How Self-Interest and Symbolic Politics Shape the Effectiveness of Compensation for Nearby Housing Development

Michael Hankinson* Justin de Benedictis-Kessner†

November 18, 2022

Abstract

Policy with concentrated costs often faces intense localized opposition. Both private and governmental actors frequently use financial compensation to attempt to overcome this opposition. Using the policy of new housing production, we measure the effectiveness of financial compensation in winning policy support. We build a novel survey platform that shows respondents images of their self-reported neighborhood with hypothetical renderings of new housing development superimposed on existing structures. Using a sample of nearly 600 Bostonians, we find that compensating nearby residents increases their support for nearby market-rate housing construction. However, compensation does not influence support for affordable housing. We theorize that the inclusion of affordable housing activates symbolic attitudes, decreasing the importance of self-interest and thus the effectiveness of compensation. Our findings suggest greater interaction between self-interest and symbolic politics within policy design than previously asserted. Together, this research points to opportunities for creative coalition building by policy entrepreneurs when facing opposition due to concentrated costs.

Word count: 6,387 words

Keywords: self-interest, compensation, survey experiment, local government, housing

For comments, suggestions, and advice, we thank in alphabetical order: Riley Carney, Ryan Enos, John Helveston, Eunji Kim, Asya Magazinnik, Melissa Sands, Ken Scheve, Andrew Thompson, and Yamil Velez. We are grateful for feedback from the CSDP Conference on Housing Politics and Policy at Princeton University. We appreciate the research assistance of Emmalee Jordan and Peyton Wilson, image rendering by Rafael Marengoni, and GIS development of Alex Jacobson. Funding for this study came from the Boston Area Research Initiative and the Harvard Graduate School of Design Real Estate Academic Initiative. A pre-analysis plan for this study was registered at EGAP prior to data collection and the study has been approved by the GWU IRB (# NCR203047) and the Harvard IRB (# IRB21-0892).

*Assistant Professor, Department of Political Science, George Washington University. 2115 G Street, N.W., Washington, D.C. 20052. hankinson@gwu.edu

†Assistant Professor, John F. Kennedy School of Government, Harvard University. 79 John F. Kennedy St., Cambridge, MA 02138. jdbk@hks.harvard.edu

Many public policies are accompanied by concentrated costs. Often these costs are spatially concentrated, such as the increased traffic and noise surrounding a new transit hub. For other policies, the concentrated costs are not inherently spatial, but still prone to geographic clustering — e.g., harms to domestic industry via trade liberalization. Spatial or not, concentrated costs may turn voters who support a policy in the abstract against the policy in its implementation. Not only do the small groups who experience concentrated costs tend to be more likely to mobilize in opposition to the policy (Wilson, 1980), but the American legislative structure empowers veto actors with considerable negative power. In short, concentrated costs can quickly derail the passage and implementation of even popular policies.

Concentrated costs have negative impacts on voters' self-interest (de Benedictis-Kessner and Hankinson, 2019; Marble and Nall, 2021). Consequently, it may be possible to offset these costs through *concentrated benefits* that have a positive impact on their self-interest, such as material compensation. Compensation is commonly used to increase political support for policies ranging from market deregulation via industry-wide subsidies (Margalit, 2011) to large-scale waste facilities via direct payments to neighbors (Kunreuther and Easterling, 1996). Though some experimental studies have tested the effect of increasing levels of compensation by varying the amount of money offered (e.g., Frey, Oberholzer-Gee, and Eichenberger, 1996; Walker, Wiersma, and Bailey, 2014), we know less about whether the form of compensation or the traits of the concentrated policy costs influence the effectiveness of that compensation. Furthermore, experimental tests of compensation often rely on abstract policies that are unlikely to be familiar to respondents, such as income tax breaks for higher carbon taxes (e.g., Jagers, Martinsson, and Matti, 2019).

In this paper, we experimentally assess the effectiveness of compensation on local support for a concentrated policy cost with which most voters are very familiar: new, nearby multifamily housing development. New housing brings concentrated costs in the form of noise, traffic congestion, and stereotypes about new arrivals — all of which existing resi-

dents often fear and express in their vocal opposition to development (Einstein, Glick, and Palmer, 2020). Moreover, we show how real estate developers already frequently try to win the approval of current residents through compensation. Unlike large-scale infrastructure, the higher frequency with which new housing is developed makes this concentrated cost one that most voters are familiar with — meaning that they are likely to have concrete opinions rather than abstract ones on this issue. These factors all make housing development an externally valid and generalizable case in which to examine the effects of compensation on policy support.

We first describe the common use of local negotiation and compensation in the housing permitting process in large cities in the U.S. In half of the 25 most populous cities, developers seeking a discretionary permit are required to meet with an organized body designated as the community representatives. One-third of these 25 cities require the community body to issue an advisory vote on support for the permit. Prior to that vote, developers will often negotiate compensation agreements with these community institutions in exchange for their political support. These negotiations in advance of even advisory votes suggests that community-level compensation plays an important role in the production of new housing.

To measure the causal effects of compensation on support for new housing, we use an original map-based survey instrument and an experimental design that leverages realistic housing proposals located in respondents' self-reported neighborhoods. Combining Google Street View images with 3-dimensional models of proposed buildings, our survey measures residents' political support for proposed developments and assesses the causal effect of compensation from a developer on this support. From a sample of nearly 600 Boston residents, we find that compensation increases support for nearby housing developments. However, the effectiveness of compensation is limited to market-rate housing. Support for affordable housing is unresponsive to an increase in compensation, even among renters who are generally less wealthy than homeowners. Likewise, whether the compensation is offered as public goods investment or direct cash payments does not change its effectiveness.

The limited effect of compensation on support for nearby affordable housing suggests that attitudes towards affordable housing may be more entrenched than those towards market-rate housing. This could be because the presence of affordable housing appeals to voters' symbolic attitudes — sympathy for the unhoused — rather than their economic self-interest. In this case, policymakers eager to build coalitions for housing development with concentrated costs may be able to leverage these symbolic attitudes to their advantage. However, they should be aware that doing so risks undermining the effectiveness of additional material compensation.

More broadly, our results corroborate recent work showing that concentrated policy costs may sometimes be overcome by self-interest. Yet our experiment also indicates that there are limits to the use of financial self-interest as a tool to provide concentrated benefits, especially when self-interest intersects with symbolic politics. This suggests that policymakers should pay more attention to both self-interest and symbolic politics in policy design than previously asserted.

Compensation and Negotiation for Housing

The construction of new homes is rife with concentrated costs. Development brings noise and traffic congestion, potentially harming quality of life. New residents may consume more in public services than they provide in tax revenue, raising the tax burden of existing property owners (Hamilton, 1976). Biases against racial outgroups may cause current residents to be wary of new neighbors, especially if those neighbors are of lower economic standing (Charles, 2006). These threats, as well as the associated potential decrease in property values from increased supply may lead homeowners to oppose new housing in favor of the status quo (Fischel, 2001). Similarly, renters may oppose new market-rate housing both because it could harm their quality of life but also because they believe it will attract demand to their neighborhoods and thereby cause rents in their neighborhoods to increase (Hankinson, 2018).

Even when in the minority, local opponents to new housing are often effective in blocking

or down-sizing proposed developments. Low-turnout local elections and a permit review processes with typically unrepresentative public comment reward the preferences of organized, wealthier homeowners who often want no new housing, only single-family housing, or housing located outside of their neighborhoods (Einstein, Palmer, and Glick, 2019). Collectively, these political barriers to housing development threaten equity both locally and nationally. Limiting new housing not only raises rents (see, e.g., Been, Ellen, and O'Regan, 2019, for a review), but also prices out those seeking to move to cities with high upward income mobility, exacerbating income inequality (Ganong and Shoag, 2017) and entrenching existing patterns of racial segregation (Trounstine, 2018).

Although permitting decisions may be formally controlled by officials appointed by city councils or mayors, these officials are usually responsive to public comment on individual development projects (Sahn, 2022). Thus, the mass public – and the reaction of the public to concentrated costs of housing development – meaningfully influences policy change. While efforts to persuade respondents of new housing's collective benefits have shown limited effectiveness (Marble and Nall, 2021), the concentrated costs of housing may be directly countered through concentrated benefits.

Historically, such benefits were public in nature and designed to offset the direct infrastructure costs of new development. Known as exactions or linkage fees, the amount of compensation is formula-based, limiting the ability for the surrounding community to extract additional benefits using their political leverage (Been, 2005). Over time, however, the conceptualization of infrastructure and externalities has increased to include effects on human capital. Today, even formula-based exactions may include public amenities beyond road and sewer development (Kim, 2020). Likewise, city governments have institutionalized the role of community groups in vocalizing what they would like to see from new development projects. These institutions formalize the process of negotiation over these collective benefits, giving political power to neighbors to exact compensation from developers in many cities.

How Concentrated Benefits Are Institutionalized

In line with larger efforts to enhance community voice within public administration (Bingham, Nabatchi, and O'Leary, 2005; Jakobsen et al., 2019; Vigoda, 2002), local governments have worked to better integrate citizen input into the housing approval process. But the inclusion of community input varies both by the type of housing proposed and the structure of the approval process within the city.

First, the permitting of housing differs based on the two types of proposals: by-right and discretionary. By-right proposals are those currently allowed by existing zoning and thus their approval is largely administrative, insulating it from community input. In contrast, proposals which exceed the current zoning code are subject to discretionary review via a legislative body which will solicit community input. Because of the strictness of contemporary zoning, new housing developments increasingly must go through this discretionary review. O'Neill, Gualco-Nelson, and Biber (2020) reviewed the permitting process of 16 cities in CA and found that more than 80% of units went through some discretionary review. A similar study reviewing five cities in the San Francisco Bay Area found that all projects of 5 or more units included some form of discretionary review (O'Neill, Gualco-Nelson, and Biber, 2019).

Second, how community input is institutionalized within discretionary review varies across cities. At the more limited end of the spectrum, discretionary review may include simple public meetings in front of a city's Planning Commission — an appointed board typically composed of professionals such as architects or lawyers with knowledge of the field of development. During these public meetings, individual residents may use brief public statements to attempt to change the design of the development or extract community benefits from the developer. Importantly, at this end of the spectrum, these residents are working as individuals and not negotiating with the developer as a unified group. After public statements and concessions from the developer, the Planning Commission votes on whether to approve the proposed project.

Focusing on this limited end of institutionalized community input, there is considerable

debate over the power community members have in these meetings. The public input may be disregarded and the meeting's occurrence used as a form of tokenization to create a sense of democratic legitimacy (Arnstein, 1969; Checkoway, 1981). On the other hand, contemporary research has found community input to sway decisionmaking, even outside the area of housing (Dynes, Karpowitz, and Monson, 2022; Sahn, 2022). And though formal approval is controlled by the Planning Commission, commission members refer to the stated community support in their rationale for approval or denial of projects (Einstein, Palmer, and Glick, 2019). Even beyond the effect of any comments in a specific meeting, public meetings in general serve as venues of coordination and agenda-setting for future action (Adams, 2004). Likewise, venues of high quality participation may increase attendees' tolerance for opposing viewpoints (Halvorsen, 2003).

At the other end of the spectrum of institutionalized community input are formal community benefits agreements (CBAs) negotiated between developers and a coalition of community groups. Meant to counter a new project's potential externalities, the benefits provided by a CBA can range from financial, to physical, to behavioral goods. They often include the provision of affordable housing units, the guarantee of a living wage for employees, and hiring workers who are residents of the nearby local community (Wolf-Powers, 2010). In exchange for these benefits, community groups will pledge to publicly support the development, typically through favorable testimony at public hearings. While less structured, there is theoretical evidence that this direct negotiation between developers and community groups is more efficient for extracting community benefits and maintaining an elastic housing supply (Foster and Warren, 2022). As a result, a well-negotiated and legally enforceable CBA can provide a community with valuable resources while helping developers build political momentum behind their projects.

Traditionally, formal CBAs have been limited to large-scale, mixed-used projects based around commercial developments on the scale of multiple city blocks. The size and uniqueness of these projects limits their comparability to each other, as well as the generalizability

of what we can learn from their negotiations. Instead, we focus on the community benefits that result from a more common, semi-formalized negotiation process between community groups and developers — a process that lies somewhere between formal CBAs and simple community input hearings. These negotiations are similar to CBAs in that the city government recognizes a group of nearby residents negotiating as legitimate representatives of the collective interests in an affected community, thus providing the agreement with legitimacy. But unlike CBAs, these negotiations occur in tandem with many types of development requiring changes to the existing zoning code, such as a multifamily housing development of even only moderate size.

How common are these opportunities for semi-formalized community-developer negotiation? We reviewed the discretionary review processes of the 25 most populous cities in the United States. Specifically, we examined whether the following conditions exist:

1. A structure of geographically-defined groups recognized by city government as representing a community/neighborhood.
2. Developers are required to meet with these groups as part of the discretionary review process.
3. These groups are asked to supply formal recommendations regarding approval of the development project.

Table A-1 in the Appendix outlines the role of recognized community groups in the discretionary review process in the largest American cities. To summarize, 12 of the 25 most populous cities recognize a geographically defined entity as representing community interests in these decisions. In 8 of these 12 cities, community consultation is a formally required part of the discretionary permit process. Within these 12 cities generally, we expect neighborhoods to be able to better exert their political influence and negotiate for compensation. In the other 13, community groups may struggle to coordinate their efforts in negotiating as a unit or risk having developers splinter the community by selecting only a few, more favorable groups to represent the community — e.g., the Atlantic Yards CBA 2005 (Been,

2010). We also find that the institutionalization of community input generally corresponds with the ideological leanings of cities, with more conservative southern cities lacking formal recognition for community organizations in the development review process.

Of note, even within this set of 12 cities with community negotiation institutions, some cities are more aggressive than others in formalizing community input. For instance, Boston is known for heavily relying on negotiated benefits unique to each development rather than scheduled benefits based on a fixed formula (Kim, 2020). Specifically, the Boston Planning & Development Agency (BPDA) formally facilitates the negotiation of community benefits using an "Impact Advisory Group" (IAG) for each large discretionary permit. These IAGs are ad hoc groups formed uniquely for each qualifying project and are composed of nearby residents appointed by the mayor. The IAG works with the developer to identify the effects of the development on the community and then — in concert with the BPDA — negotiates a mitigation package attached to the development's approval.

To understand how communities extract benefits from developers, we analyze 421 compensation agreements from large developments in Boston, MA signed between 2016 and 2021. Known locally as "cooperation agreements," these packages range from large amounts of money for community groups to other investment in physical infrastructure in the neighborhood. Not all benefits are assigned financial values within the agreements. For example, a development may provide a community group with a room for monthly meetings but not provide an estimated value of that benefit in the cooperation agreement. Of the 421 agreements we observe, 35% provided some amount of financial compensation. Of agreements including financial values, the average package was $240,000 with a maximum of $5.35 million. In total, $35.7 million in specified-financial benefits were committed to the community through these agreements in the six-year period we observe. Approximately 37% of this amount went to parks and recreation, 21% to community-based centers and resources, 28% to streets and transportation, and the remaining 13% to individual non-profits.

Figure 1 shows the distribution of these agreements across Boston, overlaid on a map

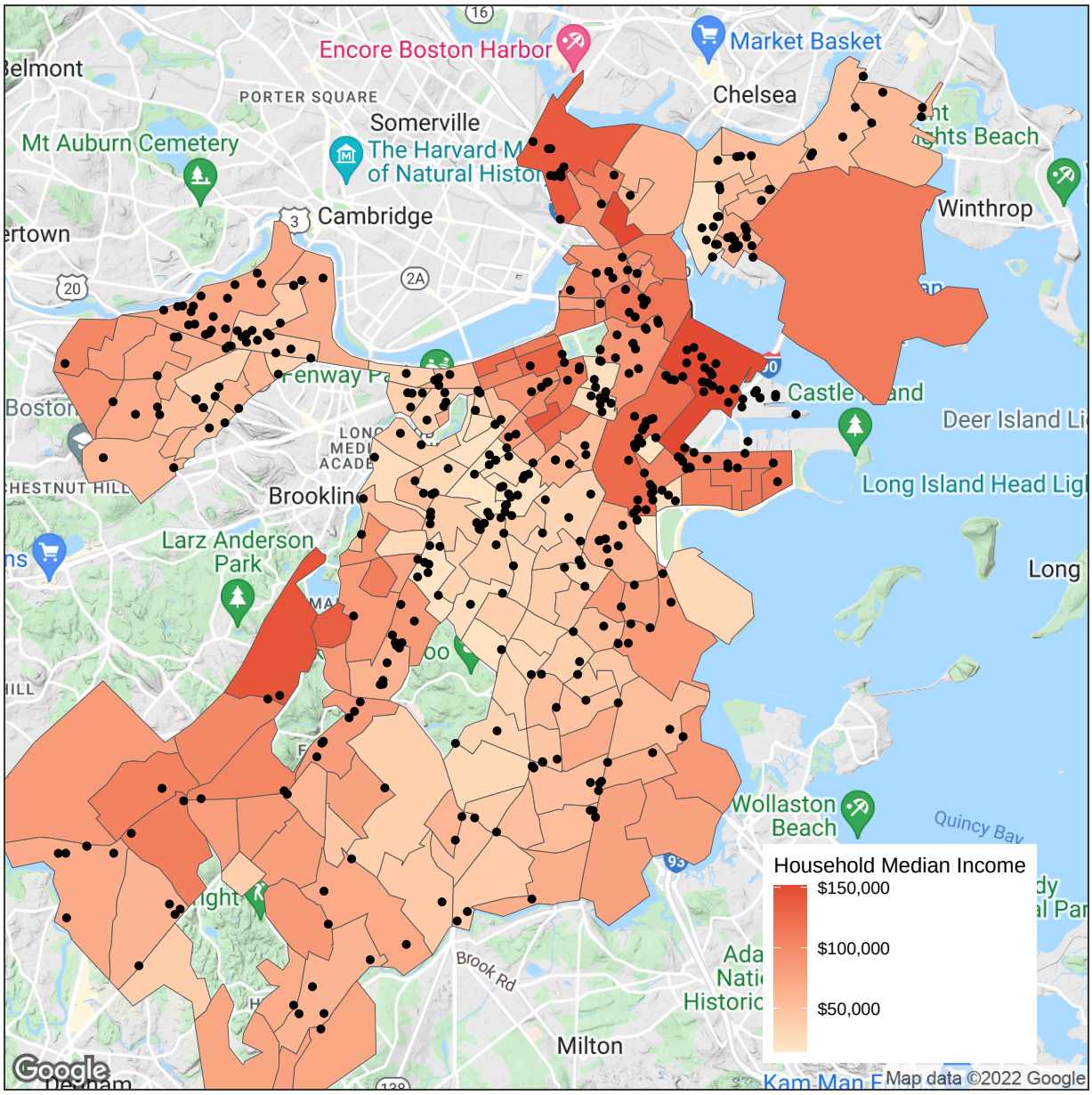


Figure 1: Distribution of cooperation agreements, Boston, MA (2016-2021)

of neighborhoods' median household income levels. The agreements are both common and geographically dispersed. They exist in the wealthier neighborhoods along the harbor, the majority single-family home neighborhoods in the southwest of the city, and in the lower-income communities in the middle and southeast of the city. The volume and distribution of these agreements suggests that most neighborhoods in Boston have experience with these negotiations.

These observational data indicate the commonality of development review processes involving material compensation exchanged for political support, especially for large-scale developments. Though this descriptive evidence shows the extent to which these negotiations are institutionalized and result in compensation for communities, it tells us little about whether such compensation is critical in securing support for new housing. Specifically, real-world data on community benefits for successful projects do not illuminate unsuccessful projects and the (unsatisfactory) package of compensation that they might have involved. Examining whether and how these benefits packages can secure public support for housing development is necessary for a holistic understanding of the role that community input plays in enabling or obstructing housing production.

Experiment

To assess the causal effect of compensation on public support for housing development, we use a "willingness-to-accept" survey experiment wherein we show residents of Boston, MA hypothetical new buildings proposed within their self-reported neighborhood and describe the randomly varied bundles of compensation that are offered by developers in exchange for their support. We conducted our pre-registered experiment on a sample of over 578 Boston residents recruited through a variety of methods from April 2021 to April 2022.

This experimental design leverages both a willingness-to-pay framework and the spatial dimension of neighborhoods to mimic the real-world concentrated costs and potential benefits from housing development.[1] To do so, our survey asked for respondents' approximate home locations, calculated the distance between the proposals and respondents' locations, and displayed 3-dimensional renderings of housing proposals on actual nearby housing parcels in their neighborhoods. The survey allowed the respondent to either enter their address or to first enter their ZIP code, causing the interface to zoom in to their neighborhood.[2] Next,

[1] In Appendix B, we further explain the advantages and disadvantages of the willingness to accept framework, and how our specific design circumvents some of the concerns about financial realism in survey experiments.
[2] This ZIP code-based method, rather than the exact address method, was chosen by 73% of respondents.

respondents were asked to indicate the intersection nearest to their home using their cursor.

After providing the location of their home, respondents were shown 5 development proposals randomly sampled from a list of potential proposals within 0.75 miles from their self-reported location. We chose nearby proposals in this distance range because past research has shown that spatially-driven opposition in an urban environment declines rapidly beyond this distance (Hankinson, 2018). Likewise, councilmembers considering whether to approve a proposal may provide greater weight to input from to those living closer to the housing proposal. In other words, proposals within 0.75 miles are the ones where respondents would both have the most leverage to obstruct and would be the most likely to benefit from any compensation offered by the developer.

The visual presentation of these proposals was designed to closely replicate how new proposals might be encountered in respondents' daily lives. Each proposal contained two images: the existing parcel viewed from the sidewalk captured via Google's Street View and a rendering of the proposed development (see Figure 2). The rendering was based on a 3-dimensional representation of the current structure captured from slightly above via Google Earth. To represent the proposed building, each rendering included a blue prism drawn over the existing building to display the physical size of the new proposed development without providing any details of its exterior design. These two images (the current street view and the proposed development rendering) were displayed alongside a map showing a blue icon — the respondent's self-reported location — and an orange icon — the location of the proposal in question. Throughout the survey and the questions about multiple development proposals, the blue icon always remained visible, with the screen zooming and reorienting to show the location of each new proposal.

All of these proposed developments were pulled from real residential structures that existed in the City of Boston's property database so as to display only realistic locations for development of larger residential buildings. Each proposed development was described as twice as tall as the current building and containing threefold as many units. The height

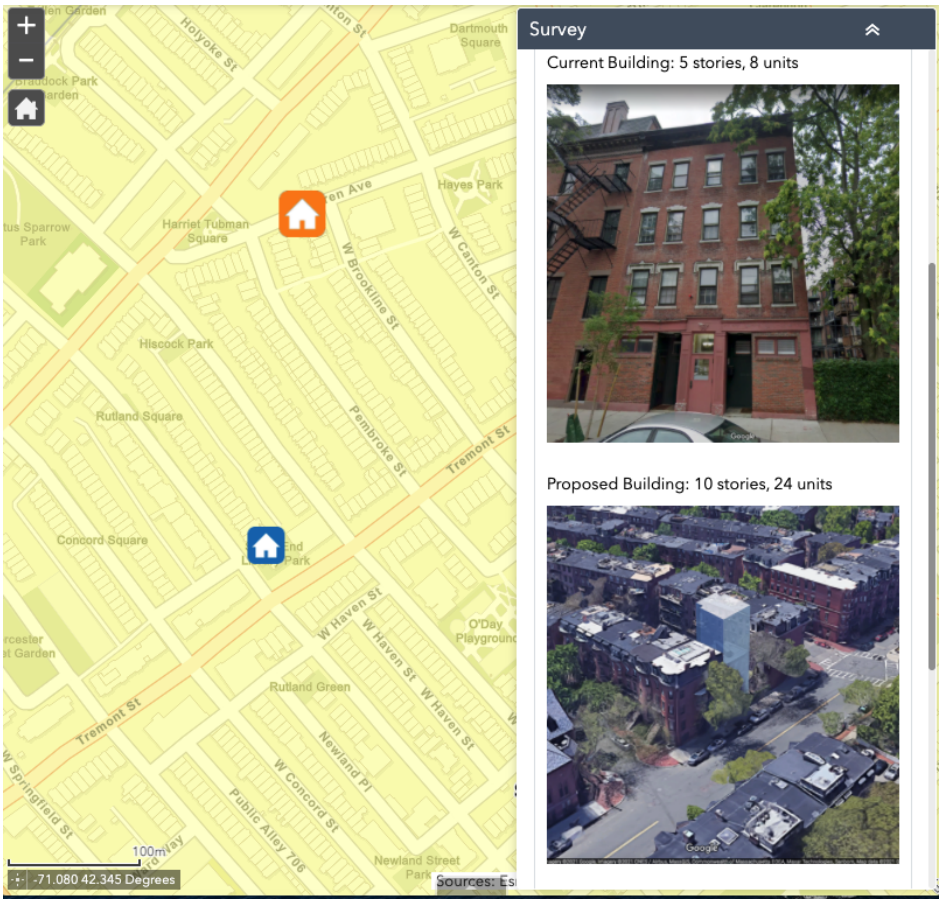


Figure 2: Example prompt

of the new building was stated in text and displayed using a blue prism surrounding the existing structure. The number of units in the new building was also displayed in text and was rounded up for buildings with odd numbers of units. This increase in density was substantial but not unrealistic for new residential development in Boston.

Experimentally, the survey randomly varied three features of each proposal. First, we varied the affordability of each proposal's units, stating either: "Half of the units would be occupied by low-income housing voucher recipients" or "The units will be rented at whatever price the local market supports." Of course, the effects of affordable vs. market-rate development reach far beyond the price point of individual units, and might include effects on the racial and economic diversity of the neighborhood and nearby schools. But this bundled treatment mirrors how affordable housing is often described by developers and

the government officials. At the bottom of the proposal, respondents were first asked their support for the new building using a 5-item Likert response scale ranging from "Strongly oppose" to "Strongly support." This reported support — after viewing only the proposed development's location and affordability — served as our first outcome of interest.

Next, respondents were given information about the compensation the developer was providing in order to garner support for the new housing development proposal. We randomly varied the amount of this compensation, and chose an amount for each proposal ranging from \$50 to \$10,000. These amounts were chosen to cover the median compensation level required for winning support and to avoid obviously excessive bids (Kanninen, 1995).[3] This compensation was presented either as a direct payment to the respondent or as an investment in local public goods, randomized at the individual-level but held constant across each of the five proposals the respondent viewed to minimize cognitive load. The text read:

> "Suppose your neighborhood could vote on whether this proposal should be built. If the proposal passes, the developer will contribute money to the neighborhood around the property. The money would be [distributed as a one-time cash payment such that each person, including you, would receive \$X]/[spent on park and street improvements worth \$X per neighborhood resident]."

The size of the "neighborhood" and total amount of compensation to be paid out (\$X $*$ # of neighborhood residents) was not defined, allowing respondents to form their own mental image of their neighborhood. Following the presentation of this information about compensation, we then asked respondents our second outcome measure for whether they supported the proposal or not. Following best practices of contingent valuation experiments, we phrased this measure in the form of a referendum. Respondents were asked "How would you vote on this proposal?" and indicated their support on a binary scale.

To summarize, the randomized features of the proposal were the following:

[3]See Section B.1 for a more detail on bid selection.

- Affordability: 0% of units for low-income residents v. 50% of units for low-income residents. Randomized at the proposal level.
- Compensation ranging from $50 to $10,000. Randomized at the proposal level.
- Form of compensation: Direct payment vs. public goods investment. Randomized at the respondent level.

Data

Due to the customized renderings of the experimental stimuli, the survey was designed only for Boston, MA, an appropriate choice given the city's high housing costs and struggles with siting new housing (Glaeser and Ward, 2009). We directly recruited respondents via emails sent to email addresses of registered voters available from a commercial voter file, via community groups likely to be already involved in the housing negotiation process, as well as via the commercial survey sample provider PureSpectrum, which interfaces with a large array of commercial survey sample providers that traditionally run advertising and marketing surveys.

Wave 1 of the survey was fielded in April 2021. To recruit the sample, we used a commercially available voter file. We defined the sampling frame of registered voters living in Boston, MA with an email address provided in the voter file (57% of registered voters). We used stratified sampling, grouping voters by race, age, voter turnout in the 2018 general election, and registered political party. We oversampled young and minority voters using estimated response rates from a similar voter file-based survey (Wilcox-Archuleta, 2019). Targeting a sample of 1,000 respondents, we emailed 46,833 voters. Participants who completed the 10-minute survey received a $5 Amazon gift card sent to their email address. Wave 1 contains 288 respondents.

Wave 2 of the survey was recruited via snowball sampling of neighborhood associations and tenants groups in Fall of 2021. We emailed unique survey IDs to individuals in leadership

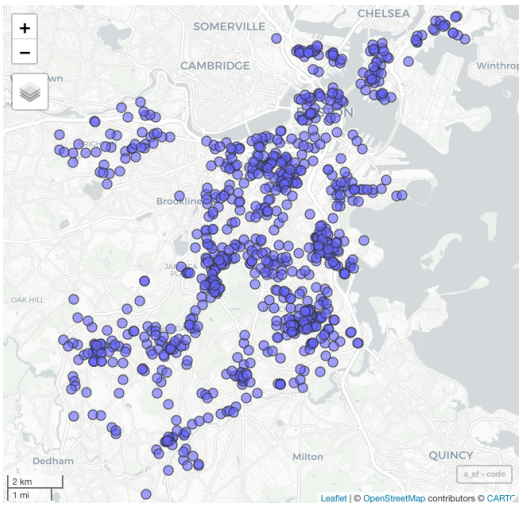
positions within these groups and asked them to distribute the survey to their members. No compensation was offered for this survey. While snowball sampling has limitations, respondents from this wave are those most likely to attend community meetings to express their support or opposition to new housing development. In line with this expectation, 76% of Wave 2 respondents reported attending a Boston political meeting or community forum in the past 12 months, meaning their voice is incredibly relevant to this political phenomenon. Wave 2 contains 216 respondents.

Wave 3 of the survey was recruited via the PureSpectrum platform in February 2022. PureSpectrum targetted our survey to respondents registered with Boston-based ZIP codes. To ensure data quality, respondents were first filtered based on self-reported residence in Boston then respondents had to indicate their address within the city using the approach described above. These requirements make us confident that all respondents are current residents of Boston. Wave 3 contains 300 respondents.

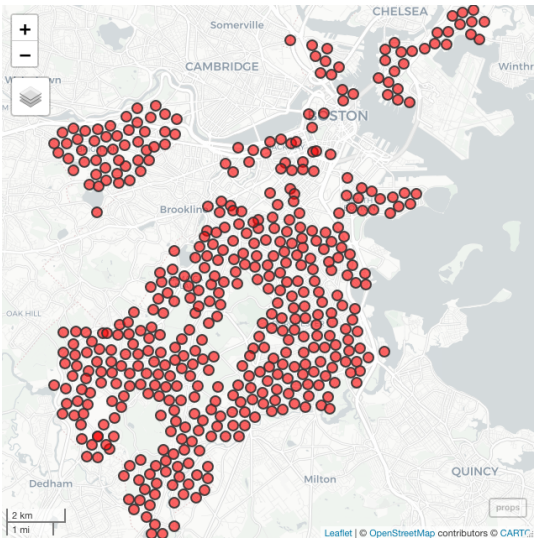
We combine responses to Waves 1, 2, and 3 for a total of 805 respondents, of which 589 respondents provided demographic information. The demographics of our combined survey sample match the population of Boston reasonably well, as we show in Appendix Table C-2.[4] The spatial distribution of respondents across Boston is plotted in Figure 3a, and Figure 3b shows the distribution of our experimental stimuli across the city. Both maps show that both our respondents and the proposed developments that they evaluated encompassed nearly all of the city's geography.

To analyze the experiment, we regressed support for each housing proposal on the randomly varied attributes of each development — compensation amount, inclusion of affordable housing, and form of compensation — as well as an array of demographic covariates including homeownership, income, race/ethnicity, education level, party identification, gender, and age. Huber-White standard errors are clustered at the respondent level to account for the multiple choices by each respondent.[5]

[4]Individual tables of descriptive statistics for Waves 1, 2 and 3 are presented in Tables C-3, C-4, and C-5.
[5]See Section G for additional details from our pre-analysis plan.



(a) Self-reported location of respondents



(b) Location of building proposals

Figure 3: Geographic distributions of respondents and experimental stimuli.

Results

In this section, we discuss the results using our two separate outcome measures in turn. Using the the 5-point Likert scale, we first provide evidence of how the affordability of housing developments affected respondents' support for these proposals before the information about compensation was presented to them. Then, we discuss the effects of compensation on our second outcome measure, respondents' support for the proposal measured as a binary outcome.

The Effects of Affordability

To understand the sample's baseline attitudes towards new housing, we begin by using an OLS framework to model support when viewing a proposal *before* compensation is described. The dependent variable of support is the 5-item Likert response operationalized as an interval variable from 0 ("Strongly oppose") to 1 ("Strongly support"). For the randomly varied proposal attributes, we operationalize distance based on a kilometer increase away from the respondent's house, and "Affordability" as a dummy variable indicating whether the

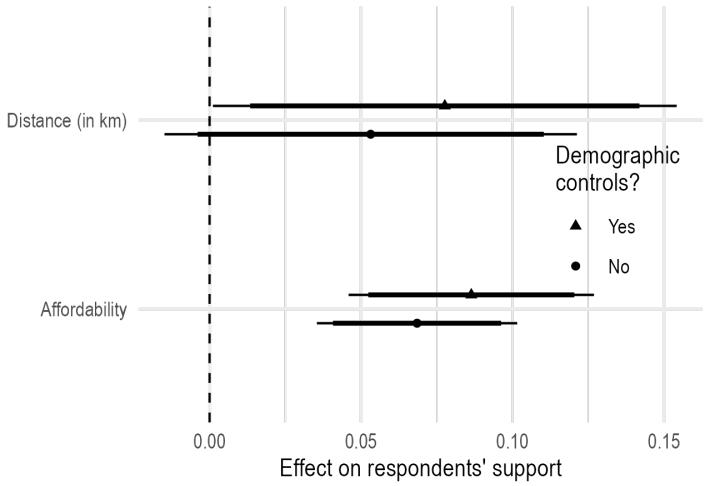


Figure 4: Predictors of support for housing proposals without compensation

proposal included half affordable units, rather than all market-rate units. Figure 4 displays the effects of these attributes on our outcome of support for the proposal, both from models with demographic controls included (triangles) and without controls (filled circles).

Corroborating recent research, we find that the distance between a respondent's home and the proposed development influences their support. A 1-kilometer increase in the distance of the proposal away from a respondent's home increased support by approximately 5 to 8 percentage points. In addition, a proposed development including affordable units caused respondents to be 7 to 8 percentage points more supportive of the proposal.[6]

The Effects of Compensation

We next assessed the effect of compensation and other experimental features of the proposed developments using our second outcome, binary support for the proposed development. We display these results in Figure 5. Compensation increased respondents' support for proposed developments. A proposed housing development accompanied by a 100 percent greater

[6]These results are similar when separately analyzing homeowners and renters, as we do in the Appendix. The inclusion of affordable housing had a similarly-sized positive effect on support for new housing among both homeowners and renters, as indicated by the null interaction between homeowner status and "Affordable" in Column 3 of Table D-6.

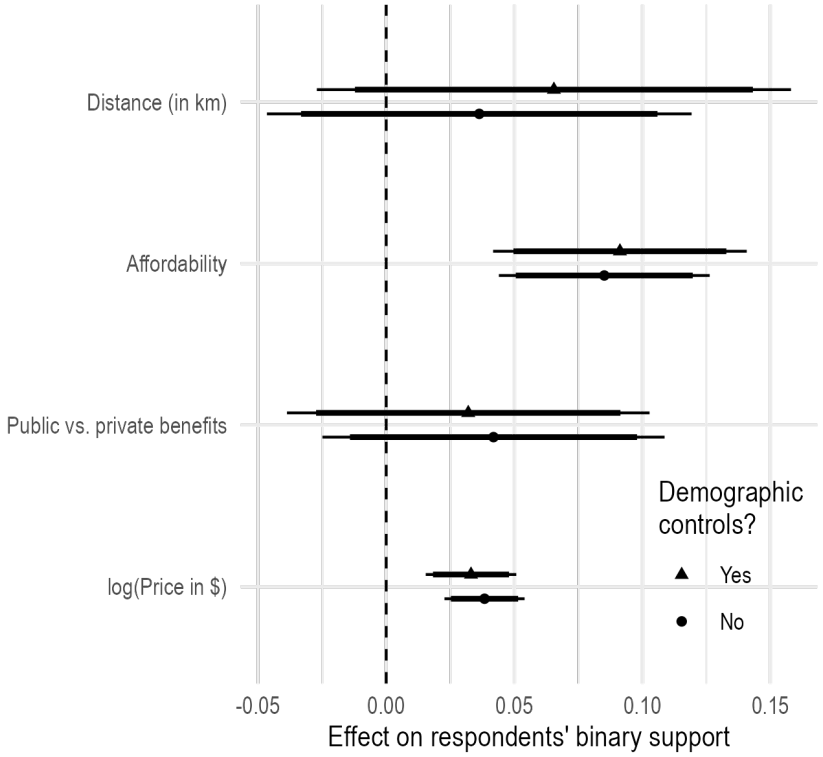


Figure 5: Predictors of support for housing proposals with compensation

amount of compensation received 2.6 percentage points greater support.[7] The form of compensation (public benefit vs. private payment) appears to have had no effect on respondents' support, however. Providing the benefits as public goods rather than private payments had a positive effect in all models, but it was not statistically significant.[8] The inclusion of affordable housing in the proposed development again increased respondents' support for the proposal – for this outcome, by 9 percentage points.

However, the form of housing (affordable rather than market-rate) moderated the effectiveness of compensation on respondents' support for developments. When we interact the affordability of the development with the amount of compensation offered we find that for affordable housing the compensation offered has no influence on respondents' support (Figure 6). Yet for market-rate housing proposals, the amount of compensation offered increased

[7] $(0.038 \times log(2))$.

[8] Additionally, the interaction between amount of compensation and the form of compensation was substantively null. See column 4 in Table D-7.

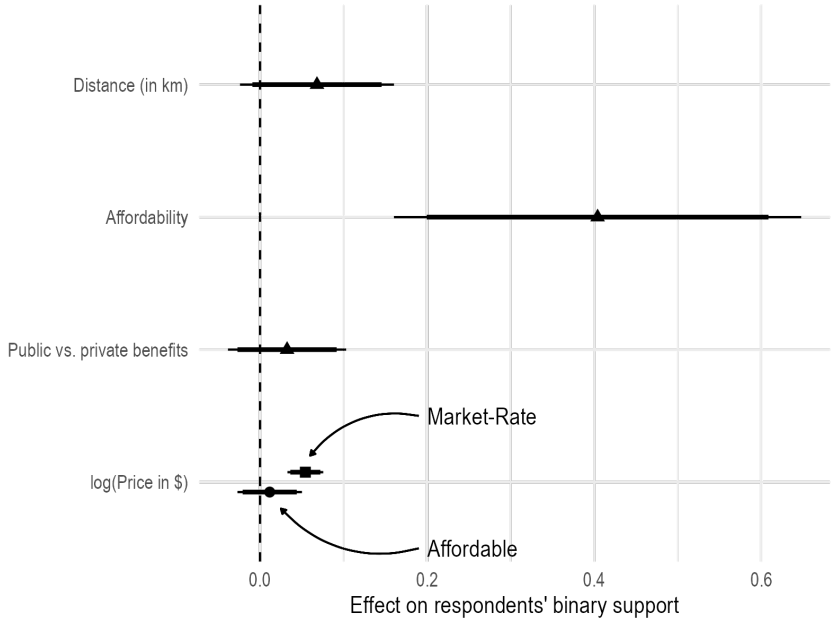


Figure 6: Predictors of support for housing proposals, affordability interacted with compensation

support.[9] While a 100 percent increase in compensation increased support for market-rate housing by 3.7 percentage points, the same increase in compensation did not increase support for affordable developments.[10]

Evidence from Open-Ended Responses

To better understand why the effect of compensation varied based on the affordability of the proposed housing, we analyzed our respondents' open-ended text responses. For the first of the five proposals viewed, we asked each respondent: "Using at least 5 words, how did the financial compensation affect your support for the proposal?" We calculated the frequency of words that people used in response to this question, among both those who were randomly assigned a proposal that included affordable housing and those assigned a proposal solely composed of market-rate housing. To make responses comparable, we stemmed all words,

[9]See column 3 in Table D-7 for these results in tabular form.

[10]Furthermore, when we disaggregate these models by homeownership status, we find that the inclusion of affordable housing negates the effectiveness of compensation among both homeowners and renters (see Appendix D.1).

removed numbers and stopwords (i.e. common conjunctions and prepositions), and replaced the symbol"$" with the word "dollars."

Figure 7 presents the relative frequency of words used by respondents in the two conditions, among the most commonly used (overall) words.[11] We operationalize this relative frequency using the base-2 logged ratio of a given term's frequency between respondents in the affordable condition and respondents in the market-rate condition (e.g. Wasow, 2020). The positive values of this ratio for the top two words in this figure, for instance, indicate that respondents evaluating affordable proposals were more than one-and-a-half times more likely to use the terms "benefit" and "build" compared to those respondents evaluating market-rate proposals.[12] In contrast, the bottom two words in Figure 7 indicate that respondents evaluating market-rate housing used the term "afford" almost three times as much, and referenced the compensation offered to them (using the word "dollar") almost twice as frequently as those evaluating an affordable housing proposal.[13]

In short, respondents evaluating market-rate housing were much more focused on the compensation offered in exchange for their support compared to respondents evaluating affordable housing. This differential attentiveness to the financial offer helps provide depth to our finding that the amount of compensation only minimally (if at all) influenced support for respondents evaluating affordable housing proposals.

[11] We chose the top 21 word stems, due to a tie for the 20th most common word.
[12] $2^{0.7} \approx 1.6$.
[13] $2^{1.4} \approx 2.7$, and $2^{0.9} \approx 1.9$, respectively.

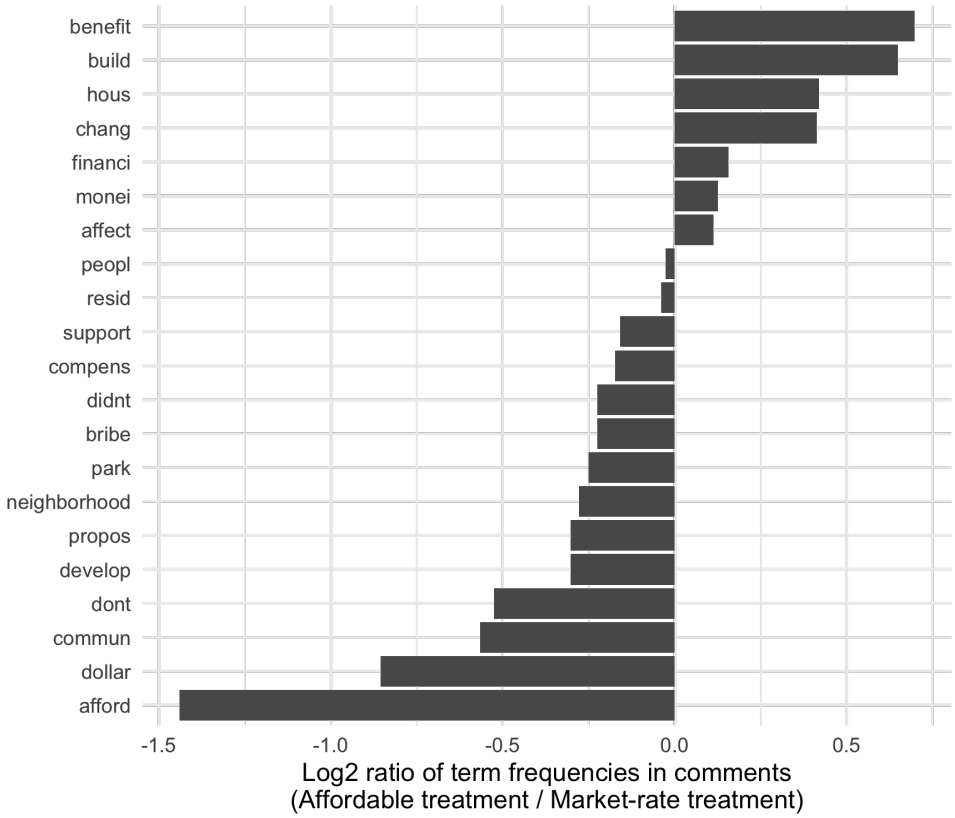


Figure 7: Log2 ratio of term frequencies in open-ended text comments regarding financial compensation (affordable housing treatment/market-rate housing treatment)

Discussion and Conclusion

Compensating the public via infrastructure fees has long been a requirement for housing developers. But little is known about how communities negotiate to extract concentrated benefits to offset housing's localized costs. In this paper, we have measured not only the extent of institutionalized community voice in extracting benefits, but the effectiveness of that compensation in offsetting concentrated costs. Using a sample where such negotiation is institutionalized, we showed respondents realistic 3-dimensional renderings for new housing development within their self-reported neighborhood. Doing so, we found that compensation — be it public goods or private payments — is effective in increasing policy support among the mass public. However, we also found that the inclusion of affordable housing not only increased support for each proposal, but negated the effect of compensation on proposal

support.

Why would support for affordable housing be unresponsive to compensation? There are two possibilities. First, affordable housing may suffer from floor or ceiling effects. Dislike for affordable housing may be so great as to overwhelm any effect of compensation. Conversely, support for affordable housing may be so high that compensation cannot move support any higher. This is unlikely, as the median support for affordable housing hovers around 50 percent. Instead, we believe that our results demonstrate the calcified nature of public opinion on affordable housing. Supporters and opponents are sufficiently anchored in their opinions that they they are unaffected by the levels of compensation that developers provide to neighbors. The symbolic politics of affordable housing therefore weaken the effects of compensation.

These findings support a history of political science and public policy research that demonstrates the dominance of symbolic politics in mass public preferences for policy (Feldman, 1982; Sears et al., 1980). Only when a policy is proximate to an individual's material well-being and lacks a salient partisan framing should we expect self-interest to drive attitudes (e.g., Hårsman and Quigley, 2010). In this case, the partisan and racialized perspectives towards affordable housing may prevent appeals to self-interest (i.e., compensation) from driving attitudes (Tighe, 2012). Conversely, research has also found self-interested attitudes to be largely unmoved by symbolic frames and sociotropic primes (Chong, Citrin, and Conley, 2001; Marble and Nall, 2021; but see Mutz and Kim, 2017). However, our findings suggest that even the narrow change of housing's affordability can influence whether voters evaluate the policy through a lens of self-interest or symbolic values.

For policymakers and private developers alike, our findings indicate clear pathways towards increasing public support for new housing development in urban environments such as Boston. Our results suggest that the inclusion of affordable housing can be a useful measure to increase net support for a project. However, once affordable housing is incorporated in a proposal, additional compensation is unlikely to prove useful in expanding a coalition.

In fact, additional compensation may only hurt the financial viability of a project if it is increased – with little payoff in public support. Instead, support for mixed-income developments, which are often developments that fall under commonly used inclusionary zoning requirements, could be increased by highlighting the relative affordability of the development. This appeal to the symbolic value of affordability may do more to garner neighbors' support than financial compensation could accomplish for such projects.

Our findings also have a natural application to policy areas beyond housing. Imagine a statewide bond to fund public schools in low-income areas. For voters outside of low-income catchment zones, support for the bond may be based on how much they expect the bond to raise tax obligations. But adjustment to the bond's design may instead activate symbolic attitudes. For example, the bond might prioritize the funding of historically disadvantaged, majority-minority schools, which could cause support for the policy to polarize according to racial attitudes. Conversely, the bond might include funding for private religious schools, which could cause polarization along voters' ideological preferences for the separation of church and state — an increasingly likely scenario given the U.S. Supreme Court's recent ruling to prevent the exclusion of private religious schools from tuition assistance programs in *Carson v. Makin*, 596 U.S. __ (2022). Either way, these changes to policy design may cause symbolic attitudes to eclipse the importance of the bond's financial implications for the average voter.

Our results also highlight that the activation of symbolic politics is especially potent when applied to issues dealing with material benefits to be divided among constituents. This hypothetical change in voter perspective on a school bond would not simply be the direct result of attaching a symbolic policy onto a policy with financial costs. Instead, it is the self-interested design features inherent to the original policies — which create financial winners and losers — that have the ability to activate new cleavages in the policy debate. Because symbolic cleavages are not driven by material well-being, they can negate the need for (or effectiveness of) compensation in winning political support. In short, our findings sug-

gest greater interaction between self-interest and symbolic politics within policy design than previously asserted. This interaction provides opportunities for creative coalition building by policy entrepreneurs.

References

Adams, Brian. 2004. "Public Meetings and the Democratic Process." *Public Administration Review* 64(1): 43–54.

Alvarez, R Michael, and Jonathan Nagler. 1998. "When Politics and Models Collide: Estimating Models of Multiparty Elections." *American Journal of Political Science* 42(1): 55–96.

Arnstein, Sherry R. 1969. "A Ladder of Citizen Participation." *Journal of the American Institute of Planners* 35(4): 216–224.

Been, Vicki. 2005. "Impact Fees and Housing Affordability." *Cityscape* pp. 139–185.

Been, Vicki. 2010. "Community Benefits: A New Local Government Tool or Another Variation on the Exactions Theme." *University of Chicago Law Review* 77: 5.

Been, Vicki, Ingrid Gould Ellen, and Katherine O'Regan. 2019. "Supply Skepticism: Housing Supply and Affordability." *Housing Policy Debate* 29(1): 25–40.

Bingham, Lisa Blomgren, Tina Nabatchi, and Rosemary O'Leary. 2005. "The New Governance: Practices and Processes for Stakeholder and Citizen Participation in the Work of Government." *Public Administration Review* 65(5): 547–558.

Boyle, Kevin J. 2017. "Contingent Valuation in Practice." In *A Primer on Nonmarket Valuation*. Springer pp. 83–131.

Calia, Pinuccia, and Elisabetta Strazzera. 1999. "Bias and Efficiency of Single vs Double Bound Models for Contingent Valuation Studies: a Monte Carlo Analysis." *Fondazione Eni Enrico Mattei Working Paper* (10.99).

Carson, Richard T, and Mikołaj Czajkowski. 2014. "The Discrete Choice Experiment Approach to Environmental Contingent Valuation." In *Handbook of Choice Modelling*, ed. S Hess, and A Daly. Northampton: Edward Elgar Publishing.

Carson, Richard T, and Theodore Groves. 2007. "Incentive and Informational Properties of Preference Questions." *Environmental and Resource Economics* 37(1): 181–210.

Charles, Camille Zubrinksy. 2006. *Won't You Be My Neighbor: Race, Class, and Residence in Los Angeles*. Russell Sage Foundation.

Checkoway, Barry. 1981. "The Politics of Public Hearings." *The Journal of Applied Behavioral Science* 17(4): 566–582.

Chong, Dennis, Jack Citrin, and Patricia Conley. 2001. "When Self-Interest Matters." *Political Psychology* 22(3): 541–570.

de Benedictis-Kessner, Justin, and Michael Hankinson. 2019. "Concentrated Burdens: How Self-Interest and Partisanship Shape Opinion of Opioid Treatment Policy." *American Political Science Review* 113(4): 1078–1084.

Diamond, Peter A, and Jerry A Hausman. 1994. "Contingent Valuation: Is Some Number Better Than No Number?" *Journal of Economic Perspectives* 8(4): 45–64.

Dynes, Adam M, Christopher F Karpowitz, and J Quin Monson. 2022. How Local Officials Respond to Expressions of Public. Technical report.

Einstein, Katherine Levine, David M Glick, and Maxwell Palmer. 2020. *Neighborhood Defenders*. New York: Cambridge University Press.

Einstein, Katherine Levine, Maxwell Palmer, and David M Glick. 2019. "Who Participates in Local Government? Evidence from Meeting Minutes." *Perspectives on Politics* 17(1): 28–46.

Feldman, Stanley. 1982. "Economic Self-Interest and Political Behavior." *American Journal of Political Science* pp. 446–466.

Fischel, William A. 2001. *The Homevoter Hypothesis*. Cambridge, MA: Harvard University Press.

Foster, David, and Joseph Warren. 2022. "The NIMBY Problem." *Journal of Theoretical Politics* 34(1): 145–172.

Frey, Bruno S, Felix Oberholzer-Gee, and Reiner Eichenberger. 1996. "The Old Lady Visits Your Backyard: A Tale of Morals and Markets." *Journal of Political Economy* 104(6): 1297–1313.

Ganong, Peter, and Daniel Shoag. 2017. "Why Has Regional Income Convergence in the US Declined?" *Journal of Urban Economics* 102: 76–90.

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.

Gomila, Robin. 2021. "Logistic or Linear? Estimating Causal Effects of Experimental Treatments on Binary Outcomes Using Regression Analysis." *Journal of Experimental Psychology: General* 150(4): 700.

Halvorsen, Kathleen E. 2003. "Assessing the Effects of Public Participation." *Public Administration Review* 63(5): 535–543.

Hamilton, Bruce W. 1976. "Capitalization of Intrajurisdictional Differences in Local Tax Prices." *The American Economic Review* 66(5): 743–753.

Hankinson, Michael. 2018. "When Do Renters Behave Like Homeowners? High Rent, Price Anxiety, and NIMBYism." *American Political Science Review* 112(3): 473–493.

Hårsman, Björn, and John M Quigley. 2010. "Political and Public Acceptability of Congestion Pricing: Ideology and Self-Interest." *Journal of Policy Analysis and Management* 29(4): 854–874.

Helveston, John Paul. 2020. *logitr: Random Utility Logit Models with Preference and Willingness to Pay Space Parameterizations*. https://jhelvy.github.io/logitr/: .

Jagers, Sverker C, Johan Martinsson, and Simon Matti. 2019. "The Impact of Compensatory Measures on Public Support for Carbon Taxation: An Experimental Study in Sweden." *Climate Policy* 19(2): 147–160.

Jakobsen, Morten, Oliver James, Donald Moynihan, and Tina Nabatchi. 2019. "JPART Virtual Issue on Citizen-State Interactions in Public Administration Research." *Journal of Public Administration Research and Theory* 29(4): e8–e15.

Johnston, Robert J, Kevin J Boyle, Wiktor Adamowicz, Jeff Bennett, Roy Brouwer, Trudy Ann Cameron, W Michael Hanemann, Nick Hanley, Mandy Ryan, Riccardo Scarpa et al. 2017. "Contemporary Guidance for Stated Preference Studies." *Journal of the Association of Environmental and Resource Economists* 4(2): 319–405.

Kanninen, Barbara J. 1995. "Bias in Discrete Response Contingent Valuation." *Journal of Environmental Economics and Management* 28(1): 114–125.

Kim, Minjee. 2020. "Negotiation or Schedule-Based? Examining the Strengths and Weaknesses of the Public Benefit Exaction Strategies of Boston and Seattle." *Journal of the American Planning Association* 86(2): 208–221.

Kim, Younjun, Catherine L Kling, and Jinhua Zhao. 2015. "Understanding Behavioral Explanations of the WTP-WTA Divergence Through a Neoclassical Lens: Implications for Environmental Policy." *Annual Review of Resource Economics* 7: 169–87.

Knetsch, Jack L. 2005. "Gains, Losses, and the US-EPA Economic Analyses Guidelines: A Hazardous Product?" *Environmental and Resource Economics* 32(1): 91–112.

Kunreuther, Howard, and Doug Easterling. 1996. "The Role of Compensation in Siting Hazardous Facilities." *Journal of Policy Analysis and Management* 15(4): 601–622.

Marble, William, and Clayton Nall. 2021. "Where Self-Interest Trumps Ideology: Liberal

Homeowners and Local Opposition to Housing Development." *Journal of Politics* 83(4): 1747–1763.

Margalit, Yotam. 2011. "Costly Jobs: Trade-Related Layoffs, Government Compensation, and Voting in US Elections." *American Political Science Review* 105(1): 166–188.

McFadden, Daniel, and Kenneth Train. 2000. "Mixed MNL Models for Discrete Response." *Journal of Applied Econometrics* 15(5): 447–470.

Mutz, Diana C, and Eunji Kim. 2017. "The Impact of In-Group Favoritism on Trade Preferences." *International Organization* 71(4): 827–850.

O'Neill, Moira, Giulia Gualco-Nelson, and Eric Biber. 2019. "Developing Policy from the Ground Up: Examining Entitlement in the Bay Area to Inform California's Housing Policy Debates." *Hastings Environmental Law Journal* 24: 1.

O'Neill, Moira, Giulia Gualco-Nelson, and Eric Biber. 2020. "Sustainable Communities or the Next Urban Renewal?" *Ecology Law Quarterly* 47: 1061.

Sahn, Alexander. 2022. "Public Comment and Public Policy." Working paper, online: `https://www.csdpconferences.org/uploads/1/3/2/7/13271319/public_meetings_paper.pdf`.

Sears, David O, Richard R Lau, Tom R Tyler, and Harris M Allen. 1980. "Self-Interest vs. Symbolic Politics in Policy Attitudes and Presidential Voting." *American Political Science Review* 74(3): 670–684.

Tighe, J Rosie. 2012. "How Race and Class Stereotyping Shapes Attitudes Toward Affordable Housing." *Housing Studies* 27(7): 962–983.

Trounstine, Jessica. 2018. *Segregation by Design: Local Politics and Inequality in American Cities*. Cambridge University Press.

Vigoda, Eran. 2002. "From Responsiveness to Collaboration: Governance, Citizens, and the Next Generation of Public Administration." *Public Administration Review* 62(5): 527–540.

Viscusi, W Kip, and Joel Huber. 2012. "Reference-Dependent Valuations of Risk: Why Willingness-to-Accept Exceeds Willingness-to-Pay." *Journal of Risk and Uncertainty* 44(1): 19–44.

Walker, Benjamin JA, Bouke Wiersma, and Etienne Bailey. 2014. "Community Benefits, Framing and the Social Acceptance of Offshore Wind Farms: An Experimental Study in England." *Energy Research & Social Science* 3: 46–54.

Wasow, Omar. 2020. "Agenda Seeding: How 1960s Black Protests Moved Elites, Public Opinion and Voting." *American Political Science Review* 114(3): 638–659.

Wilcox-Archuleta, Bryan. 2019. "Survey Sampling with Voter Files: Improving on Affordable Survey Options for Public Opinion." Working paper.

Wilson, James Q. 1980. *The Politics of Regulation*. New York: Basic Books.

Wolf-Powers, Laura. 2010. "Community Benefits Agreements and Local Government: A Review of Recent Evidence." *Journal of the American Planning Association* 76(2): 141–159.

Supplementary Appendix for "Compensating Costs: How Self-Interest and Symbolic Politics Shape the Effectiveness of Compensation"

Contents

A Institutionalization of Community Negotiation for Public Benefits

Table A-1: Institutionalization of Public Benefits Negotiation in Discretionary Review Process, 25 Most Populous Cities

City	Structure	#	Description	Media Account	Source
New York, NY	Community Boards	59	Formal part of discretionary review pipeline.	"After ongoing negotiations with Community Board 2's Land Use committee, Phipps adjusted the income bands for the units from their initial 110 to 90 percent of the Area Median Income (AMI)."	Acevedo, A. 2020. *QNS*. Dec 7.
Los Angeles, CA	Neighborhood Councils	99	Not part of discretionary review pipeline, but meeting is encouraged.	"Along with entitlement approvals, Clifford Beers Housing is seeking a letter of support for the project from UNNC, the latter's agenda shows."	Boerner, D. 2021. *What Now Los Angeles*. Jun 16.
Chicago, IL	NA	NA	Neighborhood groups express preferences through their alderman's office.	NA	NA
Houston, TX	Super Neighborhoods	88	Not part of the discretionary review pipeline.	NA	NA
Phoenix, AZ	Village Planning Committees	15	Formal part of discretionary review pipeline. Non-coterminous groups.	"When the Brown Group came back to the table with the village planning committee, it offered four units – 2% – to go toward formerly incarcerated people and front-line workers like teachers, as well as a community garden space."	Taros, M. 2021. *AZ Central*. Jun 10.

City	Structure	#	Description	Media Account	Source
Philadelphia, PA	Registered Community Organizations	200+	Formal part of discretionary review pipeline. No single group represents community though.	"In late 2012,...City Council formalized the long-standing practice of real estate developers and community groups negotiating by defining and regulating RCOs...the zoning code update requires that one RCO for the neighborhood coordinates one meeting where everybody is represented."	Elliot, K. 2017. Office of Innovation and Technology. Jul 31.
San Antonio, TX	NA	NA	NA	NA	NA
San Diego, CA	Community Planning Groups	43	Formal part of discretionary review pipeline.	"Community planning groups, even though they're advisory, play an important role in bringing the community together to have a conversation in terms of what a project should look like."	Burks, M. 2015. *KPBS*. May 20.
Dallas, TX	NA	NA	NA	NA	NA
San Jose, CA	NA	NA	NA	NA	NA
Austin, TX	Neighborhood Plan Contact Teams	31	Formal part of discretionary review pipeline. Non-coterminous groups, generated from ground up.	"I think that the discussion has been fruitful, and as a result of the stakeholder feedback the Jay Paul Company increased by over $900,000 the community benefits in the targeted areas that were in fact identified by the contact teams."	Thompson, B. 2021. *Community Impact*. Jun 9.
Jacksonville, FL	Citizens Planning Advisory Committees	6	Not part of the discretionary review pipeline. Large aggregation level limits direct neighborhood influence.	NA	NA

City	Structure	#	Description	Media Account	Source
Fort Worth, TX	NA	NA	NA	NA	NA
Columbus, OH	Area Commissions	21	Formal part of discretionary review pipeline.	"Many residents have opposed the plans for two years, saying the project's scale is too big for the neighborhood. The developer had gone back and forth with the Schumacher Place Civic Association and Columbus South Side Area Commission, and residents last year held 'whale walks' in protest of the development's size."	Ferenchik, M. 2022. *The Columbus Dispatch*. Feb 9.
Indianapolis, IN	NA	NA	NA	NA	NA
Charlotte, NC	NA	NA	NA	NA	NA
San Francisco, CA	Array of groups	NA	Pre-existing groups supplanted the need to create a new institution. These groups have the ability to request discretionary review of any project, making even their informal influence powerful.	"It's unclear how much of the project's affordability played into the discontent of neighborhood anti-gentrification activists — primarily, a coalition of Mission-based groups called United to Save the Mission. But Moshayedi asserted in an interview that, during negotiations, the coalition asked for major concessions such as "land" and "a lot of cash." He would not say how much money the coalition asked for. He said, too, the groups did not specify where the money would go but that it would be on a "payment basis."	Mark, J. 2019. *Mission Local*. July 26.
Seattle, WA	Design Review Boards	8	Formal part of discretionary review pipeline. Focused on design review, not maximizing community input writ large.	NA	NA

City	Structure	#	Description	Media Account	Source
Denver, CA	NA	NA	NA	NA	NA
Washington, DC	Advisory Neighborhood Commissions	37	Formal part of discretionary review pipeline.	"D.C. lawmakers are looking to arm the city's advisory neighborhood commissions with more resources and expertise as they negotiate with developers, hoping to empower the volunteer commissioners as they engage in highly technical debates over zoning and development."	Koma, A. 2020. *Washington Business Journal*. Dec 2.
Nashville, TN	NA	NA	NA	NA	NA
Oklahoma City, OK	NA	NA	NA	NA	NA
El Paso, TX	NA	NA	NA	NA	NA
Boston, MA	Impact Advisory Group	NA	Formal part of discretionary review pipeline. Formed ad hoc per development proposal	"The mitigation package...included a new pot of money that was championed by State Rep. Dan Ryan and other officials. That was perhaps the largest change in mitigation measures, which is what the IAG is tasked with negotiating. That new pot of money would be a $500,000 grant from the developer to the Boston Housing Authority to fix buildings and improve open spaces in areas of the development slated for reconstruction much later in the process."	Daniel, S. 2020. *Charlestown Patriot-Bridge*. Dec 16.
Portland, OR	NA	NA	NA	NA	NA

B Evaluating Public Support Using a "Willingness-to-Accept" Experiment

There are challenges to capturing the effects of compensation on public support through a survey experiment. To begin, traditional surveys often lack real-world stakes that would enable financial payments to be realistically powerful. Such surveys can introduce a hypothetical bias when the exercise lacks consequences to the respondent. However, some have suggested that a hypothetical bias can be avoided if the results of the survey have a non-zero probability of being used in the real-world decision-making process (Carson and Czajkowski, 2014). We work to counter this hypothetical bias by stating in recruitment and during the survey that a final report of findings will be shared with the City of Boston.

More broadly, experiments with financial tradeoffs are most accurate when the respondent is familiar with the good being valued. Given that housing is an individual's largest regular expense and that residents often connect new development to their personal housing costs (Fischel, 2001), and that residents in growing cities like Boston regularly observe new housing development, we expect that the respondents in our survey are both familiar and comfortable with evaluating the tradeoffs around new housing proposals. This familiarity avoids many of the logical problems identified in intangible, unfamiliar goods, such as respondents valuing the lives of 10 whales the same as 100 whales (Diamond and Hausman, 1994).

There are also debates over whether WTA or its counterpart — "Willingness to Pay" (WTP) — is a better method for measuring stated preferences. In a WTA experiment, the goal is to elicit how much a respondent would need to be compensated to agree to a policy. In contrast, a WTP experiment measures how much a respondent would pay to either implement or block a new policy. WTA is more appropriate for this study due to its loss-based reference point and realism as a policy instrument (Knetsch, 2005; Kim, Kling, and Zhao, 2015). Because most people view new housing as having negative externalities, WTA better captures the reference point of a loss which requires compensation (Viscusi and Huber, 2012; Johnston et al., 2017). This is in contrast to valuing a public good which does not exist, but for which the respondent is willing to pay, e.g., constructing a new park.

Second, the framework of WTA is far more realistic as a policy instrument. As noted, WTA already exists as a compensation measures in the form of CBAs between developers and their proposal's surrounding community. In contrast, we have yet to observe a citizen paying a developer to not build nearby (i.e., WTP). Indeed, the proposition that respondents should have to pay to avoid development would seem so ludicrous and repugnant that it risks "system rejection" of the survey by respondents, leading to either protest responses or satisficing. The tools of delay and veto are already in the hands of the current residents (Einstein, Palmer, and Glick, 2019). Thus, a WTA experiment enhances the findings' externality validity by better reflecting both the psychology of the housing's externalities and the existing policy processes.

Regarding format, the recent stated preferences literature uniformly supports using a referenda-style bid, particularly around items that are public goods. As a referendum, the bid offers respondents a payment should the proposed policy pass, then asks respondents about their support in a yes/no form. Unlike open-ended statements or payment cards, this referenda-style bid prevents respondents from intentionally misstating their values to

influence the outcomes of the study (Boyle, 2017).

Less clear is the form of the referenda choice experiment. Single-bounded experiments offer one compensation amount, whereas double-bounded experiments offer a follow-up; a higher value if the respondent declined the first offer, a lower if they accepted. Carson and Groves (2007) find the double-bounded choice experiment to bias estimates downwards and to be largely undesirable except for increasing statistical power. However, even this power benefit has been questioned for survey samples of more than a few hundred respondents (Calia and Strazzera, 1999). Consequently, this survey utilizes a single-bounded WTA choice experiment.

B.1 Bid Selection

A March 2021 pilot study (n = 250) from Amazon's Mechanical Turk platform showed respondents a hypothetical development proposal for their own community. The proposal was generic, not actually pulled from a respondent's neighborhood like in this study. Asking an open-ended response and removing seemingly extreme values (greater than $100,000), the median minimum compensation level required to support the proposal was $1,000. Best practice suggests spreading compensation values between the 20th and 80th percentiles to identify the median valuation. Consequently, we selected 7 bid amounts roughly following the distribution of minimally accepted values from 20th through 80th percentiles of the pilot data: $50, $200, $500, $1,000, $1,500, $2,000, and $5,000. Of course, this distribution may have been biased downward given the lower income levels of Mechanical Turk respondents. Results from Wave 1 showed that most respondents still were not accepting the proposed housing even when offered $5,000. To better estimate the causal effect of compensation, we increased the bid values for Waves 2 and 3 to $250, $750, $1,500, $3,000, $5,000, $7,500, and $10,000. The three waves are combined in the analysis.

C Descriptive Statistics

Table C-2: Sample Descriptive Statistics, All Respondents

Statistic	Mean	St. Dev.	Median	Min	Max	N
Female	0.64	0.48	1.00	0.00	1.00	580
White	0.61	0.49	1.00	0.00	1.00	589
Black	0.18	0.39	0.00	0.00	1.00	589
Latino	0.07	0.26	0.00	0.00	1.00	589
Asian	0.04	0.19	0.00	0.00	1.00	589
Age	42.91	15.01	40.00	17.00	80.00	589
College educated	0.74	0.44	1.00	0.00	1.00	589
Income >90k	0.43	0.50	0.00	0.00	1.00	515
Homeowner	0.59	0.49	1.00	0.00	1.00	564
Democrat	0.75	0.43	1.00	0.00	1.00	589
Liberal	0.78	0.41	1.00	0.00	1.00	589
Attended meeting	0.43	0.50	0.00	0.00	1.00	589

Table C-3: Sample Descriptive Statistics, Wave 1

Statistic	Mean	St. Dev.	Median	Min	Max	N
Female	0.70	0.46	1.00	0.00	1.00	251
White	0.49	0.50	0.00	0.00	1.00	255
Black	0.29	0.45	0.00	0.00	1.00	255
Latino	0.10	0.30	0.00	0.00	1.00	255
Asian	0.04	0.20	0.00	0.00	1.00	255
Age	44.15	14.43	40.00	23.00	80.00	255
College educated	0.73	0.45	1.00	0.00	1.00	255
Income >90k	0.43	0.50	0.00	0.00	1.00	222
Homeowner	0.54	0.50	1.00	0.00	1.00	246
Democrat	0.79	0.41	1.00	0.00	1.00	255
Liberal	0.79	0.41	1.00	0.00	1.00	255
Attended meeting	0.35	0.48	0.00	0.00	1.00	255

Table C-4: Sample Descriptive Statistics, Wave 2

Statistic	Mean	St. Dev.	Median	Min	Max	N
Female	0.54	0.50	1.00	0.00	1.00	176
White	0.76	0.43	1.00	0.00	1.00	179
Black	0.06	0.23	0.00	0.00	1.00	179
Latino	0.04	0.21	0.00	0.00	1.00	179
Asian	0.01	0.07	0.00	0.00	1.00	179
Age	48.40	13.33	46.00	23.00	78.00	179
College educated	0.89	0.32	1.00	0.00	1.00	179
Income >90k	0.64	0.48	1.00	0.00	1.00	154
Homeowner	0.88	0.32	1.00	0.00	1.00	177
Democrat	0.75	0.44	1.00	0.00	1.00	179
Liberal	0.84	0.37	1.00	0.00	1.00	179
Attended meeting	0.76	0.43	1.00	0.00	1.00	179

Table C-5: Sample Descriptive Statistics, Wave 3

Statistic	Mean	St. Dev.	Median	Min	Max	N
Female	0.65	0.48	1.00	0.00	1.00	153
White	0.62	0.49	1.00	0.00	1.00	154
Black	0.16	0.36	0.00	0.00	1.00	154
Latino	0.06	0.25	0.00	0.00	1.00	154
Asian	0.06	0.25	0.00	0.00	1.00	154
Age	34.63	14.24	30.00	17.00	75.00	154
College educated	0.58	0.50	1.00	0.00	1.00	154
Income >90k	0.22	0.41	0.00	0.00	1.00	138
Homeowner	0.33	0.47	0.00	0.00	1.00	141
Democrat	0.71	0.46	1.00	0.00	1.00	154
Liberal	0.72	0.45	1.00	0.00	1.00	154
Attended meeting	0.19	0.39	0.00	0.00	1.00	154

D Results, Tabular Form

Table D-6 displays the results of Figure 4 in tabular form. Because of a technical error, the affordability condition of proposals was not recorded for the first 78 respondents, so the sample size decreases when adding the covariate of affordability. Further decreases occur with demographics due to respondent roll-off. Model 1 (left) includes only the randomized aspects of the proposals. Model 2 (center) includes respondent demographics. Model 3 (right) includes an interaction between homeownership status and the inclusion of affordable housing units to assess differential effect between homeowners and renters.

Table D-7 displays the results of Figure 5 in tabular form.

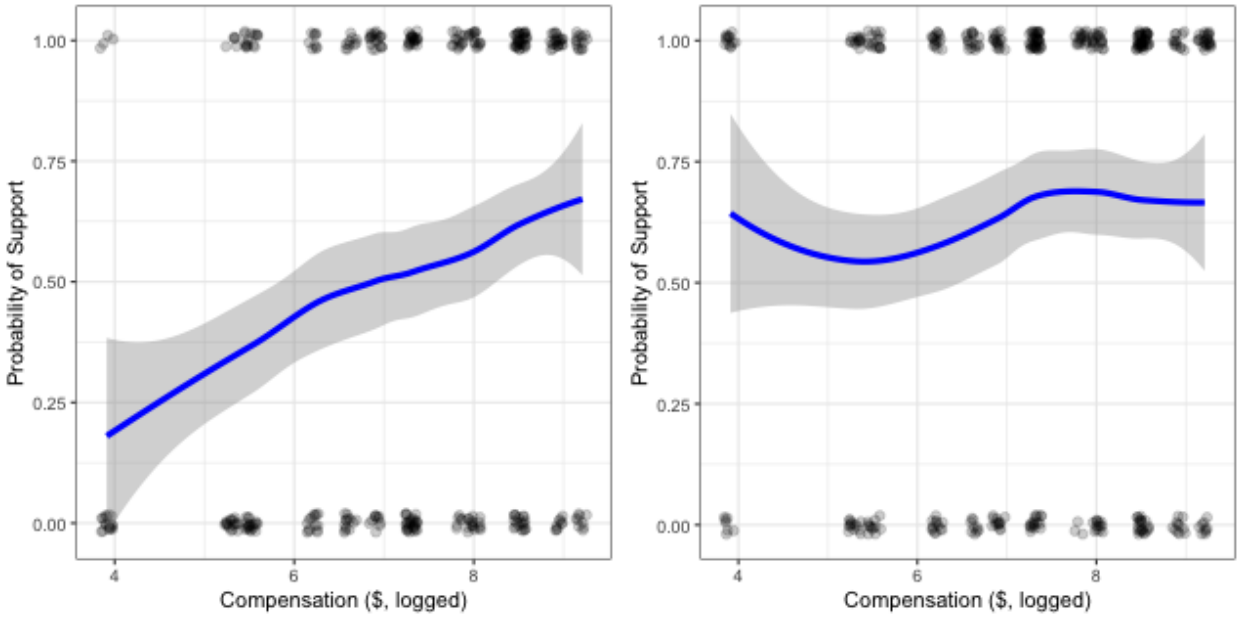
Table D-6: Predictors of Support for Housing Proposals without Compensation

	(1)	(2)	(3)
Distance (km)	0.053	0.078*	0.077*
	(0.035)	(0.039)	(0.039)
Affordable	0.069***	0.086***	0.113***
	(0.017)	(0.021)	(0.034)
Homeowner		−0.012	0.009
		(0.041)	(0.044)
Income		−0.005	−0.005
		(0.006)	(0.006)
White, non-Hispanic		−0.065	−0.065
		(0.054)	(0.055)
Black, non-Hispanic		−0.218***	−0.218***
		(0.065)	(0.065)
Hispanic		−0.095	−0.093
		(0.075)	(0.076)
College		−0.062	−0.061
		(0.047)	(0.047)
Liberal		0.018	0.017
		(0.040)	(0.040)
Female		−0.150***	−0.150***
		(0.034)	(0.034)
Age		−0.010	−0.010
		(0.007)	(0.007)
Age squared		0.00002	0.00002
		(0.0001)	(0.0001)
Affordable*Homeowner			−0.043
			(0.042)
Constant	0.359***	0.976***	0.964***
	(0.025)	(0.152)	(0.154)
Observations	2,583	1,713	1,713
R^2	0.009	0.143	0.144
Note:			*p<0.05; **p<0.01; ***p<0.001

Table D-7: Predictors of Support for Housing Proposals with Compensation

	(1)	(2)	(3)	(4)
Compensation, logged	0.038***	0.033***	0.054***	0.038**
	(0.008)	(0.009)	(0.011)	(0.014)
Distance (km)	0.036	0.065	0.068	0.065
	(0.042)	(0.047)	(0.047)	(0.047)
Public benefits	0.042	0.032	0.032	0.106
	(0.034)	(0.036)	(0.036)	(0.136)
Affordable	0.085***	0.091***	0.404**	0.091***
	(0.021)	(0.025)	(0.124)	(0.025)
Homeowner		−0.027	−0.027	−0.027
		(0.046)	(0.046)	(0.046)
Income		−0.009	−0.009	−0.009
		(0.007)	(0.007)	(0.007)
White, non-Hispanic		0.051	0.047	0.052
		(0.061)	(0.061)	(0.061)
Black, non-Hispanic		−0.100	−0.106	−0.100
		(0.075)	(0.075)	(0.075)
Hispanic		0.059	0.057	0.060
		(0.084)	(0.085)	(0.084)
College		−0.070	−0.069	−0.071
		(0.054)	(0.053)	(0.054)
Democrat		0.039	0.037	0.039
		(0.049)	(0.049)	(0.049)
Female		−0.145***	−0.145***	−0.144***
		(0.038)	(0.038)	(0.038)
Age		−0.019**	−0.020**	−0.019**
		(0.007)	(0.007)	(0.007)
Age squared		0.0001	0.0001	0.0001
		(0.0001)	(0.0001)	(0.0001)
Compensation*Affordable			−0.043**	
			(0.016)	
Compensation*Public				−0.010
				(0.018)
Constant	0.115	0.982***	0.834***	0.944***
	(0.068)	(0.185)	(0.188)	(0.206)
Observations	2,583	1,713	1,713	1,713
R^2	0.021	0.167	0.171	0.168

Note: *p<0.05; **p<0.01; ***p<0.001



(a) Market-Rate Housing (b) Affordable Housing

Figure D-1: Compensation Effects, Renters

D.1 Results by Homeownership Status

To better understand the mechanism, we plot the effect of compensation separately for market-rate and affordable proposals, separately among renters (Figures D-1a and D-1b) and homeowners (Figures D-2a and D-2b). The LOESS lines on each plot demonstrate the relationship between compensation and proposal support.

Among renters, compensation increased support for market-rate housing. In contrast, renters supported *affordable* housing at a uniformly higher level, regardless of compensation level. This interaction between affordability and compensation is reflected parametrically in Table D-8, Models 1 and 2. A 100 percent increase in compensation increased support for market-rate proposals by 5.9 percentage points, whereas the effect was null for proposals with affordable housing as evidenced by the large, statistically significant negative interaction term. These results — coupled with the positive and significant coefficient on the inclusion of affordable housing — suggest that renter support for affordable housing is higher than market-rate housing but insensitive to compensation. In contrast, support for market-rate housing was lower than affordable housing, but could be increased via financial compensation.

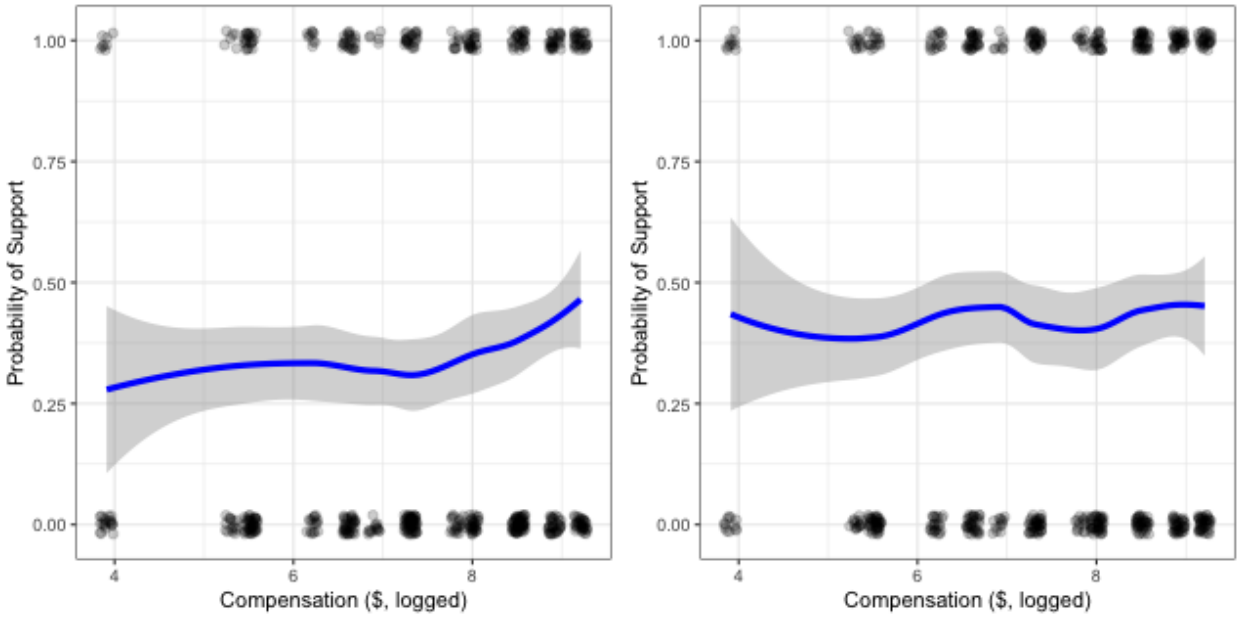
Similarly, among homeowners, compensation had a small effect on support for market rate housing, but it had little to no effect on affordable housing. This lack of an effect is reinforced by Table D-8, Models 3 and 4. A 100 percent increase in financial compensation increased support for market rate housing by 2.5 percentage points ($p < .05$). However, the interaction between compensation and affordability was negative and substantively large enough to negate any treatment effect from compensation. The effects of compensation for any type of housing are small in comparison to those observed among renters.

The generally weak effects of compensation here could be due to an income effect —

Table D-8: Predictors of Support for Housing Proposals with Compensation

	(1)	(2)	(3)	(4)
Compensation, logged	0.091***	0.085***	0.028	0.036**
	(0.018)	(0.018)	(0.014)	(0.014)
Affordable	0.581**	0.554**	0.178	0.301
	(0.193)	(0.194)	(0.163)	(0.159)
Public benefits	0.089	0.137*	0.008	−0.020
	(0.059)	(0.058)	(0.050)	(0.046)
Distance (km)		0.127		0.028
		(0.075)		(0.059)
Income		−0.010		−0.008
		(0.012)		(0.009)
White, non-Hispanic		0.087		0.024
		(0.086)		(0.080)
Black, non-Hispanic		0.006		−0.185
		(0.105)		(0.099)
Hispanic		0.139		0.014
		(0.145)		(0.113)
College		−0.056		−0.032
		(0.087)		(0.083)
Liberal		−0.011		0.036
		(0.084)		(0.061)
Female		−0.229***		−0.106*
		(0.066)		(0.046)
Age		−0.024		−0.031**
		(0.014)		(0.010)
Age squared		0.0002		0.0002
		(0.0002)		(0.0001)
Compensation*Affordable	−0.063*	−0.057*	−0.014	−0.032
	(0.026)	(0.026)	(0.021)	(0.021)
Constant	−0.195	0.565	0.144	1.258***
	(0.138)	(0.296)	(0.110)	(0.271)
Observations	747	665	1,198	1,048
R^2	0.059	0.159	0.010	0.177

Note: *p<0.05; **p<0.01; ***p<0.001



(a) Market-Rate Housing (b) Affordable Housing

Figure D-2: Compensation Effects, Homeowners

homeowners are wealthier and therefore less likely be persuaded by the same amount of money as renters — or because homeowner concerns are tied to their home value — fluctuations of which far exceed even the high levels of compensation offered. Table D-9 tests whether these effects are driven by income. We interact income with compensation level and run the analysis only for market-rate housing, the type of housing which shows responsiveness to compensation. We find no evidence that respondent income moderates the effect of compensation in increasing proposal support. While we do not have data on each respondent's household size, the lack of sensitivity to their income leads us to believe that household size would also not moderate the effect of compensation.

Table D-9: Predictors of Support for Housing Proposals with Compensation

	(1)	(2)	(3)	(4)
Compensation, logged	0.113**	0.082	0.069	0.062
	(0.041)	(0.042)	(0.053)	(0.047)
Income	0.015	−0.004	0.047	0.021
	(0.049)	(0.050)	(0.050)	(0.044)
Public benefits	0.137	0.143*	−0.035	−0.039
	(0.070)	(0.068)	(0.059)	(0.050)
Distance (km)		0.115		−0.013
		(0.103)		(0.084)
White, non-Hispanic		0.014		−0.053
		(0.105)		(0.072)
Black, non-Hispanic		−0.213		−0.117
		(0.119)		(0.102)
Hispanic		−0.014		−0.116
		(0.160)		(0.129)
College		−0.059		0.007
		(0.103)		(0.088)
Liberal		−0.054		−0.022
		(0.107)		(0.068)
Female		−0.211**		−0.146**
		(0.074)		(0.053)
Age		−0.011		−0.028*
		(0.016)		(0.011)
Age squared		0.00004		0.0001
		(0.0002)		(0.0001)
Compensation*Income	−0.002	0.001	−0.004	−0.003
	(0.007)	(0.007)	(0.006)	(0.006)
Constant	−0.367	0.396	−0.227	1.078*
	(0.306)	(0.405)	(0.410)	(0.500)
Observations	323	317	521	518
R^2	0.099	0.188	0.022	0.176

Note: *p<0.05; **p<0.01; ***p<0.001

E Alternative Modeling Approaches

Our pre-analysis plan stated that we would use multinomial and mixed logit models (Helveston, 2020). Revisiting the literature, this approach is ill-suited for our data structure (e.g. Alvarez and Nagler, 1998; McFadden and Train, 2000). Both choice-based logit models are designed for outcome variables that represent choices between multiple options. In our experiment, this could have been accomplished if respondents had chosen between, for instance, two different development proposals with their characteristics randomized, similar to a conjoint design.

In contrast, our respondents evaluated and expressed their support for a single proposal at a time rather than choosing between alternatives. To adopt our data structure for a choice-based logit model would require us to generate an alternative choice from the status quo. For example, voting against the building proposal would be coded as the equivalent of voting for a building similar to the status quo: a market-rate development which would provide $0 of compensation to the respondent. This hypothetical, synthetic choice is theoretically difficult to justify. In retrospect, our design is instead suited for an OLS approach. Using OLS, we test the same hypotheses and use the controls as specified in our pre-analysis plan, with the benefit of requiring fewer assumptions (Gomila, 2021).

Still, in the interest of full transparency, we reproduce our results using logit models. Specifically, we use multinomial logits. The mixed logit model listed in the pre-analysis plan is designed to test for heterogeneity in preferences across respondents. Within our results, this approach exhausts statistical power to point of being uninformative, whereas the multinomial logit still captures differences in choice-based decisionmaking. Additionally, because logit choice probabilities are unintuitive, we convert the coefficients into predicted probabilities of support for proposals at various levels of compensation. By plotting the expected support probability across the range of compensation offered, we show variation in the effectiveness of compensation based on traits of the respondent and building proposal.

Following the preanalysis plan, Figure E-3 shows how the effect of compensation varies based on the proximity of the development proposal to the respondent. The figure bundles proximity based on developments "near" the respondent (less than the median distance, 540 meters away) and "far" from the respondent (greater than 540 meters away). We find no evidence that the effectiveness of price varies by proximity. Instead, we see a uniform increase in the expected probability of support for new development as the compensation offered to respondents increases from $50 to $10,000.

Figure E-4 shows how the effect of compensation varies based on the affordability of the proposed housing. As we show in Figure 6, the effect of compensation is exclusively found in response to proposals for new market-rate housing. In contrast, proposals which include affordable housing do not experience an increase in expected support as compensation increases. Additionally, supporting our findings in Figure 5, the average level of support is higher for affordable housing compared to market-rate housing.

Figure E-5 shows how the effect of compensation varies based on the tenancy status of the respondent. While renters are consistently more supportive of new housing compared to homeowners, the effect of compensation — expressed here as the slope of each line — is positive for both homeowners and renters. However, as shown in the OLS results in Table D-8, renters are more responsive to compensation compared to homeowners.

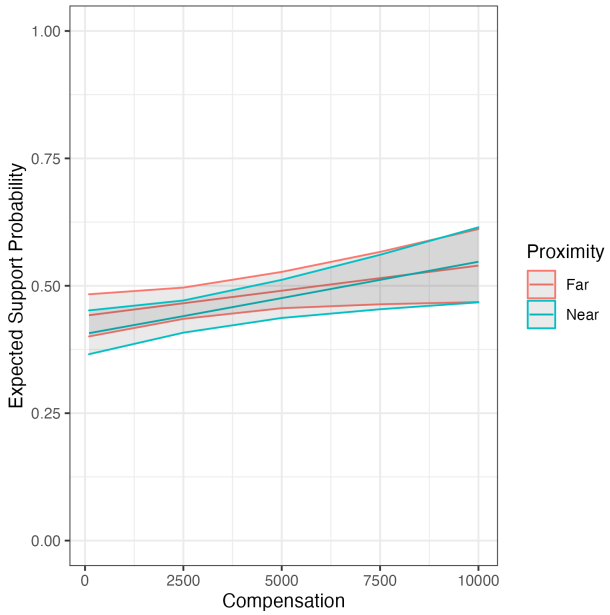


Figure E-3: Effect of compensation by proximity.

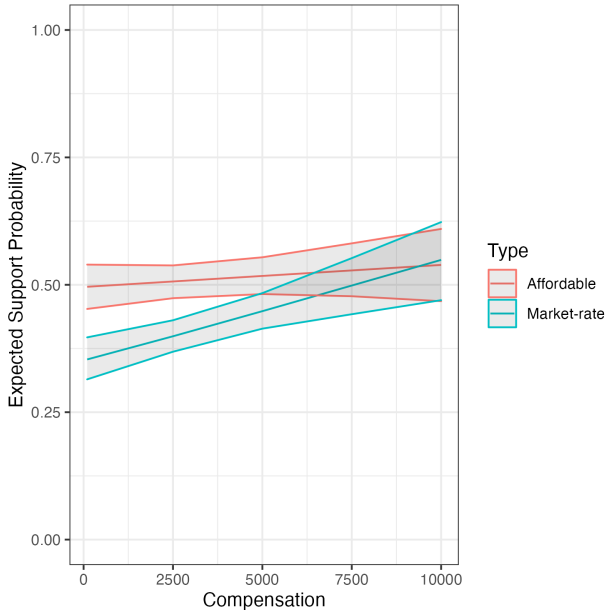


Figure E-4: Effect of compensation by housing affordability.

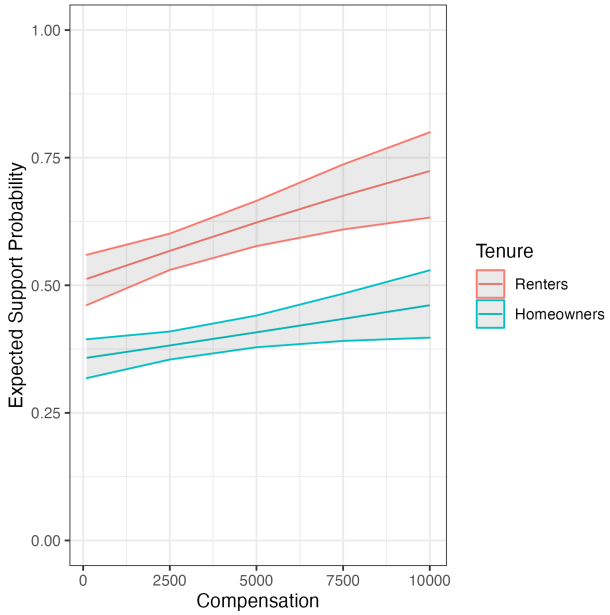


Figure E-5: Effect of compensation by tenure.

Figure E-6 shows how the effect of compensation varies by the affordability of the proposed housing, but looking exclusively among renters. Much of the gentrification literature argues that renters are generally more averse towards market-rate housing compared to affordable housing (Hankinson, 2018; Marble and Nall, 2021). Consequently, we expected renters to require more compensation in exchange for supporting market-rate housing compared to affordable housing. We find that, similar to the full sample results in Figure E-4, increased compensation generally only increases support for market-rate housing. Likewise, average support for affordable housing is higher compared to market-rate housing. In general, this supports our hypothesis that renters require more compensation for a market-rate housing proposal to reach similar expected probabilities of support as an affordable housing development.

Figure E-7 shows how the effect of compensation varies based on the form of the compensation offered to respondents. "Private" compensation was offered a direct payment to the respondent, whereas "public" compensation was offered to the community as an equivalent investment in nearby parks and streets. Matching our OLS results in Table D-8, the form of compensation does not affect respondent support for the development proposal. And although it appears that additional compensation may only be effective for private, direct payments, this interaction is not statistically significant in our OLS models (Table D-8).

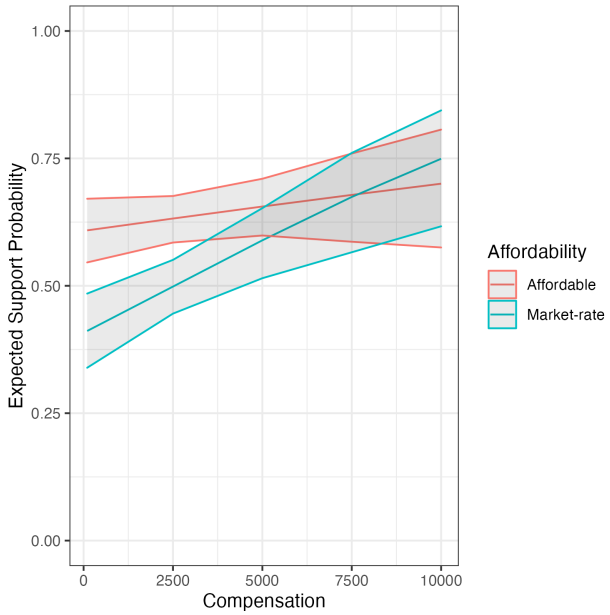


Figure E-6: Effect of compensation by housing affordability among renters.

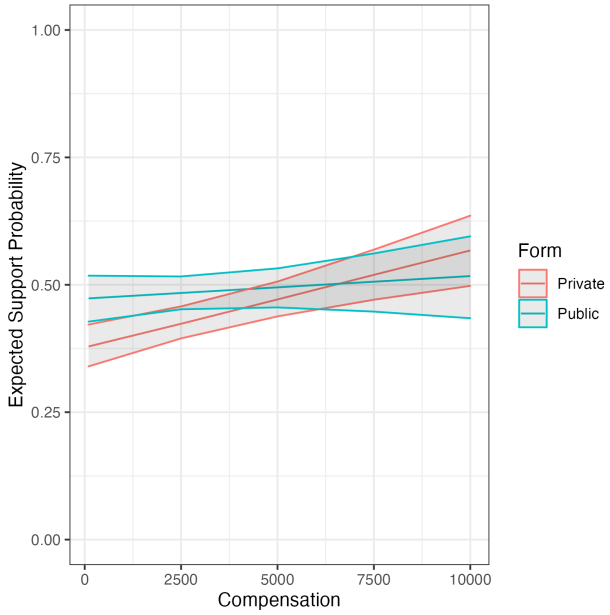


Figure E-7: Effect of compensation by form of compensation.

F Survey Instrument

Users will follow a link to the interface where they will begin the survey. Following a consent form, respondents will see a screener and two attention checks.

1. "For our research, careful attention to survey questions is critical! We thank you for your care."
    - I understand
    - I do not understand
2. "People are very busy these days and many do not have time to follow what goes on in the government. We are testing whether people read questions. To show that you've read this much, answer both 'extremely interested' and 'very interested."'
    - Extremely interested
    - Very interested
    - Moderately interested
    - Slightly interested
    - Not at all interested
3. "To start, which city/town do you live in?"
    - Boston
    - Brookline
    - Cambridge
    - Chelsea
    - Everett
    - Somerville
    - Winthrop
    - Other
4. User identifies their home
    - "First, we need to know where you live in Boston. Please enter your address. Your address will not be shared with anyone. If you would not like to share your address, please enter your ZIP code."
    - If street address entered, User is shown their neighborhood (3/4 mile radius of address) with a pin dropped on their address. If ZIP code entered, User is shown their ZIP code and asked to indicate their home or the nearest intersection.

F.1 Individual proposals

"Next, you will be asked to share your opinion about hypothetical housing development proposals in your neighborhood. These proposals are not real.

However, the findings of this study will be presented to the City of Boston to help them learn about what residents like you think about housing. To capture the most accurate data, we ask you to thoughtfully consider these proposals as if they were real."

Each proposal features:

- Current building
  - Address of property
  - Google Street View image of property currently
  - Current number of floors and units
- Proposed building
  - Number of floors (2x current building) and units (3x current building)
  - Rendering of the mass of the new building
  - Randomization of 50% affordable housing or 100% market-rate housing
- "Do you support or oppose replacing the current building with the proposed building?"
  - Strongly oppose
  - Oppose a little
  - Neither support nor oppose
  - Support a little
  - Strongly support
- For proposal 1 out of 5: "Using at least 5 words, why do you support or oppose this proposal?" Answer via text-box.
- Willingness-to-Accept Experiment - User will be randomly assigned to either the *direct payment* condition or the *public goods* condition. Whatever the User is assigned for the first proposal they will maintain for all 5 proposals to eliminate confusion. Compensation values will randomly vary from the following set: \$50, \$200, \$500, \$1000, \$1500, \$2000, \$5000.
  - Direct payment text: "Suppose your neighborhood could vote on whether this proposal should be built. If the proposal passes, the developer would contribute money to the neighborhood around the property. The money would be distributed as a one-time cash payment such that each person, including you, would receive \$XXX. How would you vote on this proposal?"

- Public goods text: "Suppose your neighborhood could vote on whether this proposal should be built. If the proposal passes, the developer would contribute money to the neighborhood around the property. The money would be spent on park and street improvements worth about $XXX per neighborhood resident. How would you vote on this proposal?"
  - "Yes, I would vote in favor of the proposal"
  - "No, I would vote against the proposal"
- For proposal 1 out of 5: "Using at least 5 words, how did the financial compensation affect your support for the proposal?" Answer via text-box.

F.2 Demographics

"Now I am going to ask a few questions about you."

1. "In the past 12 months, have you attended a Boston political meeting (such as school board or city council) or a community forum?"
   - Yes
   - No
2. "How long have you lived in Boston, in years?"
   - Less than a year
   - 1-3 years
   - 4-8 years
   - 8 years or longer
3. "How long have you lived at your current address, in years?"
   - Less than a year
   - 1-3 years
   - 4-8 years
   - 8 years or longer
4. "Do you or someone you live with own the place in Boston where you are living now, or do you rent?"
   - Own
   - Rent
   - Other
5. "Thinking back over the last year, what was your household's annual income?"
   - None or less than $19,999

- $20,000 to $39,999
- $40,000 to $49,999
- $50,000 to $59,999
- $60,000 to $69,999
- $70,000 to $89,999
- $90,000 to $119,999
- $120,000 to $149,999
- $150,000 to $199,999
- $200,000 to $249,999
- $250,000 to $349,999
- $350,000 to $499,999
- $500,000 or more
- Don't know
- Prefer not to say

6. "What is the highest level of education you have completed?"

   - Did not graduate from high school
   - High school graduate
   - Some college, but no degree
   - 2-year college degree
   - 4-year college degree
   - Postgraduate degree (MA, MBA, MD, JD, PhD, etc.)

7. "What is your gender?"

   - Male
   - Female
   - Other

8. "What year were you born?" - dropdown list

9. "What racial or ethnic group(s) best describe you? Select all that apply."

   - White
   - Black or African-American
   - Hispanic or Latino
   - Asian or Asian-American
   - Native American

- Middle Eastern
- Other

10. "In general, do you think of yourself as..."

    - Liberal
    - Conservative
    - Moderate
    - Haven't thought about it much

11. IF 'Liberal': "Would you call yourself a strong liberal or not a very strong liberal?"

    - Strong liberal
    - Not very strong liberal

12. IF 'Conservative': "Would you call yourself a strong liberal or not a very strong conservative?"

    - Strong conservative
    - Not very strong conservative

13. IF 'Moderate' or 'Haven't thought about it much': "Do you think of yourself as closer to liberals or conservatives?"

    - Closer to liberals
    - Closer to conservative
    - Neither

14. "In general, do you think of yourself as..."

    - Democrat
    - Republican
    - Independent
    - Other party

15. IF 'Democrat': "Would you call yourself a strong Democrat or not a very strong Democrat?"

    - Strong
    - Not very strong

16. IF 'Republican': "Would you call yourself a strong Republican or not a very strong Republican?"

    - Strong

- Not very strong

17. IF 'Independent' or 'Other party': "Do you think of yourself as closer to the Republican Party or to the Democratic Party?"

    - Closer to the Democratic Party
    - Closer to the Republican Party
    - Neither

18. "What else should we know about your opinion on housing prices and new development in your neighborhood and in Boston?" Answer via text-box.

19. "Do you have any other comments for us about this topic and the survey?" Answer via text-box.

G Pre-Analysis Plan

Included below are the hypotheses we test as well as our analytical strategy for testing each hypothesis as pre-registered with EGAP prior to data collection. Elements of the pre-analysis plan (the study's theory, experimental design, and survey instrument) that are discussed or included elsewhere in the manuscript are not reproduced below but are included in the PAP filed with EGAP.

G.1 Individual Proposals

This experimental module combines a location-based measure of NIMBYism with a Willingness-to-Accept (WTA) experiment. The WTA experiment estimates the median monetary value at which respondents are indifferent to a nearby increase in residential density. Respondents are offered an amount of compensation in exchange for supporting a new housing development proposal. By randomly varying the amount of compensation offered, we are able to capture the causal effect of different compensation levels on respondent support.

Using a respondent's location, the survey randomly selects 5 housing proposals that are within 1/2 mile of the respondent's home. For each proposal, respondents are shown images of the existing development and the proposed development. Each development shows the number of units as well as the share of units set aside for low-income housing voucher holders. Respondents are asked: "Do you support or oppose replacing the current building with the proposed building?" Support is captured using a 5-point Likert scale from "Strongly oppose" to "Strongly support."

Next respondents are offered an amount of compensation in the form of either a personal payment or a public goods investment, randomized at the individual-level but held constant across each proposal the respondent views. Respondents select either a "Yes" or "No" response in favor of the proposed development combined with the compensation. Respondents repeat this exercise for each of the 5 proposals.

G.1.1 Hypotheses

Our exploratory hypotheses are:

Hypothesis 1 (H1): *Compensation will be positive correlated with proximity.*

Hypothesis 2 (H2): *Compensation will be higher for developments with 50% affordable housing compared to those solely composed of market-rate units.*

Hypothesis 3 (H3): *Homeowners will require more compensation than renters.*

Hypothesis 4 (H4): *Renters require more compensation when the housing is all market-rate rather than 50% affordable.*

Hypothesis 5 (H5): *Compensation will be higher for public goods investments than for direct payments.*

G.1.2 Measures and Index Construction

The outcome variable ("Choice") is 1 if the respondent votes in favor of the proposal when coupled with the compensation and 0 otherwise.

G.1.3 Estimation Procedure

We estimate multinomial and mixed logit models on choice data using a random utility model specified in the willingness-to-pay (WTP) space via the `logitr` package (Helveston, 2020). Compensation is a fixed parameter, whereas the experimental parameters (distance from the respondent's location, affordability share, and form of compensation) will be modeled as normally distributed across the population. The model will include controls listed earlier. From this model, we also simulate shares of support for housing over a wide array price points.

The following approaches will be used to test each hypothesis:

H1: Regress choice on compensation, proximity, affordability, and form of compensation using a mixed logit model including controls.

H2: Regress choice on compensation, proximity, affordability, and form of compensation using a mixed logit model including controls.

H3: Regress choice on compensation, proximity, affordability, and form of compensation using a mixed logit model including controls.

H4: Regress choice on compensation, proximity, affordability, and form of compensation using a multinomial logit model including controls, interacting affordability with homeownership status.

H5: Regress choice on compensation, proximity, affordability, and form of compensation using a mixed logit model including controls.