict local housing development to protect their home values, even in cases where these restrictions conflict with partisan ideology (e.g., Marble and Nall 2018). Becoming a homeowner might increase participation at local meetings in settings like Palo Alto, where housing development is a central feature of local political debate, compared to settings like Dallas and Houston. The cities also offer considerable variation in size, population characteristics, and government characteristics.<sup>10</sup> Future work should expand the

<sup>10</sup>Dallas and Houston are large cities with larger African-American population populations (24.3% and 22.9%, respectively) than Palo Alto (1.2%). Palo Alto has a higher homeownership rate (55%) than Dallas (42%) and Houston (43%). While Houston operates with a mayor-council form of government, Palo Alto and Dallas have a council-manager form of government.

number of cities, perhaps at an aggregated level, to understand which features of cities influence the local meeting agenda and what motivates participation in local meetings.

For each city, I observe the full name and address of each individual who makes a public statement at a city council meeting along with the topic and, in many cases, the full text of their actual spoken statement. In other cases, meeting transcripts provide a summary of the public speaker's comments. Using these transcripts, I code every instance of a public comment, totaling over 27,000 comments across the three cities, and I preserve the name and address of each commenter in order to link them to the voter file, property records, and donation records.

## **2.1 Linking Individuals Across Data Sources**

I link individuals using full name and address, which are available in each of the four main data sources: (1) the administrative voter file, (2) property records, (3) individual contribution records, and (4) city council meeting participation. In this section, I describe the procedure for linking individuals across these four sources.

### **2.1.1 Administrative Voter File**

I begin with the full voter file for the states of California and Texas.<sup>11</sup> For each individual, the file contains full name and address, registration date, date of birth, gender, party affiliation, and turnout history in local and national elections from 2000-2017.

### **2.1.2 Linking Individuals to Property Records**

I link the voter file with property tax and deed records for the entire states of California and Texas. The property records include the full name of each property's owner(s), address, property type, sale date, sale price, assessed value, and other information. To pre-process the property records, I subset to owners of the following property types: single family residence,

---

<sup>11</sup>I use the voter file current as of September 2018 for each state.



condominium, duplex, and apartment. If properties have two owners, I treat each owner as a unique record for the purposes of the merge.<sup>12</sup> Following recent work in political science on merging individuals across large scale administrative datasets (Enamorado, Fifield, and Imai 2019), I implement a probabilistic record linking procedure, merging on exactly on last name, zip code, and city, while allowing for probabilistic linking on first name, first initial, and address.<sup>13</sup> I select the best match using this procedure, requiring that individuals match exactly on last name, zip code, and city, and either (1) exactly on first name or (2) exactly on address and first initial in order to be declared a match. The merge criterion is relatively constrained, so individuals that I match to the property records and identify as homeowners are very likely to be homeowners. To the extent that there are false negatives – or “spillover” between the treatment and control group, where individuals who become homeowners are coded as renters – this would bias effects of becoming a homeowner toward zero.<sup>14</sup> Overall, many individuals in the voter file are identified as homeowners: 36.95% of individuals in the voter file are homeowners based on this linkage procedure.<sup>15</sup> Individuals in the voter file who do not match to the property records using this procedure are coded as non-homeowners.

### 2.1.3 Linking Individuals to Political Contribution Records

Next, I merge in political contribution records for the entire states of California and Texas for each year from 2000 through 2014. These records contain itemized political contributions

---

<sup>12</sup>I also keep unique property owners that do not merge to the voter file in the analyses, coding them as not having voted. In some analyses I subset to individuals based on information only available in the voter file, in which case property owners that fail to merge to the voter file are dropped.

<sup>13</sup>Recent work in political science finds that using this linking procedure often outperforms deterministic procedures when merging across large scale administrative datasets (Enamorado, Fifield, and Imai 2019). Specifically, I use the **dtalink** package in Stata to implement the merge. Using probabilistic linking presents a trade-off: while deterministic procedures limit the potential for false positives, they sacrifice in terms of the merge rate and false negative rate because they require exact matches on all variables used in the merge. Probabilistic procedures increase the number of potential matches and bring down the false negative rate – at the risk of increasing the number of false positives. Because the false positive rate is often low when linking large administrative datasets with a lot of information (full name and address), I opt to use the probabilistic procedure in order to increase the match rate.

<sup>14</sup>This assumes that the true effect and the probability of not being linked are uncorrelated.

<sup>15</sup>The merge rates in California and Texas are very similar, 37.36% and 36.00%, respectively.

to candidates or committees for federal and state offices.<sup>16</sup> Federal races include Presidential, US House, and US Senate races, while state races include elections for Governor and state legislature. Because the contributions data contains much of the same information as the voter file and property records, namely full name and reported address, I use the same probabilistic linkage procedure as the one described for linking individuals to property records. I select the best match using this procedure, again requiring that individuals match exactly on last name, zip code, and city, as well as either (1) exactly on first name or (2) exactly on address and first initial in order to be linked. This outputs the full population of registered voters and property owners, but now includes information on whether the individual made a contribution in each year from 2000 through 2014, coded as a 0 if I fail to find a contribution record for that individual. For those who made a donation, I observe the amount of all donations, along with the office, party, and ideology of the receiving candidates.<sup>17</sup> Political donations in a given year are quite rare: about 0.5% of person-years in the voter file make an itemized contribution, overall.<sup>18</sup>

#### **2.1.4 Linking Individuals to City Council Meeting Participation**

Finally, I link individuals to an original dataset on public participation in local city council meetings. Each observation in the meetings data is a comment, accompanied by the individual's full name, address, zip code, and date of the local meeting.<sup>19</sup> I pre-process the meetings data by collapsing the dataset so that the unit is a person-year, and I generate a count of the total number of comments an individual makes in that year. I again rely on the linkage procedure described above, with one exception. To accommodate occasional missingness in the zip code of the commenters at city council meetings, I match exactly on last name and

---

<sup>16</sup>I choose to focus on California and Texas not only because they are large states, but because they also have the most complete records on contributions to candidates and committees for state offices.

<sup>17</sup>To measure ideology, I use the campaign finance (CF) scores assigned to candidates, which are constructed using campaign finance data (Bonica 2014).

<sup>18</sup>The merge rates are virtually identical in California and Texas. About 0.5% of person-years are coded as having made a donation in each state.

<sup>19</sup>Zip code is available for the city council meeting transcripts in Dallas and Houston, but only name and address are available in the Palo Alto meeting transcripts.

city, but probabilistically on first name, first initial, address, and zip code. Pooling all three cities together, about 0.47% of residents make a comment at a local city council meeting in a given year. This rate is higher in Palo Alto (1.0%) compared to Dallas (0.5%) and Houston (0.4%).

### 2.1.5 Summary

The final dataset includes over 2.8 million unique registered voters in California and Texas, whose vote history is observed since 2000.<sup>20</sup> This dataset has two main limitations: first, the voter file is only observed at one point in time, September 2018, so I do not observe individuals who were registered but purged from the voter file before this date. If homeowners are purged from the voter at different rates than non-homeowners, this would induce bias in the estimated effect of homeownership. Hall and Yoder (2018) shows that the results for a similar analysis in North Carolina, where voter file histories are available, are very similar when including and excluding purged voters – so this potential source of bias is unlikely to substantially affect the results. The second main limitation is the possibility of merge error. The false positive rate, where a match contains two different individuals individuals are linked, is often very low when using high-quality administrative datasets containing full name and address (Ansolabehere and Hersh 2017; Enamorado, Fifield, and Imai 2019).<sup>21</sup> The main concern for this merge would be false negatives, where records in different datasets correspond to the same individual but they are not matched. Because these datasets are high quality, have low missingness, and are unlikely to have widespread misspellings in name

---

<sup>20</sup>I code an individual-year as a 0 for voting, donating, and commenting if I do not observe them as having participated in a given year. If individuals move in from out of state, however, it is possible that they had participated previously in another state, so they should be coded as missing rather than as having not participated. If this is the case, I would be overestimating the effect of becoming a property owner on political behavior. To limit this potential bias, throughout the analyses I estimate the effects only among those who have been registered in the state since the start of the panel so that I know that their behavior was observable over the course of the panel.

<sup>21</sup>Moreover, Ansolabehere and Hersh (2017) show that nearly all registered voters in Texas are unique within last name, first name, zip code, and street number, so almost no false positives will be generated from duplicate records in the voter file for the variables I use for the merge.

and address, the false negative rate should be low compared to most probabilistic linking across administrative datasets.

### 3 Characterizing Who Participates in Local Meetings

With the resulting dataset, I characterize the types of individuals who participate in local city council meetings compared to other residents who do not. Figure 2 compares attributes of individuals who spoke at a Palo Alto city council meeting at some point from 2002-2010 with those who did not. Each graph plots the distribution of a given characteristic, and I do this separately for individuals who comment at local city council meetings (in blue) and for those who do not comment at local meetings (in gray). A few interesting patterns emerge. Participants in local city council meetings in Palo Alto are more likely to be registered to vote, older, male, political donors, and voters in local and national elections, on average. The differences in participation in local elections are massive: while non-commenters had a turnout rate of about 17% in local elections during this period, commenters had a turnout rate over 60%. In Palo Alto, local meeting participants are also more likely to be Democrats and are slightly more liberal according to the CF score among donors.<sup>22</sup> Lastly, commenters are much more likely to be homeowners (62%) than non-commenters (43%).<sup>23</sup>

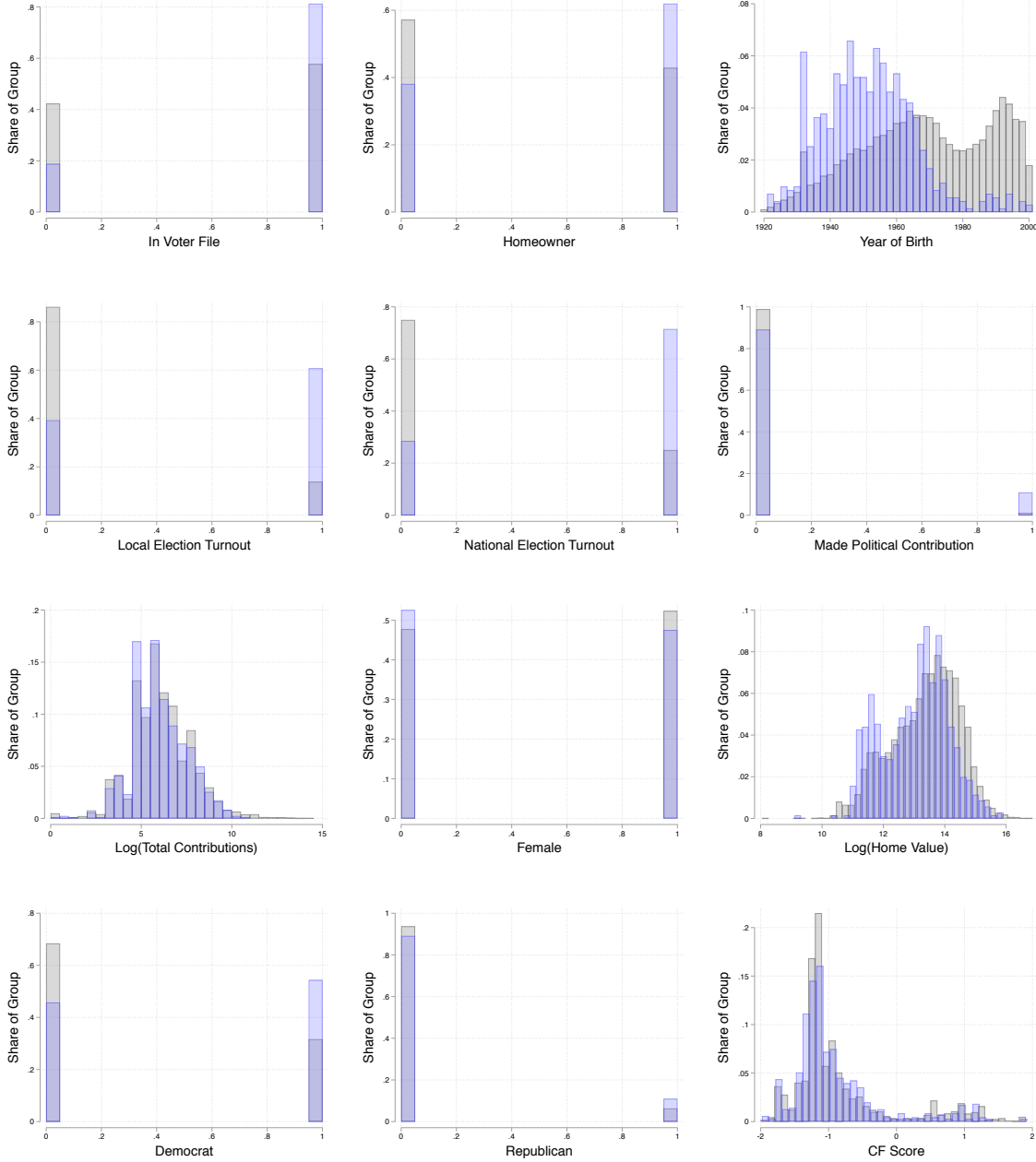
Figure 3 compares attributes of individuals who spoke at a Dallas city council meeting at some point from 1997-2018 with those who did not. Like Palo Alto, commenters in Dallas city council meetings are more likely than non-commenters to be registered to vote, older, male, political donors, and voters in local and national elections, on average. They are also slightly more liberal, looking both at the share that register as Democrats and the CF score score among donors. Interestingly, and unlike in Palo Alto, commenters in Dallas

---

<sup>22</sup>A smaller CF score indicates that donors donate to more liberal candidates.

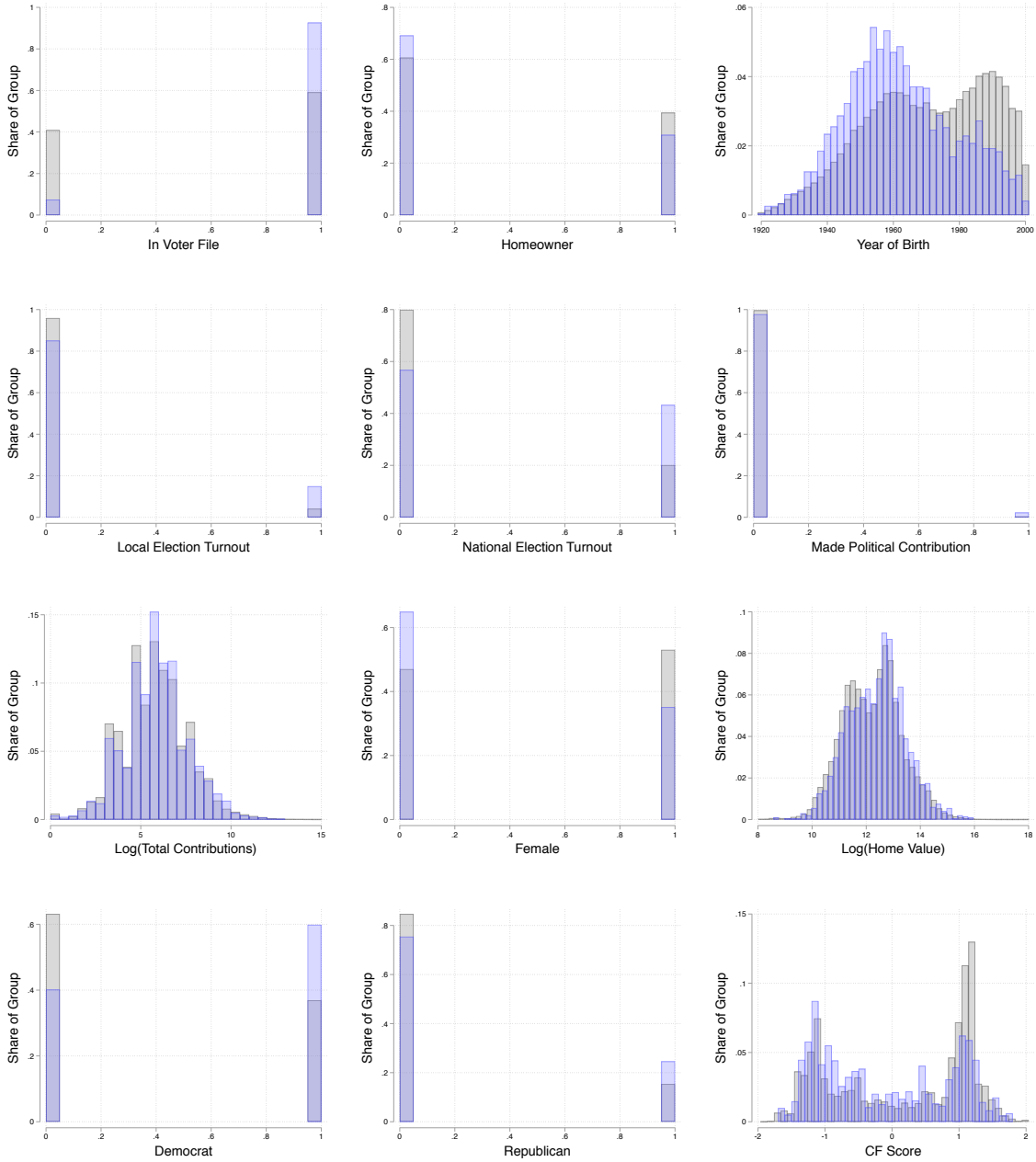
<sup>23</sup>Conditional on owning a home, we see that participants in local meetings had an average home value of \$776,164, while non-participants had a larger average home value of \$1,059,085. This difference can be explained by the fact that local meeting participants are much older on average, and age is negatively correlated home value in California because Proposition 13 caps annual increases in assessment values for long-time residents.

**Figure 2 – Palo Alto City Council Commenters, 2002-2010.** Commenters are shown in blue, while non-commenters are shown in gray. The unit of observation is a person-year. Registration year, birth year, female, and party registration are only available for individuals in the voter file. The logged contributions graph conditions on person-years in which a donation was made.



are *less likely* to be homeowners than non-commenters. This could be because the costs of participation are lower for renters if they live closer to City Hall, or because the salient topics at local meetings motivate renters to participate more than homeowners, at least in

**Figure 3 – Dallas City Council Commenters, 1997-2018.** Commenters are shown in blue, while non-commenters are shown in gray. The unit of observation is a person-year. Registration year, birth year, female, and party registration are only available for individuals in the voter file. The logged contributions graph conditions on person-years in which a donation was made.



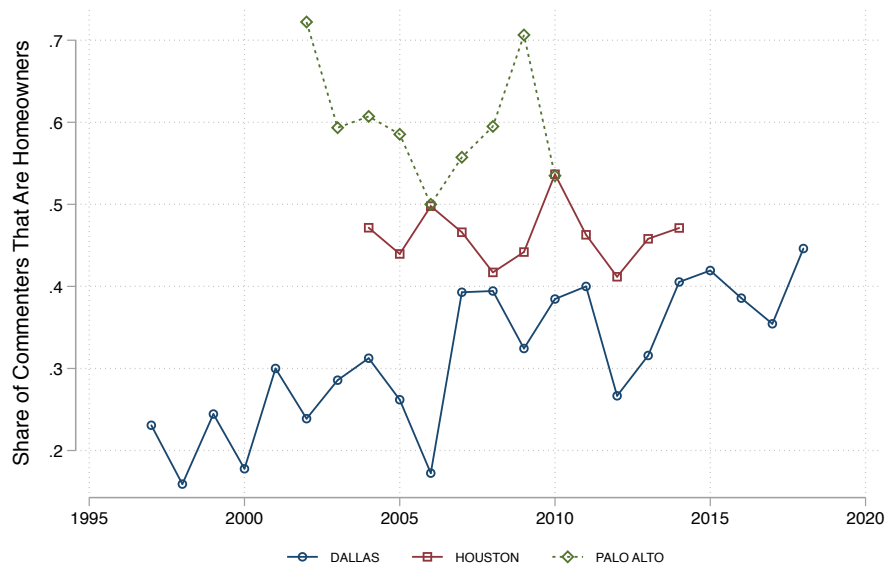
Dallas. Figure A.1 in the Appendix shows the same set of comparisons for local meeting participants in Houston, and the differences are similar to those in Dallas.

The over-representation of renters relative to homeowners in Dallas and Houston local meetings might be surprising in light the other differences I have documented between the groups. The first work to systematically document inequalities in participation in local planning and zoning board meetings finds participants in these meetings are overwhelmingly homeowners (Einstein, Palmer, and Glick 2018*a*). What might explain the differences? One possibility is that I link individuals to city council commenting rather than participation in meetings specifically about land use. Later, I show that homeowners are more likely to make comments related to land use policies than are renters, holding city, time, and the meeting agenda fixed, which is consistent with the findings from Einstein, Palmer, and Glick (2018*b*) that homeowners are much more active in local politics when questions of land use are on the agenda.

The share of commenters that are homeowners varies not only across city, but also over time within each city. As Figure 4 shows, the share of commenters in Palo Alto who are homeowners ranges from about 50% (in 2006) to over 70% (in 2002). The share of commenters at local meetings in Dallas has increased from around 25% to over 40% from the late 1990s to 2018. In Section 5 I show that homeowners and renters are motivated by different issues when commenting at local meetings, which could explain this variation within city over time.

Overall, this section provides the first systematic evidence documenting inequalities in participation in local city council meetings across different settings. While persistent inequalities in local participation emerge in each of the settings I study (participants are more likely to be older, male, voters, and political donors, on average), it is not universally true for all important characteristics. Namely, I find that, in Palo Alto, those who participate in local meetings are more likely to be homeowners compared to those who do not. Meanwhile, in Dallas and Houston those who comment at local meetings are more likely to be renters than those who do not. Our understanding of inequalities in political participation at the local

**Figure 4 – Proportion of Commenters That Are Homeowners Over Time, by City.** The figure plots the share of members of the public who comment at local city council meetings that are homeowners, over time and by city. The share of commenters that are homeowners varies from city to city, but also varies within city over time.



level, therefore requires attention to which types of issues are addressed in local meetings, and to what motivates homeowners and renters to participate.

## 4 Homeownership Increases Political Participation

So far, I have shown that inequalities in local political participation between homeowners and renters varies across cities. Next, to gain some causal leverage on how homeownership changes an individual’s political behavior, I employ a series of difference-in-differences designs to estimate how becoming a property owner affects various forms of political participation. Overall, I find that becoming a homeowner leads to increases in an individual’s likelihood of commenting at local meetings, voting in local elections, and making political contributions.



## 4.1 Evidence from Local City Council Meetings

I first estimate the effect of becoming a property owner on an individual’s participation in local city council meetings. Specifically, I estimate the following equation:

$$Commented_{it} = \beta Homeowner_{it} + \gamma_i + \delta_t + \epsilon_{it} \quad (1)$$

where  $Commented_{it}$  is an indicator for whether individual  $i$  comments at a local city council meeting in year  $t$ , and  $Homeowner_{it}$  is an indicator for whether individual  $i$  is a property owner at any time in the year prior to the start of year  $t$ . The individual ( $\gamma_i$ ) and year ( $\delta_t$ ) fixed effects control for time-invariant characteristics about individuals that affect their propensity to comment at local meetings, as well as common yearly shocks that affect the number of commenters at local city council meetings. Throughout the analyses, I vary the time fixed effects in several ways to estimate effects using different counterfactual trends.

Table 2 estimates the effect of becoming a property owner on participation at local city council meetings. Because participation in city council meetings is a low probability event, I subset to those who would go on to make a comment at some point over the entire study period, leaving about 14,000 unique individuals, totaling nearly 180,000 observations.<sup>24</sup> In column 1, I pool all three cities together, and I find that becoming a homeowner increases an individual’s likelihood of commenting by about 1.34 percentage points, representing about a 20% increase over the outcome mean.<sup>25</sup> The effect is precisely estimated: the 95% confidence interval ranges from about a 0.5 to 2.1 percentage point increase. I use zip code-by-year fixed effects to compute counterfactual trends using only individuals in the same zip code, but the results also hold across alternative sets of time fixed effects. One concern, however, with the estimates in column 1 is that I use all individuals, rather than ones who have lived in the area for the entire study period. For example, if someone were to become a property owner when

---

<sup>24</sup>The results are similar when I include individuals who never comment in the analysis.

<sup>25</sup>In Table A.2 in the Appendix, I estimate the same equation but use the logged total number of comments by an individual in a year as the outcome. The results are similar, suggesting that homeownership increases the total number of comments an individual makes in local meetings.

**Table 2 – Effect of Homeownership on Participation in City Council Meetings, 1997-2018.**

	Commented = 1				
	(1)	(2)	(3)	(4)	(5)
Homeowner	0.013 (0.004)	0.012 (0.006)	0.122 (0.045)	-0.003 (0.008)	0.028 (0.009)
Observations	179,020	82,822	5,760	29,036	48,026
Number of Individuals	13,992	6,714	640	1,708	4,366
Outcome Mean	0.067	0.073	0.163	0.059	0.071
Sample	Pooled	Pooled	Palo Alto	Dallas	Houston
Always Registered	No	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes	Yes
Year-by-Zip Code FEs	Yes	Yes	Yes	Yes	Yes

Robust standard errors clustered by individual in parentheses. The unit of observation is a person-year. Columns 2 through 5 restrict the sample to individuals registered to vote in the state before the panel. All columns restrict the sample to individuals who make a comment at some point over the length of the panel.

they newly move into the city, I would count them as not having participated in the local city council meetings before moving there, even though they did not have the opportunity to participate, or they could have been participating in local meetings elsewhere. While I cannot observe the date an individual moved into the city, I can subset to individuals who were registered within the same state since before the start of the study period. This helps alleviate concerns about movers biasing the estimate upward in column 1. In column 2, I estimate the effect just among those who were registered in the state during the entire study period. The estimate shrinks slightly to about 1.2 percentage points, but remains positive and reasonably precisely estimated.

In columns 3, 4, and 5 I estimate the effect separately for each city in my data: Palo Alto, Dallas, and Houston, respectively. Becoming a property owner leads an individual to become nearly twice as likely to comment at a local city council meeting in Palo Alto, where housing issues are most salient. Meanwhile, becoming a property owner does not seem to lead individuals to comment more at local meetings in Dallas, and the effect is positive but much

more modest in Houston. This suggests that individuals become most likely to participate more after becoming a property owner where housing issues are most important, which is consistent with the Fischel (2001) homevoter hypothesis, where homeowners become more attentive to local politics in places where incentives to protect property values are highest.

The validity of these difference-in-differences estimates relies on the parallel trends assumption, where changes in individuals' propensities to comment at local meetings after purchasing a home in a given year would have been the same as changes for those who did not purchase a home in that year. There are reasons to be skeptical of the parallel trends assumption in this particular case. Because homeownership is not randomly assigned, the obvious concern is that any *time-varying* confounder that correlates both with an individual's decision to purchase a home and with trends in local meeting participation would bias the estimates. One strategy to assess the difference-in-differences identification strategy is to add a variety of group-specific time trends to allow for different counterfactual trends. Later in the paper, I use this strategy to assess the influence of possible time-varying confounders, like wealth, age, planning for children, or other "adult roles" (Highton and Wolfinger 2001). Here, I assess the plausibility of parallel trends in two other ways. First, in the first two columns of Table A.1 in the Appendix I include leads of homeownership, and I do not find strong evidence of pre-trending. Second, in Figure A.2 I include several leads and lags of homeownership, modeling the dynamic effect of homeownership on the probability that an individual comments at local meetings (Autor 2003; Angrist and Pischke 2008). The estimates show no evidence of an effect in the years before homeownership, with increasing effects in the first few years after becoming a homeowner. This pattern is a reassuring sign that the difference-in-differences identification assumption could hold in this case.

## 4.2 Evidence from Local Turnout

So far, I have shown that property ownership increases an individual's likelihood of participating in local city council meetings, on average. Now, I turn to its effect on other forms

of political participation, starting with turnout in local elections. I rely on difference-in-differences designs to estimate how property ownership changes turnout in local elections in California and Texas from 2001-2017.<sup>26</sup> The outcome,  $Turnout_{it}$ , is a simple indicator for whether individual  $i$  voted in the general election in time  $t$ . Because wealth is the most obvious time-varying confounder in this setup – where individuals who become wealthier decide to purchase homes and also have different turnout trends for reasons other than the decision to purchase a home. As a first way to address this, I estimate the effect of property ownership on local election turnout only among those who become homeowners at some point – so every individual achieves the wealth status necessary to purchase a home at some point. These estimates, then, exploit variation in the timing of the decision to purchase a home, effectively requiring that changes in turnout among those who purchase a home in time  $t$  would have been the same as changes in turnout among those who did not purchase a home in time  $t$ , but who would later go on to purchase one. This perhaps makes the parallel trends assumption more plausible than including individuals who never become homeowners, who likely have very different counterfactual local turnout trends from individuals who eventually own homes.<sup>27</sup> In column 1 of Table 3 I include a separate set of year fixed effects for California and Texas, so that counterfactual trends for treated units are constructed only control units within the same state. In that specification, I find that property ownership leads to a 3 percentage point increase in local turnout, which represents nearly a 30% increase over the baseline mean.<sup>28</sup> Because changes in local turnout are likely a function of unobserved features like the types of local races or candidates on the ballot, in column 2 I allow each zip code to have its own set of year fixed effects, which constructs counterfactual trends for treated units using only control individuals within the same zip code. The point estimate is

---

<sup>26</sup>Because there are tens of millions of individuals and nine local election cycles, there are computational constraints in the estimation. To simplify, I randomly sample 10% of individuals in every zip code in California and Texas to enter into the sample.

<sup>27</sup>In Table A.3 in the Appendix, I estimate the effect of property ownership on local turnout for the full sample, meaning I do not restrict the sample to eventual homeowners. The results are substantively similar.

<sup>28</sup>This result is similar to that found in Hall and Yoder (2018), which finds about a 5 percentage point increase in local turnout in local elections in the state of Ohio, representing about a 20% increase in local election turnout over the baseline mean in Ohio.

**Table 3 – Effect of Homeownership on Political Participation in Local California and Texas Elections, 2001-2017.**

	Turnout in Local Election = 1			
	(1)	(2)	(3)	(4)
Homeowner	0.030	0.032	0.027	0.019
	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8,467,380	8,467,272	8,460,549	8,465,157
Outcome Mean	0.099	0.099	0.099	0.099
Individual FEs	Yes	Yes	Yes	Yes
Year-by-State FEs	Yes	No	No	No
Year-by-Zip Code FEs	No	Yes	No	No
Year-by-Value-by-State FEs	No	No	Yes	No
Year-by-Age-by-State FEs	No	No	No	Yes

Robust standard errors clustered by individual in parentheses. All columns include only individuals who become homeowners at some point during the study period. Year-by-Value fixed effects interact years with home value deciles.

similar, which helps alleviate concerns that people are becoming property owners in places where local turnout happens to be increasing anyway because of local factors like the types of races or candidates in these localities.

While I already subset on those who eventually become homeowners to make comparisons among individuals with at least enough wealth to eventually qualify to purchase property, in column 3 I use information on assessed home value to make even more fine-grained comparisons that make wealth less likely to be confounding the result. Following Hall and Yoder (2018), I include a separate year fixed effects for each home value decile in each state, which creates counterfactual trends for those who purchase a home using only individuals who did not purchase a home, but would go on to purchase a *similarly priced* home in the same state in the future. Again, the point estimate remains similar in magnitude. Lastly, another time-varying confounder could be changes in “adult roles,” like marriage or planning for children.<sup>29</sup> These factors might encourage long-term residency in a community, which positively correlates with political participation (Gay 2012; McCabe 2016). While I cannot measure

<sup>29</sup>Oliver and Ha (2007) show that participants in local elections tend to be highly informed community “stakeholders,” like homeowners, parents of children, or long time residents.

these directly, I use the individual birth dates to make more plausible counterfactual comparisons. In column 4 I include a set of year fixed effects for every birth year in each state, so that I construct counterfactual trends for those who purchase a home using only control units who share the same birth year and are in the same state. The point estimate decreases slightly to 0.019, but it still represents a 20% increase in local turnout after becoming a property owner. This suggests that the effect is likely not explained solely by changes in wealth or taking on other adult roles.

To evaluate the plausibility of the parallel trends assumption, I include leads of property ownership in columns 3 and 4 of Table A.1 in the Appendix. These tests do not reveal evidence of pre-trending, which adds some credibility to the difference-in-differences identification assumption. I also include a lags and leads plot, finding that the effects are close to zero before property ownership and grow in local election cycles after becoming a property owner. I discuss these in more detail in Section A.2 of the Appendix, but this is a reassuring sign that parallel trends might hold in this case.

### 4.3 Evidence from Political Contributions

Next, I estimate how property ownership influences a third form of participation: political contributions to candidates or committees for federal or state elections. The outcome,  $Contributed_{it}$ , is an indicator for whether individual  $i$  made an itemized contribution in year  $t$ . I restrict the sample to registered voters in the state prior to 2000, the start of the panel.<sup>30</sup> I do not review each particular estimate, but the motivation for each specification mirrors that in Table 3, which I discuss above.

Overall, two notable features stand out. First, across all specifications, homeownership leads to roughly a one percentage point in increase in the probability of making a contribution in a given year. Given that the baseline rate of donating is low, this represents nearly a 100% increase. Second, the point estimate in column 3, where I include year-by-home value

---

<sup>30</sup>I show results using the full sample in Table A.4 in the Appendix, and the results are very similar.

**Table 4 – Effect of Homeownership on Political Contributions, 2000-2014.**

	Made Political Contribution = 1			
	(1)	(2)	(3)	(4)
Homeowner	0.009 (0.000)	0.009 (0.000)	0.005 (0.000)	0.010 (0.000)
Observations	14,285,505	14,285,505	7,886,205	14,270,445
Outcome Mean	0.012	0.012	0.016	0.012
Individual FEs	Yes	Yes	Yes	Yes
Year-by-State FEs	Yes	No	No	No
Year-by-Zip Code FEs	No	Yes	No	No
Year-by-Value FEs	No	No	Yes	No
Year-by-Age FEs	No	No	No	Yes

Robust standard errors clustered by individual in parentheses. All columns include only individuals who were registered to vote in the state prior to the start of the study period. Column 3 restricts the sample to those who become homeowners at some point during the study period.

decile fixed effects, reduces to a 0.5 percentage point increase. Because this specification computes homeowners' counterfactual trends using only individuals who would eventually go on to buy similarly priced homes but had not yet done so, this suggests we should be concerned that the effects reported in columns 1, 2, and 4 could be biased upward by changes in wealth, an important potential time-varying confounder. This would be plausible because the outcome variable requires monetary giving. Wealth and political contributions are positively correlated (Bonica and Rosenthal 2015), so we might expect this outcome to be especially vulnerable to pre-trending as a function of increased wealth. To check for possible pre-trending, in Figure A.4, I again model the dynamic effect of homeownership, using political contributions as the outcome variable. There is some evidence of pre-trending, likely because increased wealth correlates both with the decision to purchase a home and the likelihood of making political contribution. Given that, we should prefer the more moderated effect in column 3, which makes comparisons among individuals with more similar levels of wealth. Nonetheless, the evidence suggests that becoming a property owner likely leads to an increase in political donations, on average.

## 5 Homeowners and Renters Focus on Different Political Issues

Why might homeowners be over-represented in Palo Alto but under-represented in Dallas and Houston relative to the homeownership rate among its city residents? One explanation is simply the parochial nature of small-scale democracy (Oliver, Ha, and Callen 2012). Homeowners might be less likely to show up to meetings in Dallas and Houston because those larger cities deal with a wider range of political issues in their local meetings compared to Palo Alto, where questions of land use and development tend to dominate the discussion. Understanding whether homeowners and renters are actually differentiated in the types of topics they raise in local meetings requires a design that holds time, place and the local meeting agenda fixed.

To do this, I use the text of each comment made by a member of the public at city council meetings in each of the three cities for which I have collected data. Each observation is a comment, which includes the full name, address, and statement that an individual makes in a meeting. Crucially, I also observe the date of the local meeting along with the individual’s homeownership status at the time of the comment, so I can estimate which topics differentiate homeowners from renters within the same local meeting. I implement the same linkage procedure described in Section 2.1.

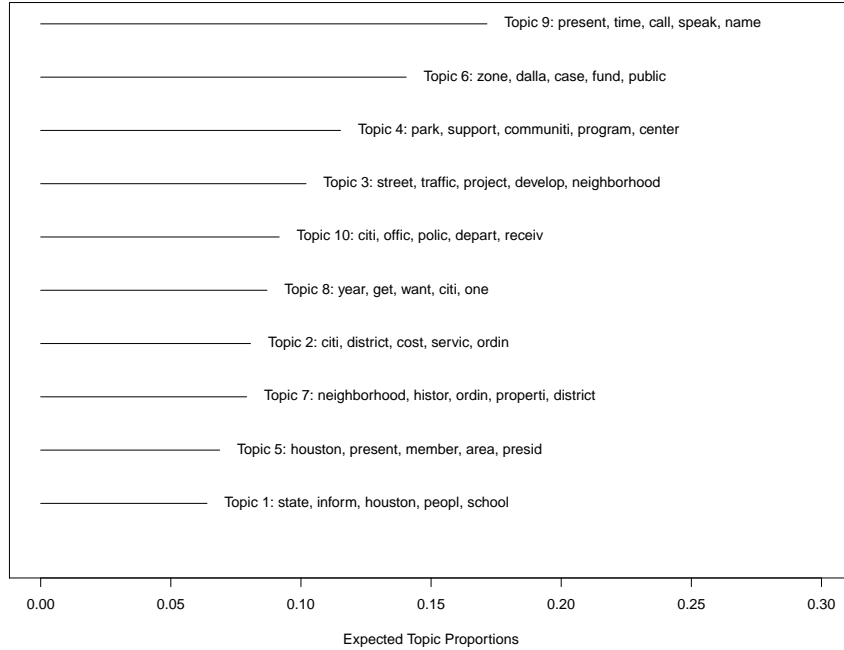
The final dataset includes over 4,300 comments made by individuals at local city council meetings.<sup>31</sup> To summarize the types of comments, I rely on a Structural Topic Model (STM) to model latent comment topics (Roberts, Stewart, and Tingley 2014). Similar to Latent Dirichlet Allocation (LDA) (e.g., Blei, Ng, and Jordan 2003), STM is a probabilistic topic model, which assigns each document a vector of weights over distinct topics. Its advantage

---

<sup>31</sup>I only include individuals that merge to the voter file in order to use only comments where the transcription of the name and address of the individual making the comment is of sufficiently high quality. Typographical errors in the meeting transcripts would lead to false negatives, meaning mistakenly coding individuals as non-homeowners when they are in fact homeowners, and lead to attenuation bias in estimated differences between homeowners and renters.



**Figure 5 – Topic Frequency in Public Statements at City Council Meetings.** This graph summarizes the frequency of each of 10 topics discovered by the Structural Topic Model, with expected topic proportions on the x-axis. While some topics appear to be procedural (9, 8, and 5), others appear related to zoning (6), community programming (4), local development (3), and policing (10).

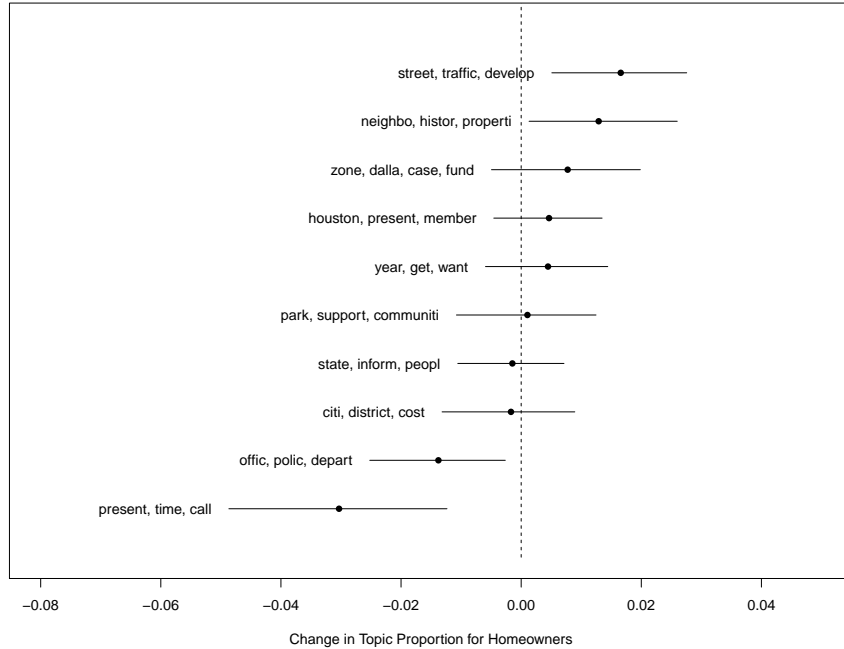


for my particular context is that STM allows for the inclusion of comment-level covariate information, both to model the prevalence of topics as a function of observable characteristics and to conduct hypothesis testing about the relationships between document characteristics and topics that the model discovers (Roberts, Stewart, and Tingley 2014).

Figure 5 summarizes the top words in each of 10 topics discovered by the model, along with each topic’s frequency.<sup>32</sup> Because the frequency of topics likely varies both across cities and over time, I include indicators for each city-year in the model to allow time and place to affect the frequency with which a topic is discussed (Roberts, Stewart, and Tingley 2014). Some of the topics are more interpretable than others: the most frequent topic appears mainly procedural, where the most commonly used words include item, agenda, and case.

<sup>32</sup>I use the `stm` package in R, and I set the number of topics to 10. I also run the same topic model 50 times with randomly sampled starting values, and in every case the top 7 words associated with each topic are the same. This suggests that the results are not sensitive to the starting values used in the topic estimation.

**Figure 6 – Change in Topic Proportion between Renters and Homeowners.** This graph plots the change in the proportion of a comment that one would expect to belong to each topic for homeowners versus renters, with the change in proportion for going from a renter to a homeowner on the x-axis. The regressions include city-year fixed effects, which controls for unobservable characteristics of a city in a particular year that influence the frequency of each topic. Coefficients are plotted with 95% confidence intervals from robust standard errors. Homeowners are more likely to mention street, traffic, and development, while renters are more likely to mention police, officer, department, and present.



Other categories have more notable interpretations. Topic 3 appears related to local development, as it often uses words like neighborhood, project, traffic, and development. Topic 4 seems related to community programming, commonly using words like park, community, center, and program. Topic 10 seems to be about policing, using words like police, department, and officer.

In Figure 6 I estimate how being a homeowner, as opposed to a renter, changes the proportion of the individual’s comment we would expect to belong to each topic. For each topic, I regress the proportion of the document that falls in the topic on an indicator for whether the commenter is a homeowner along with city-year fixed effects, which control for unobservable factors that influence the frequency of topics in a city in a particular year. Consistent with

expectations about the influence of homeowners in local politics (e.g., Fischel 2001; Einstein, Palmer, and Glick 2018*b*), I find that homeowners' comments are more likely to belong to topics that reference traffic, housing, property, and development. Meanwhile, renters are relatively more likely to comment on topics related to policing. While this evidence is purely descriptive, it is consistent with the theory that homeowners are motivated to participate in local politics by different issues than are renters. Namely, homeowners are more likely to show up to comment about issues we might expect to relate to preserving their property values – that is, housing and development. Homeowners' disproportionate appeals to traffic and history are also consistent with qualitative accounts that show homeowners often raise concerns over traffic congestion, historical preservation, and environmental protection as justifications to restrict development (Gerber and Phillips 2003; Glaeser and Ward 2009).

One disadvantage of using STM is that the topics lack a direct interpretation. For a more directly interpretable summary of whether homeowners are more motivated to mention housing development at local meetings than renters, I code each comment according to whether the stems of any of the following words are used in the comment: build, character, development, environment, property, historical, history, home, homeowner, housing, neighborhood, traffic, and zoning. I choose these words because they are generally associated with concerns about housing development and with the reasons offered for supporting or opposing development projects (e.g., Gerber and Phillips 2003; Glaeser and Ward 2009; Einstein, Palmer, and Glick 2018*b*). Column 1 of Table 5 shows that homeowners are about 7.3 percentage points more likely to use at least one of these housing-related words in their comments compared to renters. To control for changes in the meeting agendas across cities and over time, columns 2 and 3 use city-year fixed effects and meeting fixed effects, respectively, which make comparisons between homeowners and renters within the same meeting year and at the same meeting. In column 3, for example, homeowners are about 5.5 percentage points more likely to use housing-related language than renters, even within the same meeting. Because these differences could be driven by the length of public comments, in columns 4-6 I also estimate

**Table 5 – Determinants of Using Housing-Related Language in Public Comments, 1997-2018.**

	Used Housing Word = 1			Pct Words About Housing		
	(1)	(2)	(3)	(4)	(5)	(6)
Homeowner	0.073 (0.016)	0.066 (0.015)	0.055 (0.020)	0.002 (0.003)	0.006 (0.002)	0.003 (0.003)
Observations	4,345	4,345	4,345	4,345	4,345	4,345
Outcome Mean	0.331	0.331	0.331	0.034	0.034	0.034
City-Year FEs	No	Yes	No	No	Yes	No
Meeting FEs	No	No	Yes	No	No	Yes

Robust standard errors clustered by meeting in parentheses. The unit of observation is a comment. The outcome in columns 1-3 is whether the commenter used stems of any of the following words in their statement: build, character, development, environment, property, historical, history, home, homeowner, housing, neighborhood, traffic, or zoning. The outcome in columns 4-6 is the share of words in each comment that were stems of these words.

the same regressions using a different outcome: the proportion of words in the comment that are any of the housing-related words mentioned above. While these estimates are somewhat less precise, it appears that homeowners use language related to housing development more than renters, even when controlling for the city and year, as well as the meeting agenda.

While there are not enough repeat commenters who change homeownership status over the course of the panel to precisely estimate how becoming a homeowner changes the substance of an individual’s comment, this section nonetheless shows that, descriptively, homeowners and renters focus on different issues in local meetings – even within the same meeting where the topics on the agenda are held fixed.

## 6 Conclusion

Although there are well-established descriptive relationships between homeownership and political behavior, there is much less work on how the experience of becoming a homeowner changes individual political behavior. In this paper, I contribute to our understanding of how homeownership shapes behavior in three ways. First, using individual comments made

by members of the public at local city council meetings, I document large inequalities in who participates in local politics. Individuals who show up and make statements at local meetings are overwhelmingly older, more likely to be male, and much more likely to participate in politics in other ways, like voting in local and national elections as well as making political contributions. Homeowners are drastically over-represented at local meetings in places where housing issues are particularly salient, like Palo Alto, but homeowners are actually under-represented in larger cities like Dallas and Houston. Inequality in local political participation, therefore, is likely a function of the issues that are most salient in the local politics.

Second, I present causal evidence that becoming a homeowner leads individuals to participate more in politics using three separate measures of participation: local meeting comments, voting in local elections, and making political contributions. While the mechanism for these increases is more difficult to pin down, the variation in the effects across geography again points to varying issue salience across different communities. Follow up analyses suggest that these effects likely cannot be wholly explained by wealth or changing adult roles. The economic incentives associated with property ownership appear to be an important motivator of both political participation.

Lastly, I show that homeowners and renters seem to care about different topics in local political meetings, even within the same meeting where the agenda of topics are held fixed. Homeowners are more likely to raise topics related to housing development, consistent with the homevoter hypothesis, where homeowners become motivated to participate in local politics in order to protect their property value (Fischel 2001).

More broadly, housing policy has increasingly become a central focus of both local and national political discussion, which raises important and fundamental questions about how property ownership motivates and changes political behavior.<sup>33</sup> With the proliferation of publicly available city council meeting minutes, along with more easily available admin-

---

<sup>33</sup>For a recent example of housing policy's importance in the national political discourse, see [https://www.washingtonpost.com/business/2018/07/19/rents-soar-democrats-push-new-policies-affordable-housing/?utm\\_term=.46210e1c7ec2](https://www.washingtonpost.com/business/2018/07/19/rents-soar-democrats-push-new-policies-affordable-housing/?utm_term=.46210e1c7ec2).

istrative data at the individual level, researchers have new and exciting opportunities to advance our understanding of exactly how individuals map economic incentives onto their political behavior, both at the local and national level. This paper seeks to understand the political effects of effect these incentives for one of the most important financial changes in an individual's lifetime – becoming a property owner. Future work should link voters and property records to other types of administrative data, like marriage records, for example, to understand the role of other important influences on political behavior. Discussions in local city council meetings transcripts also present exciting opportunities to further document and understand which local issues are most salient across both place and time, and how homeownership or other individual characteristics motivate participation in local politics.

## References

- Acemoglu, Daron, and James A Robinson. 2005. *Economic Origins of Dictatorship and Democracy*. Cambridge University Press.
- Angrist, Joshua D, and Jörn-Steffen Pischke. 2008. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.
- Ansolabehere, Stephen, and Eitan D Hersh. 2017. “ADGN: An Algorithm for Record Linkage Using Address, Date of Birth, Gender, and Name.” *Statistics and Public Policy* 4(1): 1–10.
- Ansolabehere, Stephen, John M De Figueiredo, and James M Jr. Snyder. 2003. “Why is There so Little Money in US Politics?” *Journal of Economic Perspectives* 17(1): 105–130.
- Autor, David H. 2003. “Outsourcing at Will: The Contribution of Unjust Dismissal Doctrine to the Growth of Employment Outsourcing.” *Journal of Labor Economics* 21(1): 1–42.
- Blei, David M, Andrew Y Ng, and Michael I Jordan. 2003. “Latent Dirichlet Allocation.” *Journal of Machine Learning Research* 3(Jan): 993–1022.
- Bonica, Adam. 2014. “Mapping the Ideological Marketplace.” *American Journal of Political Science* 58(2): 367–386.
- Bonica, Adam. 2016. “Database on Ideology, Money in Politics, and Elections: Public version 2.0 [Computer file].”
- Bonica, Adam, and Howard Rosenthal. 2015. “The Wealth Elasticity of Political Contributions by the Forbes 400.”
- Brady, Henry E, Sidney Verba, and Kay Lehman Schlozman. 1995. “Beyond SES: A Resource Model of Political Participation.” *American Political Science Review* 89(2): 271–294.
- Downs, Anthony. 1957. “An Economic Theory of Political Action in a Democracy.” *The Journal of Political Economy* 65(2): 135–150.
- Einstein, Katherine Levine, David M Glick, and Conor LeBlanc. 2017. “2016 Menino Survey of Mayors.”
- Einstein, Katherine Levine, Maxwell Palmer, and David Glick. 2018a. “Racial Disparities in Housing Politics: Evidence from Administrative Data.”
- Einstein, Katherine Levine, Maxwell Palmer, and David M Glick. 2018b. “Who Participates in Local Government? Evidence from Meeting Minutes.” *Perspectives on Politics* pp. 1–19.

- Enamorado, Ted, Benjamin Fifield, and Kosuke Imai. 2019. “Using a Probabilistic Model to Assist Merging of Large-Scale Administrative Records.” *American Political Science Review* 113(2): 353–371.
- Engerman, Stanley L, and Kenneth L Sokoloff. 2005. “The Evolution of Suffrage Institutions in the New World.” *The Journal of Economic History* 65(4): 891–921.
- Fischel, William A. 2001. *The Homevoter Hypothesis*. Harvard University Press.
- Fung, Archon. 2006. “Varieties of Participation in Complex Governance.” *Public Administration Review* 66: 66–75.
- Gay, Claudine. 2012. “Moving to Opportunity: The Political Effects of a Housing Mobility Experiment.” *Urban Affairs Review* 48(2): 147–179.
- Gerber, Elisabeth R, and Justin H Phillips. 2003. “Development Ballot Measures, Interest Group Endorsements, and the Political Geography of Growth Preferences.” *American Journal of Political Science* 47(4): 625–639.
- Glaeser, Edward, and Joseph Gyourko. 2018. “The Economic Implications of Housing Supply.” *Journal of Economic Perspectives* 32(February): 3–30.
- Glaeser, Edward L, and Bryce A Ward. 2009. “The Causes and Consequences of Land Use Regulation: Evidence from Greater Boston.” *Journal of Urban Economics* 65(3): 265–278.
- Hall, Andrew B, and Jesse Yoder. 2018. “Does Homeownership Influence Political Behavior? Evidence from Administrative Data.”.
- Hankinson, Michael. 2018. “When Do Renters Behave Like Homeowners? High Rent, Price Anxiety, and NIMBYism.” *American Political Science Review* 112(3): 473 – 493.
- Highton, Benjamin, and Raymond E Wolfinger. 2001. “The First Seven Years of the Political Life Cycle.” *American Journal of Political Science* pp. 202–209.
- Jha, Saumitra, and Moses Shayo. 2019. “Valuing Peace: The Effects of Financial Market Exposure on Votes and Political Attitudes.” *Econometrica* Forthcoming.
- Marble, William, and Clayton Nall. 2018. “Where Self-Interest Trumps Ideology: Liberal Homeowners and Local Opposition to Housing Development.”.
- McCabe, Brian J. 2016. *No Place Like Home: Wealth, Community, and the Politics of Homeownership*. Oxford University Press.



- Meltzer, Allan H, and Scott F Richard. 1981. "A Rational Theory of the Size of Government." *Journal of Political Economy* 89(5): 914–927.
- Oliver, J Eric, and Shang E Ha. 2007. "Vote Choice in Suburban Elections." *American Political Science Review* 101(3): 393–408.
- Oliver, J Eric, Shang E Ha, and Zachary Callen. 2012. *Local Elections and the Politics of Small-Scale Democracy*. Princeton University Press.
- Riker, William H, and Peter C Ordeshook. 1968. "A Theory of the Calculus of Voting." *American Political Science Review* 62(1): 25–42.
- Roberts, Margaret E, Brandon M Stewart, and Dustin Tingley. 2014. "stm: R Package for Structural Topic Models." *Journal of Statistical Software* VV(II): 12.
- Trounstine, Jessica. 2018. "The Geography of Inequality: How Land Use Regulation Produces Segregation and Polarization."
- Verba, Sidney, Kay Lehman Schlozman, and Henry E Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Harvard University Press.
- Wong, Weihuang. 2018. "Our Town: Support for Housing Growth When Localism Meets Liberalism."

# Online Appendix

*Intended for online publication only.*

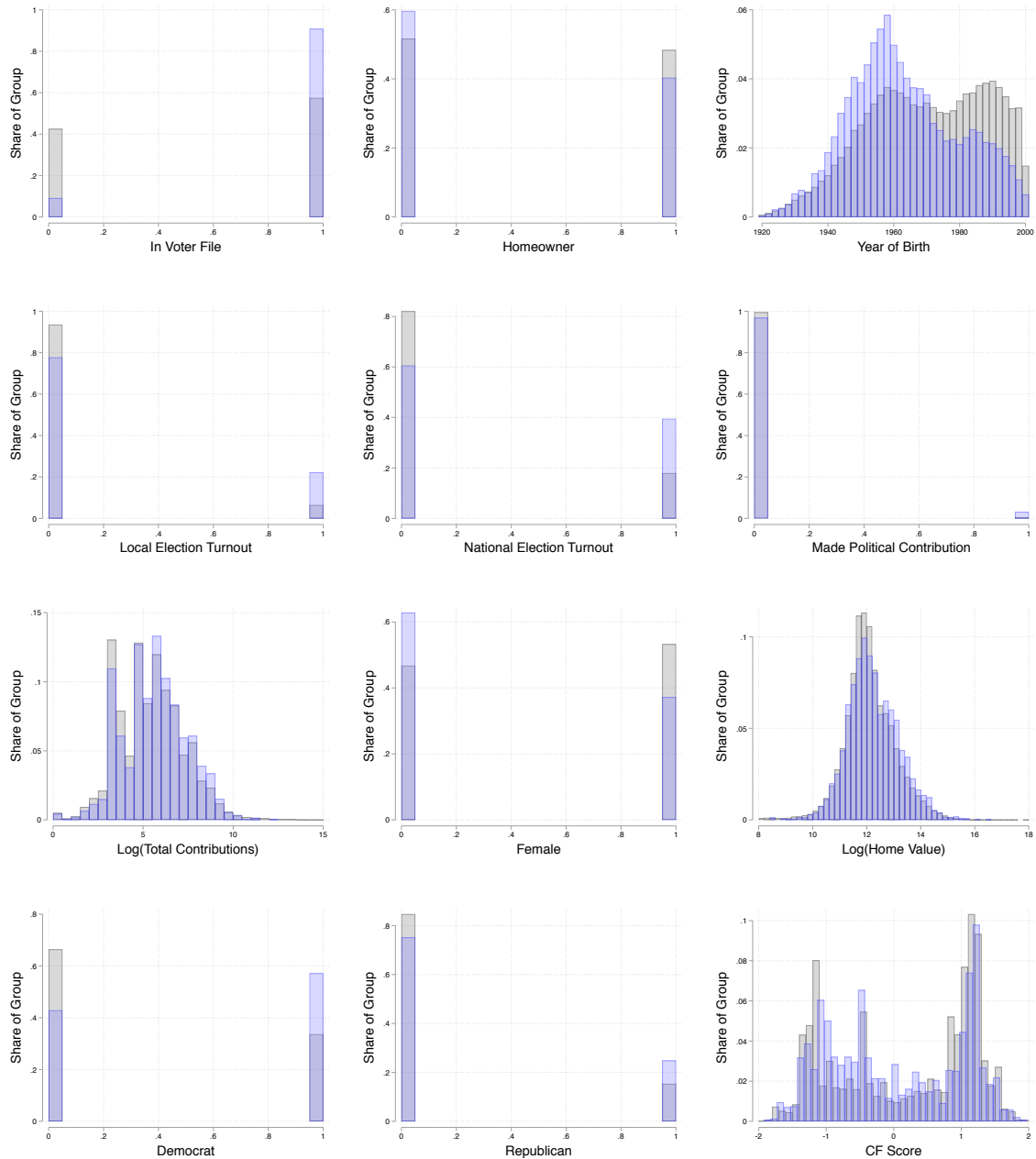
## Contents

A.1	Local Meeting Participants In Houston . . . . .	34
A.2	Validating the Parallel Trends Assumption . . . . .	35
A.3	Additional Results for Comments in City Council Meetings . . . . .	38
A.4	Additional Results for Local Turnout . . . . .	39
A.5	Additional Results for Contributions . . . . .	40
A.6	Topic Model . . . . .	41

# A.1 Local Meeting Participants In Houston

In this section, I show descriptive characteristics of local meeting participants in Houston, Texas from 2004-2014.

**Figure A.1 – Houston City Council Commenters, 2004-2014.** Commenters are shown in blue, while non-commenters are shown in gray. The unit of observation is a person-year. Registration year, birth year, female, and party registration are only available for individuals in the voter file. The logged contributions graph conditions on person-years in which a donation was made.



Histograms of individuals who show up to local city council meetings to make a public comment are shown in blue, while histograms of those who do not participate in local meetings are shown in gray. Many of the differences between commenters and non-commenters resemble those found in Dallas in Figure 3. Notably, commenters are actually more likely to be renters than non-commenters, contrary to findings in Palo Alto, California, where homeowners are over-represented among local meeting participants (Figure 2). Similar to other cities, participants in Dallas participate in other forms of politics at higher rates, are older, and are more likely to be men, on average.

## A.2 Validating the Parallel Trends Assumption

In this section, I take a few different approaches to help validate the parallel trends assumption.

**Table A.1 – Testing the Parallel Trends Assumption for the Effect of Homeownership on Political Outcomes**

	Commented = 1		Local Turnout = 1		Made Contribution = 1	
	(1)	(2)	(3)	(4)	(5)	(6)
Homeowner	0.0150 (0.0056)	0.0128 (0.0059)	0.0183 (0.0004)	0.0168 (0.0004)	0.0074 (0.0003)	0.0075 (0.0003)
Homeowner ( $t + 1$ )	-0.0008 (0.0057)	0.0048 (0.0070)	0.0007 (0.0003)	-0.0024 (0.0004)	0.0022 (0.0003)	0.0028 (0.0003)
Homeowner ( $t + 2$ )		-0.0082 (0.0061)		0.0024 (0.0003)		-0.0011 (0.0002)
Observations	165028	151036	23070496	20186684	13333138	12380771
Outcome Mean	0.066	0.068	0.069	0.068	0.012	0.012
Individual FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year-by-Zip Code FEs	Yes	Yes	No	No	No	No
Year-by-State FEs	No	No	Yes	Yes	Yes	Yes

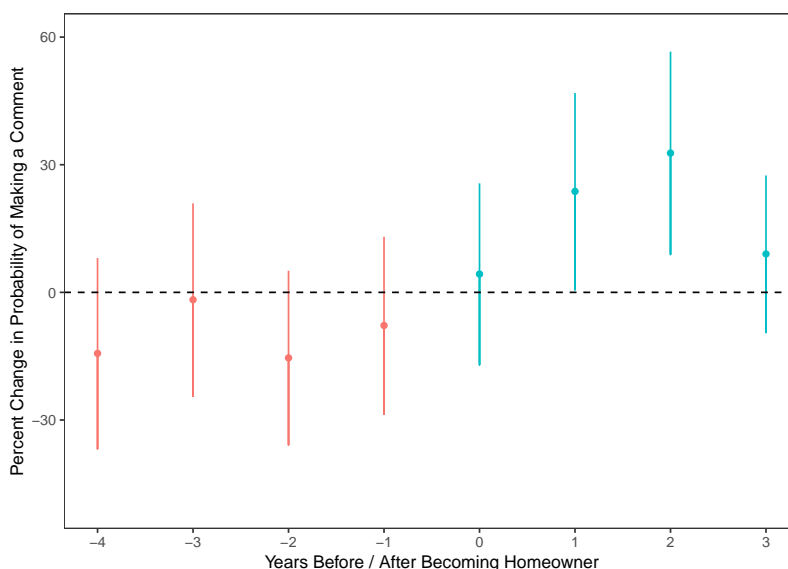
Robust standard errors clustered by individual in parentheses. Columns 1 and 2 include only individuals who make a comment at some point over the study period, consistent with Table 2. Columns 5 and 6 include individuals registered to vote before the start of the study period, consistent with Table 4.

First, in Table A.1 I include leads of the homeowner variable, where an individual is coded as a 1 for homeowner in time  $t + 1$  if they are not a homeowner in a given year, but will become a homeowner in the following period. If the effect of homeownership on political participation is not the result of pre-trending, we would expect that the coefficient on the lead variable to be close to zero. In columns 1, 3, and 5, I include a homeownership lead variable for each of the three outcomes in the main body of the paper. In each case, the main effect of homeownership remains similar, while the coefficients on the lead variables are near zero. The only case that exhibits possible pre-trending is for political contributions in column

5, where the coefficient on the lead is small, but positive and statistically significant. This signals the possibility of pre-trending for the political contributions outcomes, where wealth could be a time-varying confounder that correlates both with the decision to purchase a home and with the propensity to make a political contribution. This would make sense, especially given that, among the types of political participation, making a contribution would be most likely to be a direct function of an individual's wealth. As such, the effects using home value-by-year fixed effects should be the most trusted, which essentially makes comparisons among those with more plausibly similar levels of wealth – comparing homeowners with those who would eventually go on to purchase similarly priced homes.

In columns 2, 4, and 6, I include two leads of the homeowner variable. For each outcome, the coefficient on the main effect remains similar, and the coefficients on both leads are near zero in all cases. Again, the only outcome that exhibits possible pre-trending is for political contributions in column 6, where the coefficient on the one-period lead is positive and not negligible compared to the main effect. Overall, this table suggests that the parallel trends assumption might hold for local meeting participation and turnout, but we should perhaps be a little more cautious in our interpretation of the results for political donations.

**Figure A.2 – Dynamic Effect of Homeownership on Local Comments**



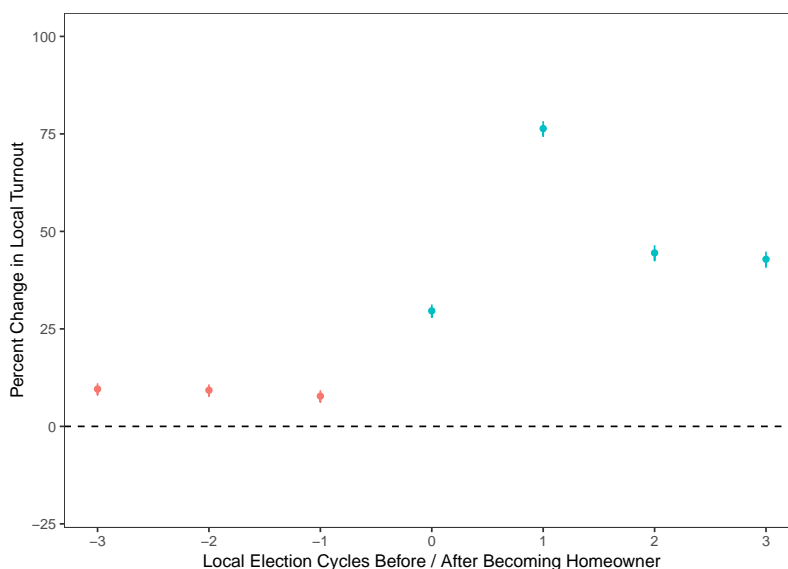
Note: In this analysis, I construct four leads of homeownership, a switching indicator, and three lags of homeownership. The four-period lead, for example, takes on a value of 1 if the individual is 4 years away from becoming a homeowner, and zero otherwise. As the plot shows, those who purchase homes become much more likely to comment in local city council meetings.

As another way to test the parallel trends assumption, I model the dynamic effect of homeownership on each outcome (Angrist and Pischke 2008; Autor 2003). In Figure A.2 I construct leads and lags of homeownership and plot the percent change in the probability that an individual shows up to make a comment at a local meeting in each year. The coefficients in red represent effects in years prior to becoming a homeowner, while the coefficients in green represent effects in years after becoming a homeowner. Reassuringly, the effect of

homeownership on making comments is indistinguishable from zero in the periods prior to homeownership, and they manifest only after an individual becomes a homeowner.

In Figures A.3 and A.4 I do the same exercise for local turnout and political contributions, respectively. For local turnout, the effect of homeownership in the lead periods is near zero (but statistically significant because of the large sample size), and the effect jumps to over 25 percent in all periods after becoming a homeowner. Again, this is reassuring evidence that parallel trends might hold in this case.

**Figure A.3 – Dynamic Effect of Homeownership on Local Turnout**

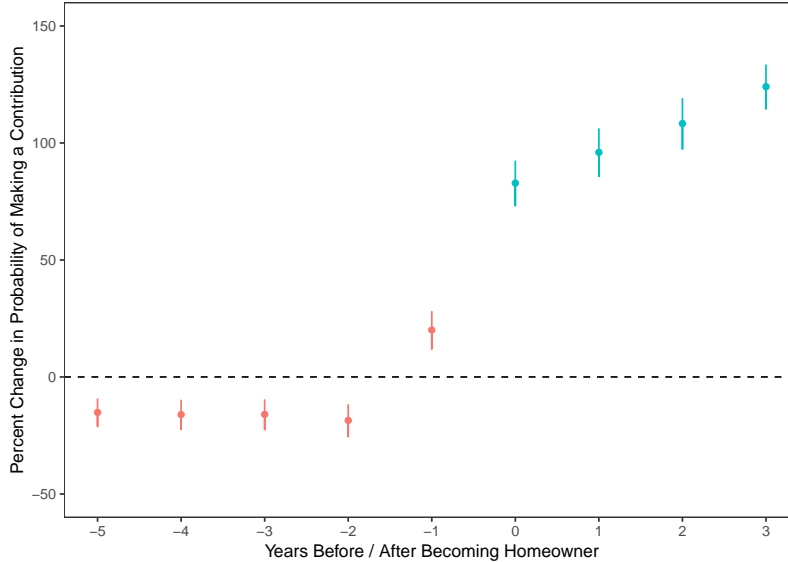


Note: In this analysis, I construct three leads of homeownership, a switching indicator, and three lags of homeownership. The three-period lead, for example, takes on a value of 1 if the individual is 3 local election cycles away from becoming a homeowner, and zero otherwise. As the plot shows, those who purchase homes become much more likely to participate in local elections.

Similar to the findings in Table A.1, in Figure A.4 I find some evidence of possible pre-trending in the likelihood of making a political contribution. The effect in the period just before becoming a homeowner is positive and non-negligible, near 25 percent. Again, this is consistent with the possibility of wealth being a time-varying confounder. Because political donations are monetary, it's likely to be more susceptible to confounding where individuals become wealthier, leading them to both purchase a home and to increase their political donations. As such, we should be careful in interpreting the results where political donations are the main outcome.

Overall, these tests suggest the parallel trends assumption are likely to hold in the case of local comments and local turnout, but might be vulnerable to time-varying confounding in the case of political contributions. As such, as an additional way to test the parallel trends assumption, albeit indirectly, in the main body of the paper I include alternative sets of fixed effects. The coefficients remain remarkably stable across specifications, which again helps to validate the parallel trends assumption.

**Figure A.4 – Dynamic Effect of Homeownership on Political Contributions**



Note: In this analysis, I focus on individuals registered prior to 2000, and I construct five leads of homeownership, a switching indicator, and three lags of homeownership. The five-year lead, for example, takes on a value of 1 if the individual is 5 years from becoming a homeowner, and zero otherwise. As the plot shows, those who purchase homes become much more likely to make a political donation.

### A.3 Additional Results for Comments in City Council Meetings

In this section, I include additional results for the effect of homeownership on commenting behavior in local city council meetings. In Table A.2 I reproduce Table 2 but use total number of comments that an individual makes in a given year as the outcome, rather than an indicator for whether or not an individual makes at least one comment in a given year. The results are substantively quite similar. Homeownership leads to increases in the total number of comments made in a year by an individual, but the size of the effect varies dramatically across context. Individuals become much more likely to participate in Palo Alto city council meetings once they become homeowners (column 3), the effect is statistically indistinguishable from zero in Dallas (column 4), and the effect is positive but slightly more modest in Houston (column 5). Overall, this is consistent with the interpretation that homeownership motivates individuals to participate in local politics, but the extent to which it motivates them depends on the context.

**Table A.2 – Effect of Homeownership on Participation in City Council Meetings, 1997-2018.**

	Log(Comments + 1)				
	(1)	(2)	(3)	(4)	(5)
Homeowner	0.0083 (0.0037)	0.0073 (0.0058)	0.1093 (0.0360)	-0.0092 (0.0082)	0.0247 (0.0081)
Observations	179,020	82,822	5,760	29,036	48,026
Number of Individuals	13,992	6,714	640	1,708	4,366
Outcome Mean	0.0674	0.0732	0.1632	0.0585	0.0713
Sample	Pooled	Pooled	Palo Alto	Dallas	Houston
Always Registered	No	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes	Yes
Year-by-Zip Code FEs	Yes	Yes	Yes	Yes	Yes

Robust standard errors clustered by individual in parentheses. The unit of observation is a person-year. Columns 2 through 5 restrict the sample to individuals registered to vote in the state before the panel. All columns restrict the sample to individuals who make a comment at some point over the length of the panel.

## A.4 Additional Results for Local Turnout

In this section, I include additional results for the effect of homeownership on local election turnout.

In Table A.3 I reproduce Table 3 but use the full sample of individuals in the voter file and the property records, regardless of their voter registration status or date. In the main body of the paper, I included only individuals who were registered in their state prior to 2001 to ensure that individuals were living in the state, and therefore had the opportunity to vote in their state, in each time period. Including the full sample might introduce bias if, for example, an individual moves into the state after the beginning of the panel. In that case, I code them as not having voted in the local election before they move, even though they might have been voting in local elections in another state prior to moving. This would lead me to overestimate the effect of homeownership on local turnout. The results in Table A.3 suggest that this is likely a small issue, as the results using the full sample are nearly identical to those in Table 3.



**Table A.3 – Effect of Homeownership on Political Participation in Local California and Texas Elections, Full Sample, 2001-2017.**

	Turnout in Local Election = 1			
	(1)	(2)	(3)	(4)
Homeowner	0.020 (0.000)	0.022 (0.000)	0.028 (0.000)	0.017 (0.000)
Observations	25,954,308	25,954,308	9,575,226	25,939,854
Outcome Mean	0.065	0.065	0.104	0.065
Individual FEs	Yes	Yes	Yes	Yes
Year-by-State FEs	Yes	Yes	No	No
Year-by-Zip Code FEs	No	Yes	No	No
Year-by-Value-by-State FEs	No	No	Yes	No
Year-by-Age-by-State FEs	No	No	No	Yes

Robust standard errors clustered by individual in parentheses. Column 3 includes only individuals who become homeowners at some point during the study period. Year-by-Value fixed effects interact years with home value deciles.

## A.5 Additional Results for Contributions

In this section, I include additional results for the effect of homeownership on political contributions.

**Table A.4 – Effect of Homeownership on Political Contributions, Full Sample, 2000-2014.**

	Made Itemized Contribution = 1			
	(1)	(2)	(3)	(4)
Homeowner	0.010 (0.000)	0.009 (0.000)	0.005 (0.000)	0.009 (0.000)
Observations	41,602,215	41,602,215	15,338,490	41,578,185
Outcome Mean	0.006	0.006	0.011	0.006
Individual FEs	Yes	Yes	Yes	Yes
Year-by-State FEs	Yes	No	No	No
Year-by-Zip Code FEs	No	Yes	No	No
Year-by-Value FEs	No	No	Yes	No
Year-by-Age FEs	No	No	No	Yes

Robust standard errors clustered by individual in parentheses. All columns include all individuals in the voter file and property records, regardless of voter registration status. Column 3 restricts the sample to those who become homeowners at some point during the study period.

First, in Table A.4 I reproduce Table 4 but use the full sample of individuals in the voter file and the property records, regardless of their voter registration status or date. The reasoning is the same as described in Section A.4. Similar to the local turnout, the results for contributions using the full sample Table are nearly identical to those in Table 4, which uses only individuals registered to vote prior to 2000. In Table A.5 I estimate the effect on political contribution amount rather than an indicator for whether an individual made a contribution in a given year. The results suggest that homeownership leads to an increase not just in likelihood of donating, but also in the contribution amount.

**Table A.5 – Effect of Homeownership on Political Contribution Amount, 2000-2014.**

	Log(Contributions + 1)			
	(1)	(2)	(3)	(4)
Homeowner	0.051 (0.001)	0.050 (0.001)	0.025 (0.001)	0.056 (0.001)
Observations	14,285,505	14,285,505	7,886,205	14,270,445
Outcome Mean	0.012	0.012	0.016	0.012
Individual FEs	Yes	Yes	Yes	Yes
Year-by-State FEs	Yes	No	No	No
Year-by-Zip Code FEs	No	Yes	No	No
Year-by-Value FEs	No	No	Yes	No
Year-by-Age FEs	No	No	No	Yes

Robust standard errors clustered by individual in parentheses. All columns include only individuals who were registered to vote in the state prior to the start of the study period. Column 3 restricts the sample to those who become homeowners at some point during the study period.

## A.6 Topic Model

For illustration, I include the single subject or public comment that loads most heavily on each topic. The most common words in each topic are in italics, followed by the full text of the item or comment, city, and year.

- **Topic 1:** *state, inform, houston, peopl, school*: “presented information displayed a healthy and a diseased lung and stated that secondhand smoke was associated with lung disease etc. and people were at risk in their workplace; that secondhand smoke levels in bars were 300% to 600% higher than in other smoke filled workplaces and in an eight hour shift a bartender or waitress had inhaled as much as if they smoked a pack of cigarettes; that cadmium benzene lead and arsenic were just a few of the over 4000 hazardous chemical components in secondhand smoke; that children who breathed secondhand smoke were more subject to pneumonia bronchitis and other lung diseases and they had no choice.” **Houston, 2005.**

- **Topic 2:** *citi, district, cost, servic, ordin:* “an ordinance amending chapters 14, “dance halls,” and 41a, “sexually oriented businesses,” of the dallas city code, to define terms, including revising definitions of adult cabaret, nudity, and specified anatomical areas and deleting definitions of semi-nudity and simulated nudity; to eliminate the classification and requirements for class d dance halls; to provide an amortization period for nonconforming sexually oriented businesses; to restrict the location of sexually oriented businesses within 1,000 feet of child care facilities; to provide sign requirements and exterior requirements for sexually oriented businesses; to provide restrictions for nude model studios and adult cabarets relating to physical contact between employees and customers and customer access to closed areas within those establishments; and to include other possible amendments such as increasing locational restrictions from 1,000 feet to 1,500 feet - financing no cost consideration to the city ” **Dallas, 1997.**
- **Topic 3:** *street, traffic, project, develop, neighborhood:* “traffic calming was needed but the barriers were an extreme measure. alternatives would be traffic circles lights and stop signs for safer streets.” **Palo Alto, 2004.**
- **Topic 4:** *park, support, communiti, program, center:* “world music day is a celebration of music for professional amateur and children musicians alike. the grassroots event would encourage the participation of a wide variety of music types. he indicated the sponsors of the event were the human relations commission downtown business association palo alto chamber of commerce palo alto weekly palo alto online and chinese weekly. he this event entailed a detailed workplan and a massive outreach to the community would happen after the report was approved.” **Palo Alto, 2009.**
- **Topic 5:** *houston, present, member, area, presid:* “he was present on the cip meetings also; that in the past acres homes and district b itself had multiple meetings and this year they scheduled one; that he was president of the garden city civic club within acres homes; that 70% in his area were elderly and they would like a cip meeting in the acres homes area.” **Houston, 2010.**
- **Topic 6:** *zone, dalla, case, fund, public:* “a public hearing to receive comments concerning the application with the texas department of housing and community affairs (tdhca) for 4% tax credits in the approximate amount of \$7,705,000 with tax exempt bonds in the approximate amount of \$15,000,000 to be issued by the city of dallas housing finance corporation (dhfc) for the silver gardens apartments, an existing senior apartment community comprised of 202 units for seniors, located at 2620 ruidosa avenue, dallas, texas, 75228 and, at the close of the public hearing, authorize (1) dhfc to issue the tax exempt bonds in an amount not to exceed \$15,000,000 in multi-family housing mortgage revenue bonds series 2017 to finance the acquisition and rehabilitation of 202 units for seniors by dominium development & acquisition, llc (dominium), on behalf of dallas leased housing associates iv, llp (the applicant), referred to as the silver gardens; and (2) a resolution to support the tdhcas award of low income housing tax credits for the acquisition and rehabilitation of the existing silver gardens housing development located at 2620 ruidosa avenue, dallas, texas by conducting a public hearing pursuant to texas government code, §2306.67071(a) and 10 texas administrative code

(tac) §10.204(4)(a), texas government code, §2306.67071(b) and 10 tac§10.204(4)(b) and pursuant to §11.3(a-g) and §11.4 (c)(1) of the 2017 qualified allocation plan (qap) regarding housing deconcentration factors - financing no cost consideration to the city.” **Dallas, 2017.**

- **Topic 7:** *neighborhood, histor, ordin, properti, district:* “that he was the applicant, he and his wife owned two historic properties within the proposed district, they stood on the threshold of an exciting moment in the first ward, though many residents had long lamented the bulldozing of so many of their neighborhoods historic buildings, few believed that anything could be done about it, today they had new hope as the proposed high first ward historic district, the product of nine months of tireless effort by a team of determined volunteers, had reached the final step in its formation, requiring a 60% super majority, while counting non votes as no, created a high bar for a district application to surmount, it was not easy and the resulting map was not what any of them would have chosen, but it was what emerged from the process they had, and it would have the intended effect, the irreplaceable historic homes of the district would be saved and would preserve much of the historic character and charm of their neighborhood, that having met all of the requirements, they the 67% respectfully ask council to keep faith with the by approving this application.” **Houston, 2014.**
- **Topic 8:** *year, get, want, citi, one:* “that he was present trying to get some ditches fixed; that years ago the city came and dug them out eight feet wide and 3-1/2 feet deep and they stood with six inches of stagnant water, mosquitoes, etc., two neighbors died while mowing their ditch and the end of his shoe was cut off; that all they wanted was a cheap fix of throwing a pipe in and covering it with dirt; that city surveyors came out and said it was done wrong, but when it got to public works they said nothing was wrong.” **Houston, 2004.**
- **Topic 9:** *present, time, call, speak, name:* “had reserved time to speak, but was not present when his name was called.” **Houston, 2014.**
- **Topic 10:** *citi, offic, polic, depart, receiv:* “that he had 46 years of being culturally challenged and wanted to share a moment of his frustration; that on july 8, 2008, he inadvertently failed to appear for a traffic court appearance and contacted them on july 10th and conceded to accept the fine which he was refused a payment schedule and he said it was an act of concession because on february 5, 2008, at the preliminary hearing the officer or witness failed to appear and at the june 10, 2008, 9:00 a.m. hearing being indigent he filed a motion to dismiss citing failure of the witness to appear and later that afternoon the witness he said he had no legal responsibility as accused and the prosecutor urged the court to disallow the argument of legal responsibility before the jury which the court appeased and he then requested assistance of counsel and was told his time of prosecution did not quality for guarantee of representation; that he filed an appeal and it was dismissed and today he was asking here had he been a victim of government and not a benefactor of democracy.” **Houston, 2008.**