Opposition to Development or Opposition to Developers?
Survey Evidence from Los Angeles County on Attitudes towards New Housing

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Abstract

Problem, Research Strategy and Findings: Opposition to new housing at higher densities is a pervasive problem in planning. Such opposition constrains the housing supply and undermines both affordability and sustainability in growing metropolitan areas. Relatively little research, however, examines the motives behind such opposition, and much of the research that does exist examines only opponents' stated concerns, which may differ from their underlying reasons. We use a survey-framing experiment, administered to over 1,300 people in Los Angeles County, to measure the relative power of different arguments against new housing. We test the impact of common anti-housing arguments: about traffic congestion, neighborhood character, and strained local services. We also, however, introduce the idea that local residents might not like development because they do not like *developers*. We find strong evidence for this idea: opposition to new development increases by 20 percentage points when respondents see the argument that a developer is likely to earn a large profit from the building. This magnitude is double the increase in opposition associated with concerns about traffic congestion.

Takeaway for Practice: Housing opposition is often framed as a form of risk aversion. Our findings, however, suggest that at least some opposition to housing might be motivated not by residents' fears of their own losses, but resentment of others' gains. This finding in turn suggests the possibility that housing opposition could be influenced by vicious cycles of regulation and resentment. Many expensive cities are heavily-regulated, and in such cities only deep-pocketed and aggressive developers can afford to build. The prevalence of such developers might reinforce negative stereotypes about them, and fuel animus against them, further complicating efforts to build housing. Finally, such resentment might help explain the popularity of regulations—such as exactions—whose costs to developers are certain but whose benefits to society are less so. If residents derive satisfaction from seeing developers punished, the persistence of these programs in the face of ambiguous evidence about their efficacy becomes less mysterious.

Keywords: NIMBY, housing, density, neighborhood character; greedy developers

1. Introduction

Opposition to housing is a defining attribute of contemporary urban planning. In cities large and small, developers propose build new residences, planners review their applications and ask for community input, and the community more often than not expresses concern about, or even hostility toward, those proposals. This opposition occurs in communities of all sizes, but especially in America's densest and most supply-constrained markets, where new housing does not keep pace with population growth.

Opposition to housing isn't new, of course; the NIMBY (not-in-my-backyard) problem is longstanding. While many people agree in principle that new housing is necessary, they fight in practice to prevent it from being nearby. But what motivates this opposition? When neighbors fight new housing, they are contesting the production of a good they themselves consume, and often one that they own. Housing opponents sometimes argue that new housing will depress their about property values (or, somewhat paradoxically, increase their rents). More frequently, opponents cite concerns about congested roads and parking, or changes to community character. Lurking beneath some of these complaints is also a fear or resentment of new people, who might be of a different income level or racial or ethnic group—though this motivation is rarely stated to explicitly.

For analysts, the multiple motives for housing opposition are troublesome because they are often deployed simultaneously, and they are often inter-related. It is not uncommon for a local opponent to cycle through a catalog of objections to a new building. While this might be an obfuscatory tactic, it is also possible that people see these objections as consequences of each

other. Current residents might think, for example, that more traffic will not just impose transportation delays but also lower property values. Alternatively, they might believe that poorer neighbors will depress prices, through nonconforming behavior or because society at large is animated by race- and class-based biases. Whatever the reason, the simultaneity of these objections makes it difficult to determine which ones carry the most persuasive power.

In this article we use a survey-framing experiment to isolate arguments against new housing, and measure their relative persuasive power. Doing so allows us to test the influence of common anti-housing concerns, such as those about traffic and neighborhood character and strained services. But we also examine a different idea: that people oppose housing development because they don't like *developers*. In principle, the attributes of a producer should have little bearing on the merits of a product, especially a long-lived product like housing. The housing, after all, will be in the neighborhood long after the developer. At the same time, however, developers appear to be remarkably unpopular. Popular culture often portrays them as enemies of the public interest, and the word "developer" is frequently preceded by adjectives like "greedy" or "rapacious" (e.g., Ratcliffe and Stubbs 1996; Wainwright 2017). In planning education and practice, developers are often framed as adversaries rather than partners (Lester 2016).

Our results suggest that anti-developer animus is a powerful source of opposition to housing development. Respondents who saw a frame about developers earning large profits were 20 percentage points more likely to oppose a hypothetical new housing development than were respondents in a control group. They were also more hostile than respondents treated with other frames, including anti-development arguments based neighborhood character, congestion, or

strained services (these latter frames were 15, 10, 10 percentage points more likely than to oppose the development than were control groups).

Our findings inform planning practice in two ways. First, we contribute to the growing body of work on development conflict, and in particular on how the framing of development influences attitudes toward it. We are not the first to examine development's popularity using a framing experiment, but to our knowledge we are the first to examine the relative power of arguments against housing, as opposed to for it (e.g., Whittemore and BenDor, 2018; Manuel and Kendall-Taylor, 2016; Doberstein et al., 2016).

Second, our findings complicate simple stories of NIMBYism. These stories often emphasize the negative externalities of new housing. When residents oppose new housing because they believe it will congest their streets, they are acting in their own self-interest: working to prevent their own loss. When residents oppose new development because a developer might earn a large profit, they are opposing someone else's gain. This action suggests a separate dimension of NIMBYism, centered less on risk aversion and more on enforcing community norms of fairness. The power of these norms, furthermore, might help explain the popularity of regulations like linkage fees, exactions or inclusionary zoning ordinances. These policies are increasingly common, but estimates of their efficacy are at best mixed (e.g., Furman Center 2008; Bento et al 2009). These programs impose certain costs on developers, but deliver uncertain benefits to their intended targets. If residents derive satisfaction from seeing developers punished, however, the persistence of these programs in the face of ambiguous evidence about their efficacy becomes less mysterious.

2. Opposition to Housing

In places where housing demand is high, the costs of failing to build are large and well-documented. Preventing denser development in coveted neighborhoods makes housing prices higher, exacerbates segregation by income or race, generates more carbon emissions, and increases gentrification pressures in other parts of the city (e.g. Rothwell and Massey 2009; Glaeser and Kahn 2001; Glaeser and Ward 2009; Lens and Monkkonen 2016). These consequences are increasingly evident in America's coastal metropolitan areas, where the economy grows much faster than the housing stock.

Cities' failure to build housing is a political rather than a practical problem. Physical constraints in some parts of some regions can make housing construction difficult, but the biggest obstacle to housing is localized opposition. Relatively little empirical scholarship examines this opposition. To some extent, anti-housing sentiment has fallen into an unclaimed research territory between more conventional housing studies (whose questions lend themselves more readily to existing data) and traditional NIMBY research, whose early focus was on so-called "noxious" land uses, such as incinerators, landfills, and homeless shelters, rather than housing (e.g., Lake 2006, Takahashi 1998). Noxious land uses, however, are far less common than housing proposals, and objections to them are easier to understand. Little mystery surrounds the motives of people who oppose incinerators or methadone clinics nearby. It is less easy to discern why housing consumers will fight new housing.

Fischel (2002) and Fennell (2006) theorize housing NIMBYism as a process that begins with homeowner risk aversion and ends in homeowner rent-seeking. Both authors extend Tiebout (1956) to suggest that homeowners do not just consume but also produce "housing services". Housing services, in turn, are composed not just of housing units themselves but also the bundle of amenities—such as schools, crime levels, and open space—that are traded as subparts of the housing market. Homeowners, in short, are both consumers and capitalists. In their role as capitalists, they have incentives to behave like producers in any other market, and protect the value of their assets by restricting new entrants.

The exclusionary motivation is arguably stronger for homeowners than owners of other capital, because housing is a uniquely risky investment, as a result of spatial externalities. Houses are similar to stocks or bonds in that their value lies largely beyond the control of any individual owner, and rests instead on the behavior of other consumers and producers. Unlike stocks or bonds, however, houses are indivisible, immobile, and largely illiquid assets, making downturns hard to hedge against or recover from. In these circumstances, NIMBYism starts as rational risk aversion and becomes tacit collusion. Without formal agreements to do so, homeowners behave like a cartel, blocking new development, depressing supply and stifling competition, and enabling monopoly returns on their investments.

This conception of NIMBYism is almost certainly valid, but also incomplete. Most obviously, it cannot explain housing opposition from *renters*. Renters are pure housing consumers, not joint

producers/consumers, so they should benefit from more housing supply.[1] Yet renters do oppose

new housing, and are particularly likely to do so in expensive markets. Hankinson (2017) uses a

national survey to show that opposition to new housing is lower among renters than owners, but

then uses a survey of San Francisco to show that in a high-priced market, these tenure-based

differences disappear. Renters in San Francisco are as likely as owners to oppose new market-

rate development near them.

Why might renters oppose new housing? Fischel (2002) calls zoning a "collective property

right"—a tool of exclusion shared by an entire neighborhood. Homeowners have a stronger

financial incentive to exercise this right, but this does not mean renters have no reason to use it.

Renters might enjoy the aesthetic character of a community, or might more concretely worry

about traffic congestion or competition for street parking.[2] If new development threatens the

quality of the common goods attached to rental units (or if they think it does), then development

might result in renters paying the same amount for a diminished set of services.

This reasoning comports well with existing research about why people oppose housing. Pendall

(1999) surveyed almost 200 development proposals from the Bay Area in the early 1990s. When

opposition arose, renters and owners alike worried about neighborhood character and congestion.

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[1] More precisely, renters *do* jointly produce and consume housing services (e.g., renters consume public safety by paying to live in a low-crime place, and help produce that safety by providing "eyes on the street" and not committing crimes). Unlike homeowners, however, renters do not change their net worth because of these behaviors.

[2] A related explanation for renter opposition to housing in expensive markets is rent control. Rent control transfers some property rights from owners to renters (Arnott 1995), and should thus let renters behave more like homeowners, particularly in decisions to exclude outsiders from local collective goods. Only a handful of expensive cities have rent controls, however, and renter opposition to housing appears to be widespread in uncontrolled expensive cities.

Housing opponents in Los Angeles expressed similar concerns in community hearings over two decades later (Monkkonen, 2016).

In opposing new development to protect common goods, renters also promote higher rents, making their behavior at least partly contradictory: renter activism keeps rents high. That seeming contradiction, however, might be explained by a temporal and spatial mismatch between the scale at which new development helps renters and the scale at which renters experience new development. Building new housing can reduce prices, but does so primarily at the city-level, and by slowing or reversing price increases in the existing stock. The new housing itself is often expensive, and depending on where it is built it could make average *neighborhood* rents rise quickly, while only slowly making citywide rents fall. Renters could, as a result, view new housing as a source of rising rather than falling rents.

If residents see new housing as a sign of rising rents or other negative changes, they might naturally dislike developers, who would be the visible agents of unwanted change. But animosity to developers might have a source beyond their mere association with new housing. Ant-developer animosity is hard to systematically document, but it does seem prevalent. In their 1996 text on development, Ratcliffe and Stubbs observe, "it is sad but true that the image of the property development industry is generally poor" (Ratcliffe and Stubbs, 1996: 537). Moreover, in popular culture developers are almost universally portrayed negatively. The prevalence of developers as movie villains in movies is high enough to have spawned an Internet "evil

developer" film database[3], which catalogs movies, from the 1980s to the present, with developer as antagonists.

Hostility to developers has also long been common in planning practice. As far back as 1990, in this journal, Richard Peiser observed that developers think "all too often with some justification, that planners loathe developer 'profits'" and that planners "are deeply suspicious of developers. They believe that developers' profit motive is in conflict with society's welfare" (Peiser, 1990: 500). Little evidence suggests that this disconnect between planners and developers has narrowed since; the American Planning Association has even sponsored panels and programming to close it (American Planning Association, 2016). At planning hearings, planners and the public often question the developer's motives in addition to the development's merits.[4]

Dislike for developers might not be about developers per se; it could stem from a broader mistrust of business or the wealthy (Stein 1979; Rubin 2002),.[5] On the other hand, it is not unprecedented for particular professions to be uniquely disliked. A small but substantial literature in law, for example, documents and investigates the public's widespread distaste for attorneys. Raymond (2007) notes that anti-lawyer sentiment is in part a product of lawyers' frequently association with—and profit from—criminals, and in part because their courtroom demeanor is inherently confrontational, and thus out of step with the norms of 'polite society.'

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[3] Available at: https://evildevelopermovies.wordpress.com/ (last accessed February 17, 2018).
[4] Two examples, admittedly anecdotal: one of us attended a zoning appeals hearing in 2012 where board members repeatedly asked a developer about his anticipated profits, rather than about the merits of his requested variance. At a planning board hearing in the same city, a resident used his public comment to call the developers of a by-right apartment building were the "moral equivalent of tobacco companies."
[5] Distrust of affluence is by some accounts an ingrained residual of our evolutionary past, since hunter-gatherer lifestyles were so egalitarian (e.g., Morris 2015).

Similar dynamics might explain anti-developer animus. In supply-constrained and expensive housing markets, residents might see developers as wealthy, confrontational and illegitimate. This impression might be correct, and it could be an artifact of a tightly-regulated market. In expensive housing markets, a combination of high land costs and complex regulations often makes development difficult. These circumstances could select for developers who are both affluent and out-of-step with conventional ways of behaving: only deep-pocketed, hard-charging and confrontational people will be willing and able to lobby elected officials and get rules changed in order to build. The same conditions that make development difficult, in short, might also make developers less likeable and seem less legitimate, which could in turn increase hostility and make development more difficult still. Manville and Osman (2017) show that the perception that developers were bending rules triggered a series of growth revolts in Southern California.

A related possibility is that in supply-constrained cities—when people both need housing and have trouble affording it—the mere idea of profiting from it might seem morally inappropriate. In times and places when housing prices do not heavily burden people, property development might be less objectionable. When cities have housing crises, however, development might become what Roth (2007) calls a "repugnant market"—an unseemly exchange where profit is ethically problematic. This could be true even if development's overall effect is to make housing *more* affordable; many repugnant markets have social benefits that are lost because the transactions themselves seem wrong. This repugnance could be compounded, moreover, if people believe developers are bending rules or winning special permissions to build.

Development would in this case be not an unjust profit but a corrupt purchase of government privilege.[6]

3. Research Design and Methods

We use Monkkonen (2016) to compile common arguments against new housing. Our goal is to measure the relative power of these common arguments, and also the power of less-common idea that developers themselves are distasteful. An argument's power can be measured by its ability to change attitudes and its ability to trigger political action. Persuasive arguments can change a voters' minds, and very persuasive arguments can encourage voters to lobby officials, attend rallies, or donate money.

We measure persuasive power through a simple online survey experiment. Survey experiments randomly assign respondents to a control group or one of several treatment groups, and use that random assignment to evaluate how attitudes change in response to different contexts, or frames. Sometimes the frames are words or phrases: researchers have used experiments to show, for example, that using the word "welfare", as opposed to "assistance to the poor," dramatically reduces support for redistribution (Smith 1987; for other examples see Nelson et al 1997; Cobb 2005; Heerwig and McCabe 2012; Jacoby 2000). Similarly, Goetz (2008), in this journal,

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[6] Logically, a repugnance based on antipathy to housing-based profits should also extend to real estate agents, and to people who sell homes during housing crises. We are aware of little evidence, however, that people begrudge homeowners for selling at windfall prices. People do sometimes decry realtors, but usually for reasons other than profiting off the sale of expensive houses (e.g., a fear that they are hiding crucial information). Developers probably stand out for their salience: selling an existing home is less noticeable than building a new one.

showed that white suburbanites were more supportive of subsidized housing when it was called *lifecycle housing* rather than *affordable housing*.

Frames can also be used to gauge the prestige or perceived reliability of information sources. Whittemore and BenDor (2018) use a survey experiment to see if the same pro-density argument is more persuasive when it comes from community members or planning experts.

Our experiment tests the power of different substantive arguments, rather than of particular sources or words. Framing studies that evaluate arguments have become increasingly common in political science and psychology (Chong and Druckman 2007; Scheufele and Tewksbury 2007), and are making inroads in planning and urban studies. McCabe (2017), for instance, used a framing experiment to show that the popularity of the mortgage interest deduction hinges on people considering it a tool to increase homeownership, while Doberstein et al (2016) showed that increased density was more popular when proponents emphasized its public benefits.

Our experiment randomly assigned subjects to vignettes that emphasized different arguments ("frames") about development, and then measured both their attitudes toward new development and their willingness to engage in activism for or against it.

We administered the survey in July 2017, to a sample of over 1,300 LA County adults recruited by Survey Sampling International (SSI). SSI recruits respondents through different online networks and online ads. The firm emphasizes harder-to-reach groups, like the elderly, the low-income, and racial and ethnic minorities. Once recruited, SSI randomly invites participants to

take different surveys, limited only by any quotas set by researchers. We set a quota for our sample to match the countywide population on gender and age.

Our sample is thus representative of LA County based on gender and age, but *not* representative of the county overall. Because we are conducting an experimental survey, this unrepresentativeness is less of a problem. We want to examine the power of different arguments within a randomized group, not generalize from our sample to estimate the prevalence of different attitudes or arguments across the larger population

The validity of our experiment hinges on three factors: salience, random assignment and balance, and the invariance of all factors save the treatment itself. Salience is important because experimental surveys sometimes ask people about issues that to them may be abstract or unrealistic, meaning their answers may not reflect strongly-held views, and thus yield little insight. To some extent, our use of LA County addresses this problem: development conflict has long been endemic in the county's cities (e.g., Fulton 1994; Fulton et al 2001; Manville and Osman 2017), making the issue more tangible. Only a few months before our survey, for example, residents of the City of Los Angeles voted on a large and controversial growth control ballot measure that received substantial media attention.

A more concrete salience concern, for our purposes, is that not all development could plausibly occur in all neighborhoods. We might learn little, for instance, by asking people in a low-density suburb how they would feel about a proposed nearby skyscraper, simply because that prospect might seem so unlikely as to be absurd. To address this concern, we first sort respondents based

on the type of neighborhood they live in (primarily single-family, low-rise multifamily, high-rise). We use this information as a baseline, so that in the survey we can expose them to plausible hypothetical developments—structures that are only moderately denser than their current environments.

After sorting respondents into these neighborhood groups, we sorted them randomly into experimental groups: either one of four treatment groups or a control group. If this random sorting balances people of different socioeconomic attributes across the different frames, we can view differences across the frames as average treatment effects—the causal impact of each frame. If the random sorting does not yield a balanced sample, we will analyze the differences using controlled regressions.

We presented all respondents with a vignette describing a proposed housing development near them, moderately larger than the typical housing in their neighborhood. Respondents in the control group who live in predominantly single-family neighborhoods saw this vignette:

> *Suppose a developer proposes to build a three story apartment building on your block. The proposed building, which will contain 20 one-bedroom and studio units, is designed by Camarillo Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable.*

Control group respondents living in predominantly multi-family neighborhoods saw this vignette:

> *Suppose there is a proposal to build a 10 story apartment building on your block. The proposed building, which will contain 90 two-bedroom and one-bedroom units, is designed by Solano Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable.*

Respondents in the treatment groups saw the vignettes above, but each vignette had an additional 1-2 sentences making an argument against the development. These additional sentences were the treatments.

Respondents in the "traffic and parking frame" saw this additional text:

> *However, some of your neighbors oppose this project. They worry that it will lead to increased traffic in the neighborhood and make street parking harder to find. Traffic and parking are always sources of concern to Angelenos, and there is reason to think that new housing does mean more cars.*

Neighborhood character frame:

> *However, some of your neighbors oppose this project. They worry that a taller apartment building will change the character of the neighborhood. Neighborhoods are often appealing because they have a consistent appearance where buildings of the same size are clustered near each other. Introducing a larger and different building could undermine the look and appeal of your neighborhood.*

Strain on services frame:

> *However, some of your neighbors oppose this project. They worry that the residents of this new building will put a strain on local public services like parks and schools, without paying their fair share. Many existing services are already strained, and existing residents should not have to endure further declines in service quality just to make room for new people.*

Developer profit frame:

> *However, some of your neighbors oppose this project. They point out that the project's developers obtained a special permit from the city, which lets them build at a higher density than zoning would normally allow. The developers stand to make large profits as a result. Your neighbors argue that the City Planning Department should not be in the business of making developers rich.*

We tried to make each frame roughly the same length, and to give each one the same balance of specific and detailed information (e.g., "strain on services" and "fair share" and 'special permit from the city" and "large profit.")

After respondents read these vignettes, we asked them if they supported, opposed, or were indifferent to ("neither support nor oppose") the project, using a five-point scale. Depending on their answer, we then asked an activism question: if they would like to volunteer with a local pro-housing or anti-development group. We sent respondents who answered in the affirmative a link to the organization's web site when the survey ended.

This measure of activism is admittedly limited: we capture only one dimension of activism (voluntarism), we capture only a stated willingness to volunteer, not a revealed preference for doing so, and we extract no formal commitment to actually volunteer. We also do not explain to respondents exactly what they would be doing if they did volunteer (because we do not know); this lack of specificity has been shown in other research to depress the rates at which respondents agree to participate (Levine 2015). For all these reasons—along with behavioral engagement simply being a bigger commitment than attitudinal engagement—we expect our frames to have a smaller association with activism.

As an extension to our primary hypothesis, we asked two additional questions, each one as a separate framing experiment (that is, the respondents were re-sorted into new frames). In the first, we asked respondents if they would support the project they had just seen if it were built in

a *different* neighborhood. For example, we asked people in low-density areas if they would support a multifamily project in a multi-family neighborhood. This question allows us to verify the basic NIMBY hypothesis: that housing will be more popular elsewhere. The question has limitations as well, however. People who have already stated opposition or support for a development near them might be primed to oppose or support it elsewhere, making the two scenarios more correlated than we would prefer. Further, the answer to this question might have multiple interpretations, a point we return to later.

Our second additional question creates a scenario where the developer offers mitigation to help compensate the neighbors for the presence of new housing. We do not test what package of benefits is most attractive. Instead, we hold the mitigation constant, and ask if the circumstances of its being offered make people more or less likely to support it. We thus sort people into three frames and each sees the same set community benefits: extra off-street parking spaces, a donation to the local school, and improvements to the nearby streetscape, such as planting trees and replacing sidewalks and curbs. What differs across frames are the reasons for the mitigation. One group is told that the benefits are provided voluntarily by the developer, another is told neighborhood groups exacted them from the developer after a conflict, and the last posits that the mitigations are required and "will cost hundreds of thousands of dollars, and could substantially reduce the developer's profit margins." As before, the full text of these frames is in Appendix A.

4. Results

Table 1 shows some descriptive statistics from our sample. As expected, the sample differs

substantially from LA County overall. Compared to county residents, our respondents are more

educated (51 percent have a BA as compared to 30 in Los Angeles County), whiter (52 percent

to 27 percent), and less likely to be foreign born (13 percent as compared to 35). Our sample is

also slightly more female, has higher income, is less likely to be married, and more likely to live

in a multifamily housing unit rather than a single-family dwelling. Again, however, our

experiment's validity rests on the sample being balanced across the treatments, not on it

matching the county overall.

<<Table 1 here>>

Table 1 of Appendix B shows our balance test. The sample is not quite balanced, particularly in

tenure and housing type, so when we test differences between frames we use logistic regressions

with controls.

Table 2 reports, for each frame, the share of respondents supporting, opposing, or having no

opinion on the housing development near them. Support ranges from 33 to 53 percent, and

opposition from 28 percent to 48 percent. The share with no opinion is always substantial,

ranging from 16 percent to 20 percent. The most dramatic result here is the outsized influence of

developer profit frame. Forty-eight percent of people told about the developers' large profit

opposed the development, compared to 28 percent of respondents who saw the control frame.

People that saw the argument about neighborhood character were 15 percentage points more

likely to oppose than the control frame. The strain on services and traffic/parking frames

increased opposition by 10 percentage points—somewhat surprising, given the common

perception that Angelenos care a lot about traffic.

<<Table 2 here>>

These are raw percentages, however, and because our sample is not balanced, some of the

differences we observe might be artifacts of socioeconomic or demographic differences across

the frames. We thus estimate logistic regressions with a suite of person-level controls: tenure

(renter/owner), housing type (single- or multi-family), the length of time in current residence,

race/ethnic identity, gender, and highest level of education.

Figure 1 shows the results of these regressions, as graphed odds ratios with 95 percent

confidence intervals. The results confirm what we see in the raw experimental output. All of the

relationships between the frames and the propensity to oppose a housing proposal are statistically

significant at the 0.01 level, except for the strain on services frame, which is significant at the

0.05 level in the model with controls. (The full model results are in Table 2 of Appendix B).

<<Figure 1 here>>

For each frame, the odds ratio compares the odds of a respondent opposing the project to the

odds that a member of the control group would oppose the project. So, the odds of opposition

from someone given the traffic/parking frame were nearly twice that of a control respondent, and

the odds of opposition from someone in the developer profit frame were nearly three times higher.

Table 3 shows results from a regression estimating the odds that people will volunteer for pro- or anti-housing activism. As expected, our frames has a much smaller impact here. The largest effect associated with this measure of issue engagement came from respondents who saw the strain on services frame. Respondents in the developer profit frame were actually less likely than control group respondents to seek information about advocacy groups. But none of the frames had a statistically significant association with respondents' desire for more information.

<<Table 3 here>>

Our second experiment had asked the respondents if they would support a similar development in a neighborhood whose housing stock was different from their own. Not surprisingly, a larger share of people supported the hypothetical development when it was somewhere else.

Of the respondents who opposed the development in their own neighborhood, 21 percent were indifferent to the building when it was proposed in another neighborhood. We consider this weak NIMBYism—they oppose housing nearby but have no opinion on it elsewhere. Another 23 percent actually supported the proposal, which we consider strong NIMBYism—they oppose housing nearby but support it elsewhere.

Table 4 shows results from our last experiment, which examined the role that mitigation might play in changing people's minds about a development. Recall that we tested not the benefits themselves but the manner in which they arrive: if the developer volunteered them, the community forced them, or the city exacted them as a matter of course (at great expense). We did not use a control frame.

Changing the frame of the same community benefits package substantially changes support for the project – by up to 13 percentage points. The voluntary benefits frame was associated with the largest change in support. This finding fits with a common complaint by community groups about the development process, that they do not do sufficient outreach and community engagement before proposing a project (Monkkonen, 2016). The frame emphasizing a government exaction was associated with the least increase in support for a project. The differences between the frames of mitigation are statistically significant in a regression model that includes controls. Full results with controls are available in Appendix Table 3.

5. Discussion and Conclusions

Opposition to housing is prevalent and consequential, but understudied and thus not fully understood. People oppose new development for many reasons, many of them familiar, but analysts have difficulty knowing which reasons resonate most. This difficulty arises in part because people make multiple related anti-housing arguments at once, and because people's stated reasons for opposing development might differ from their true, underlying reasons—which people disguise those even from themselves (e.g. Trivers 2011).

The experiments we report in this article are a small step toward overcoming these obstacles. We isolate individual arguments against housing and measure their resonance across randomly-assigned groups. The advantage of this approach is its ability to control the arguments people are exposed to, and thus better measure their power. But the approach also has limitations. First, we report only one set of experiments. Further research should replicate and validate these results. Second, a hypothetical development in one's neighborhood is quite different from an actual development proposal in one's neighborhood. If a real development proposal would simply elicit stronger reactions, then our results could be considered lower-bound associations between frames and issue engagement. It is possible, however, that a real development proposal would elicit different reactions, in which case our experiment misses some important aspects of development conflict. We think it is particularly likely that our hypothetical development elicited far less interest in activism than would a real proposal. Perhaps the hypothetical development was insufficiently salient, or perhaps a lab-style survey could not tap into the emotions and reasoning that motivate activism. But since activism is an important part of opposition to housing, clearly our method misses something.

Those concerns aside, much of what we find is not surprising. People are more likely to oppose the same building when it is in their neighborhood, as opposed to elsewhere. Further, antipathy to the same new housing increases when new housing is framed as a source of congestion, or strained public services, or changes in aesthetic character. The most powerful frame, however, has little to with the development itself and more to do with the developer. When we told survey

respondents that a developer may have received special permission to build, and that he would make a large profit, became far more hostile to new housing—more than with any other frame.

How should we think about this reaction? Interpreting the "developer profit" frame is complicated, because it contains more than one implicit argument. The frame captures two aspects of expensive markets: the difficulty of building, and the potentially-outsized rewards to those who manage to do so. Thus reaction to the developer's profit might show distaste for the idea of profiting from housing, a reaction to the idea that this profit is ill-gotten (as a result of influence-peddling over planners) or both. Future work should pull apart these two potential explanations.

Even with these explanations entangled, however, our results have disquieting implications. A hallmark of expensive markets is that developers often *do* need to lobby and negotiate for permission to build, and this in turn means that development becomes feasible only for the deep-pocketed developers (who are able to not just lobby but also carry land costs while the lobbying occurs). The result could be a self-fulfilling process that fulfills people's worst expectations: communities suspicious of development clamp down on it, partly because they believe developers are rich and confrontational, and by clamping down they increase the probability that developers will be rich and confrontational.

One result of such a process could be an increased support for exactions. Stricty speaking, in cities with housing crises, new development is a form of mitigation, because it delivers much-needed supply. To community members, however, housing is often a nuisance that needs to be

mitigated. For this reasons planners and the public often support policies like impact fees, community benefits agreements, and inclusionary housing, despite limited evidence of their efficacy. A community truly concerned about supplying affordable housing, for example, would be far better off levying a property tax surcharge to finance it, than implementing an inclusionary zoning ordinance. But exactions might have two purposes: to comfort the afflicted (through subsidized housing) and to afflict the comfortable (by punishing developers). If the latter is more important to voters than the former, exactions might make more sense.

To be clear: development conflict is difficult because many concerns that arise about new housing are reasonable. But most of those concerns are about housing as a product, not about the nature of the producer. When communities block development because they dislike developers, they inflict substantial collateral damage. For better or worse, private development today is the only viable path toward new housing, and the failure to build new housing has devastating consequences for low-income people in expensive markets. Virtually everyone lives in a home built by a self-interested developer. Blocking the product to punish the producer has a visible short-term consequence that might look progressive (assuming the developer is in fact rich) but a less-visible long-term consequence that lands on vulnerable people elsewhere.

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Tables

Table 1. Comparison of socioeconomic characteristics of sample and LA County

Characteristic	Survey sample	LA County
Female (%)	64	51
Renter (%)	47	54
Lived in home 5 years or less (%)	35	32
Married (%)	42	49
Median household income (thousands)	62	56
Age 65 years and over (%)	10	13
BA or higher education	51	30
Self-identified race/ethnicity		
White alone, not Hispanic or Latino (%)	52	27
Hispanic (%)	27	49
Black alone, not Hispanic or Latino (%)	9	9
Asian, not Hispanic or Latino (%)	16	15
Foreign born (%)	13	35
Housing type		
Single family house (%)	65	71
Small multifamily <21 units (%)	25	19
Large multifamily >20 (%)	11	9

Source: 2011-2015 American Community Survey 5-Year Estimates

Table 2. Opposition and Support for New Housing Development under Different Frames

Response	strain	traffic	developer	character	control
Support (%)	49	45	33	37	53
No opinion (%)	16	18	20	20	19
Oppose (%)	35	37	48	43	28
N	266	256	260	275	240

Table 3. Issue Engagement under Different Frames

Response	Traffic, parking	Neighborhood character	Strain on services	Developers make profit	Control (no argument)
For those that oppose new housing					
Want more information? (%)	36	31	42	30	35
N	66	86	71	88	49
For those that support new housing					
Want more information? (%)	59	65	65	49	58
N	64	46	66	49	60

Table 4. Does mitigation matter?

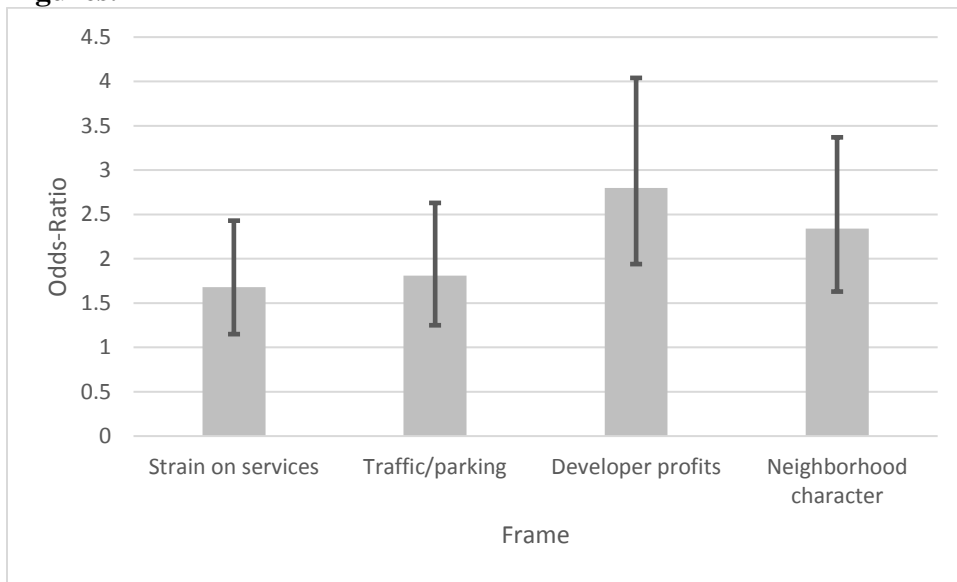| Opinion	Frames		
	Voluntary	**Forced by community**	**Developer loses money**
More support (%)	63	57	50
No difference (%)	33	40	45
Less support (%)	3	3	5
N	465	415	458

Figures.

Figure 1. Odds of opposing new housing development by frame, with 95 percent confidence intervals

Appendix A. Full Survey

Introduction

Hello. Professors Paavo Monkkonen and Michael Manville from the Department of Urban Planning at the University of California, Los Angeles (UCLA) are conducting a study about how people think about residential development in Los Angeles. You were selected as a possible participant in this study because you live in Los Angeles. The study is strictly for research purposes.

Your participation is entirely voluntary, your answers will be confidential, and you may skip any questions or stop your participation at any time.

[Quota Questions]

What is your current age? (under 18 / 18 or over)

Where do you reside? (In the city of Los Angeles? / Outside the city of Los Angeles)

How did you hear about this study? (I received a link / someone forwarded me a link)

[Sorting Question]
3. First, we'd like to know what kind of neighborhood you live in. What sort of housing is in the three blocks around your residence? Choose the type that best describes your area:

a.   Primarily detached single family homes
b.   Primarily 2-4 story multifamily (condominiums or apartments)
c.   Primarily 5-10 story multifamily (condominiums or apartments)
d.   Primarily 10+ story multifamily (condominiums or apartments)

Section I. Attitude towards a project on your block

Vignettes for Residents of Single Family Home Neighborhoods (random frames)

A. Traffic/Parking

Suppose a developer proposes to build a three story apartment building on your block. The proposed building, which will contain 20 one-bedroom and studio units, is designed by Camarillo Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable. However, some of your neighbors oppose this project. They worry that it will lead to increased traffic in the neighborhood and make street parking harder to find. Traffic

and parking are always sources of concern to Angelenos, and there is reason to think that new housing does mean more cars.

Please tell us how much you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

B. Neighborhood character

Suppose a developer proposes to build a three story apartment building on your block. The proposed building, which will contain 20 one-bedroom and studio units, is designed by Camarillo Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable. However, some of your neighbors oppose this project. They worry that a taller apartment building will change the character of the neighborhood. Neighborhoods are often appealing because they have a consistent appearance where buildings of the same size are clustered near each other. Introducing a larger and different building could undermine the look and appeal of your neighborhood.

Please tell us how much you support or oppose this proposed development.
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

C. Strain on services

Suppose a developer proposes to build a three story apartment building on your block. The proposed building, which will contain 20 one-bedroom and studio units, is designed by Camarillo Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable. However, some of your neighbors oppose this project. They worry that the residents of this new building will put a strain on local public services like parks and schools, without paying their fair share. Many existing services are already strained, and existing residents should not have to endure further declines in service quality just to make room for new people.

Please tell us how much you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

D. Developer profit

Suppose a developer proposes to build a three story apartment building on your block. The proposed building, which will contain 20 one-bedroom and studio units, is designed by Camarillo Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture

and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable. However, some of your neighbors oppose this project. They point out that the project's developers obtained a special permit from the city, which lets them build at a higher density than zoning would normally allow. The developers stand to make large profits as a result. Your neighbors argue that the City Planning Department should not be in the business of making developers rich.

Please tell us how much you support or oppose this proposed development.
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

E. Control

Suppose there is a proposal to build a three story apartment building on your block. The proposed building, which will contain 20 one-bedroom and studio units, is designed by Camarillo Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a style a tasteful contemporary architecture with ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable.

Please tell us how much you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

Vignettes for Residents of Multi-family Neighborhoods (random frames)

A. Traffic/parking

Suppose there is a proposal to build a 10 story apartment building on your block. The proposed building, which will contain 90 two-bedroom and one-bedroom units, is designed by Solano Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable. However, some of your neighbors oppose this project. They worry that it will lead to increased traffic in the neighborhood and make street parking harder to find. Traffic and parking are always sources of concern to Angelenos, and there is reason to think that new housing does mean more cars.

Please tell us how much you support or oppose this proposed development.
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

B. Neighborhood character

Suppose there is a proposal to build a 10 story apartment building on your block. The proposed building, which will contain 90 two-bedroom and one-bedroom units, is designed by Solano

Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable. However, some of your neighbors oppose this project. They worry that a taller apartment building will change the character of the neighborhood. Neighborhoods are often appealing because they have a consistent appearance where buildings of the same size are clustered near each other. Introducing a larger and different building could undermine the look and appeal of your neighborhood.

Please tell us how much you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

C. Strain on services

Suppose there is a proposal to build a 10 story apartment building on your block. The proposed building, which will contain 90 two-bedroom and one-bedroom units, is designed by Solano Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable. However, some of your neighbors oppose this project. They worry that the residents of this new building will put a strain on local public services like parks and schools, without paying their fair share. Many existing services are already strained, and existing residents should not have to endure further declines in service quality just to make room for new people.

Please tell us how much you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

D. Developer profit

Suppose there is a proposal to build a 10 story apartment building on your block. The proposed building, which will contain 90 two-bedroom and one-bedroom units, was designed by Solano Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a building with tasteful contemporary architecture and ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable. However, some of your neighbors oppose this project. They point out that the project's developers obtained a special permit from the city, which lets them build at a higher density than zoning would normally allow. The developers stand to make large profits as a result. Your neighbors argue that the City Planning Department should not be in the business of making developers rich.

Please tell us how much you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

E. Control

Suppose there is a proposal to build a 10 story apartment building on your block. The proposed building, which will contain 90 two-bedroom and one-bedroom units, is designed by Solano Architects, who have developed multi-family residential projects across Southern California for decades. Early renderings show a style a tasteful contemporary architecture with ecologically sensitive landscaping. Some advantages of this development are clear. Los Angeles badly needs more housing, and city planners hope that new construction will help make rents more affordable.

Please tell us how much you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

Issue Engagement

a. If you are concerned about the negative impacts of development, you may be interested in the work of the Coalition to Preserve LA, an organization that advocates restricting new residential development to protect local quality of life. The Coalition offers many ways to get involved in this issue, ranging from letter-writing, attending meetings, and helping organize neighbors.

At the end of the survey, would you to receive more information about the Coalition to Preserve LA? (Yes / No)

b. If you support building more housing in Los Angeles to increase affordability, you may be interested in the work of Abundant Housing LA, an organization that advocates for more residential development in the city and region. Abundant Housing offers many ways to get involved in this issue, ranging from letter-writing, attending meetings, and helping organize neighbors.

At the end of the survey, would you like more information about Abundant Housing LA? (Yes / No)

<div align="center">

Attitude toward a project somewhere else

</div>

Vignette for residents of multi-family neighborhood

Now suppose a developer proposes a three story apartment building on a block that is made up entirely of single family homes. The proposed building, which will contain 20 one-bedroom and studio units, is well-designed and will use top-quality materials, and will be substantially newer than anything around it. The advantages of this project are essentially the same as the advantages of most new housing: it will help ease rents and home prices at a time when both are rising fast. The concerns, voiced by some neighbors, are that the new residents will make traffic worse and strain existing services, and that the taller building will be out of scale with the neighborhood.

Based on this limited information, how much would you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

Vignette for residents of single-family neighborhood

Now suppose a developer proposes a 10-story apartment building in a neighborhood that is mostly three and four story buildings with apartments and condos. The proposed building, which will contain 90 two-bedroom and one-bedroom units, is well-designed and will use top-quality materials, and will be substantially newer than anything around it. The advantages of this project are essentially the same as the advantages of most new housing: it will help ease rents and home prices at a time when both are rising fast. The concerns, voiced by some neighbors, are that the new residents will make traffic worse and strain existing services, and that the taller building will be out of scale with the neighborhood.

Based on this limited information, how much would you support or oppose this proposed development?
(Strongly support, Support, Neither support nor oppose, Oppose, Strongly oppose)

Section 2: Mitigation and change in support for a new project (random frames)

A. Generic voluntary community benefits

Suppose the developer of the multi-family project we just talked about volunteers to provide numerous community benefits, in order to assuage any neighbors' concerns. The developer agrees to include extra off-street parking spaces, make a donation to the local school, and pay for improvements to the nearby streetscape, such as planting trees and replacing sidewalks and curbs.

How would these improvements affect your level of support for this project?
(Support it more, Does not change my opinion, Support it less)

B. Community benefits result from neighborhood objections

Suppose the second multi-family project we talked about above becomes controversial and neighbors object. As a result the City Planning Department requires the developer to provide numerous community benefits in order get a building permit. The developer agrees to include extra off-street parking spaces, make a donation to the local school, and pay for improvements to the nearby streetscape, such as planting trees and replacing sidewalks and curbs.

How would these improvements affect your level of support for this project?
(Support it more, Does not change my opinion, Support it less)

C. Community benefits costly to developer

Suppose the second multi-family project we talked about above becomes controversial, and as a result the City Planning Department requires the developer to provide numerous community benefits in order get a building permit. The developer agrees to include extra off-street parking spaces, make a donation to the local school, and pay for improvements to the nearby streetscape, such as planting trees and replacing sidewalks and curbs. These improvements will cost hundreds of thousands of dollars, and could substantially reduce the developer's profit margins.

How would these improvements affect your level of support for this project?
(Support it more, Does not change my opinion, Support it less)

Section 3. Demographic questions

1. Do you rent or own your home? (Rent/Own/Other)

2. How long have you lived in your current home?
(Less than 1 year /1 to 3 years /4 to 10 years /More than 10 years)

3. What type of housing do you live in?
(Detached Single Family Home/Attached Single Family Home/Duplex/Multi-family (3 to 20 units)/Multi-family (20+units))

4. How many people, including yourself, live in your household?

5. How many vehicles do people in your household own?

6. What is your best guess of the total Income of all household members this year (before taxes)?

7. What race / ethnicity do you identify as?
(Black, Latino/Hispanic, White, Asian, Native American, Other)

8. How old are you?

9. What is your Gender? (Male/Female/Other)

10. What is your marital status? (Married, Single, Divorced/Separated, Widowed)

11. What is the highest level of education you have completed?
(Some high school/High school/Some college/BA or equivalent/Advanced degree)

12. Were you born in the United States? (Yes/No)

Thank you for your participation! Your response is very important to us.

Appendix B Table 1. Balance Test Under Five Random Frames

Characteristic	Strain	Traffic	Developer	Character	Control
Female (%)	66	62	60	66	65
Renter (%)	43	51	42	44	49
Lived in less than 5 years (%)	33	36	30	38	36
Married (%)	45	39	42	43	39
Median Age	34	34	37	35	34
BA or higher education	46	47	51	53	45
Self-identified race/ethnicity					
White alone, not Latino (%)	45	46	47	44	43
Latino (%)	25	20	23	23	31
Black alone, not Latino (%)	5	10	9	8	6
Asian, not Latino (%)	15	17	13	15	12
Foreign-born (%)	13	13	13	13	14
Housing type					
Single family house (%)	66	61	65	67	62
Multifamily <21 units (%)	14	18	16	15	19
Multifamily >20 units (%)	21	21	19	19	19
N	266	256	260	275	277

Appendix B Table 2. Logistic Regression Results, DV: 1 = Oppose Hypothetical Housing Development, 0 = Support or No Opinion

Frame	Model 1 (no controls	Model 2 (with controls)
Strain on services	1.68***	1.53**
	[0.32]	[0.31]
Traffic/parking	1.81***	1.90***
	[0.35]	[0.39]
Developer profits	2.80***	2.61***
	[0.52]	[0.53]
Neighborhood character	2.34***	2.22***
	[0.43]	[0.44]
Constant	0.33***	0.10***
	[0.05]	[0.05]
Log likelihood	-864.05	-755.81
Observations	1,334.00	1,309.00

Notes: ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.1 levels. Standard errors in brackets. Model 2 includes the following as controls: housing tenure (renter/owner), housing type (single- or multi-family), the length of time in current residence, race/ethnic identity, gender, and highest level of education.

Appendix B Table 3. Logistic Regression Results, DV: 1 = Support Project More, 0 = No Change or Support Project Less (Base group is 'forced by community pressure' frame)

Frame	Model 1 (with controls)	Model 2: Developer frame (with controls)
Voluntary	1.39**	1.84*
	[0.20]	[0.66]
Developer loses money	0.77*	0.78
	[0.11]	[0.27]
Constant	1.15	0.67
	[0.46]	[0.61]
Log likelihood	-850.27	-155.97
Observations	1299	246

Notes: ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.1 levels. Standard errors in brackets. Model 2 includes the following as controls: housing tenure (renter/owner), housing type (single- or multi-family), the length of time in current residence, race/ethnic identity, gender, and highest level of education.