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Foreclosure's Fallout: Economic Adversity and Voter Turnout

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Abstract

With the foreclosure crisis continuing to impact individuals and communities across the country, understanding the extent of its effect on political life is tantamount. In this paper, we ask how political behaviors are influenced by the economic adversities created by this crisis: loss of home, loss of resources, and perhaps loss of political efficacy. Previous research on economic adversity focuses almost exclusively on unemployment. Here we explore the demobilizing effects of foreclosures at the individual level, community levels, and the intersection of individuals nested in communities. With a unique dataset that matches voter file data to a database on individual foreclosures, we show that the foreclosure crisis was associated with a decline in voter turnout, both individually and for those in neighborhoods hit harder by the foreclosure crisis. We find that homeowners facing the loss of their homes were less likely to go to the polls. Consistent with previous research, we also show that turnout was suppressed in neighborhoods with higher rates of foreclosure. Taken together, our results suggest that political elites were less likely to hear from constituents most directly impacted by the foreclosure crisis.

Keywords Foreclosures · Voter turnout · Political inequality

The Great Recession that accompanied the financial crisis didn't bring back breadlines or industrial strikes. This time, the desperation was quiet and lonely: a pile of mail at the doorstep of a deserted house in a brand-new subdivision; a foreclosure judge presiding over a stack of files; a middle-aged man playing video games all day with the shades drawn; a retired woman trying to get a human being on the phone at the bank.
—George Packer, The New Yorker (2018).

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Over 9 million families lost their homes to foreclosure between 2006 and 2014 (Semuels 2017). Scholars have well documented the "collateral damage" of the foreclosure crisis on property values (Immergluck and Smith 2006a; Harding et al. 2009; Gerardi et al. 2012), neighborhood crime (Immergluck and Smith 2006b; Katz et al. 2013; Ellen et al. 2013), and housing sales (Rogers and Winter 2009). Less clear is how the foreclosures impacted *political inequality* in America. The bursting of the housing bubble left few areas of the country unscathed, but disproportionately affected less advantaged homeowners (Pfeffer et al. 2013). The crisis also widened racial disparities. African Americans and Latinos, for example, were more likely to face foreclosure relative to their share of mortgage originations than non-Hispanic whites (Li 2011; Bocian et al. 2010). But did the crisis reduce disparities in political voice, bringing neighbors together in protest (Bennett 2012; Levin et al. 2016) and motivating greater political engagement (Brody and Sniderman 1977)? Or did the crisis exacerbate the imbalance, causing overwhelmed and overburdened Americans to withdraw from political life (Rosenstone 1982; Verba et al. 1995)?

Despite the severity and reach of the foreclosure crisis, few studies have explored its influence on political behaviors. Estrada-Correa and Johnson (2012) use zipcode-level data from California to estimate the relationship between the foreclosure rate (between August and October 2008) and voter turnout in the November 2008 election. Controlling for turnout in the 2008 primary, they find a one-point increase in the foreclosure rate was associated with a 0.01-point drop in neighborhood turnout.[1] Their results suggest that the foreclosure crisis reduced political participation in 2008, despite an overall increase in voter turnout that culminated with the election of Barack Obama. But with only zipcode-level data on foreclosures, Estrada-Correa and Johnson conclude that a "remaining unexamined link is the connection between declines in voter turnout due to foreclosure and patterns of inequality in political disenfranchisement" (Estrada-Correa and Johnson 2012, p. 574).

Our study builds upon the previous literature on economic adversity and turnout in three important ways. First, we leverage a unique, individual-level dataset that matches voter file data to foreclosure filings to overcome the limits of aggregate analyses. Instead of relying on ecological inference and nesting individuals within zipcodes hit by various numbers of foreclosures, as Estrada-Correa and Johnson do, our data allow us to directly test whether individuals facing foreclosure are less likely to vote. Are individuals facing foreclosure less likely to vote *as a result of the foreclosure*? Second, we subject this hypothesis to a placebo test, looking to see if foreclosures experienced in 2012 affect turnout in a previous presidential election. Finally, we replicate this earlier work by examining the relationship between neighborhood foreclosure rates and voter turnout, but extend the analysis to a different geographic context and test whether foreclosures also affected those who were not themselves threatened with the loss of their homes.

[1] They find similar results in a separate multilevel analysis that nests individuals in zipcodes; the likelihood of going to the ballot box fell by 0.012 points for a one standard deviation increase in the foreclosure rate of the voter's zipcode, a slight drop in participation, but comparable in size to a one standard deviation shift in the proportion of the population living in poverty or holding a bachelor's degree.

Our results are consistent with resource models of political participation (see e.g. Verba et al. 1995): under a number of rigorous specifications and conditions, we find individuals facing the loss of their homes were less likely to participate in the 2012 presidential election. Our results on whether the effects of foreclosure spilled over onto the neighbors of troubled homeowners are more mixed. We find no evidence of a contextual influence of foreclosure rates, but in a supplemental analysis that disaggregates neighborhoods by median household income, we present suggestive evidence that turnout was lower in middle-income neighborhoods with higher rates of foreclosure. Taken together, we find that the foreclosure crisis increased political inequality, depressing turnout among those facing foreclosure and possibly dampening the political engagement of working-class and middle-class homeowners living in neighborhoods experiencing the shock of the housing crisis.

Economic Adversity and Voting

By far, the most common understanding of economic adversity in the political science literature has focused on unemployment. Several studies have concluded that unemployment has short- and long-term consequences on civic participation (Verba et al. 1995; Wilson 2000; Rotolo and Wilson 2003). In this paper, we expand the conceptualization of economic adversity and focus on the loss of homeownership via foreclosures. Our expectation is the mechanisms by which employment influences political participation—resources, social networks—can be extended to homeownership. We also consider whether these losses were felt at a community level. To do so, we test whether housing distress explains contextual variation in neighborhood turnout, even after accounting for the individual experience of foreclosure. Below, we review the relevant literature on how individual and community losses condition voting behavior, present our hypotheses and discuss how our study addresses some of the limitations of previous research on the foreclosure crisis.

Individual Loss and Political Participation

Foreclosures lead to individual distress via several direct and indirect pathways, each depressing political participation. First, and perhaps most obviously, individuals who lose their home face economic hardships. Resource models of participation provide convincing evidence that socioeconomic factors drive opportunities and abilities to participate (Verba et al. 1995; Schlozman et al. 2012). In much the same way, foreclosure may lead to less civic participation because individuals facing housing distress are likely to lose many of these resources, including time, interest, and money.

Second, foreclosures may reduce the likelihood of voting indirectly by making it less likely that citizens are asked to participate (Rosenstone and Hansen 1993). Organizations and campaign operatives may avoid those neighborhoods hit hardest by the collapse of the housing market, thinking that their mobilization efforts will bear greater fruit elsewhere. Foreclosures may also make it more difficult to find

potential voters. Indeed, heading into the 2010 gubernatorial recall election in Wisconsin, canvassers from the League of Young Voters were only able to find 31% of their targets in Milwaukee; twice that number were missed either because the residence identified on the voter file was now abandoned or because the targeted voter no longer lived there (Issenberg 2012).

Last, losing a home can indirectly affect other factors shown to influence voting behavior. Research has documented the link between foreclosures and health (Saegert et al. 2011), loss of employment (Kingsley et al. 2009), and marital tensions (Abramovitz and Albrecht 2013). Stated differently, voters who are insecure about their basic needs are less interested in politics; they have more pressing concerns (Wolfinger and Rosenstone 1980).

In sum, the extant theoretical literature implies that at the individual level, foreclosures may decrease political participation via a number of mechanisms that influence a person's resources and social networks.[2]

Neighborhood Context and Loss

In addition, we might reasonably anticipate variation across neighborhoods in the link between foreclosures and voter turnout. Scholars have long noted that the broader contexts within which individuals are situated can also have important implications for how various social problems and economic shocks are experienced and perceived. Measured at the level of counties (Reeves and Gimpel 2012), metropolitan areas (Weatherford 1983) or zip codes (Newman et al. 2014), a robust literature finds a connection between perceptions of environment and political attitudes and behaviors. Local contexts, for example, provide important frames of reference for making inferences about national statistics and trends (Wong 2007; Ansolabehere et al. 2014). Building on theories of social influence (Huckfeldt and Sprague 1995), the premise is that voters obtain relevant political information through "the slow drip of everyday life" (Baybeck and McClurg 2005, p. 498) by observation of their environment and those around them. Thus, individual stressors might also have cumulative community effects. Importantly, these effects are felt by everyone within the community—those who lost their home, and those who did not. These neighborhood-level effects can influence political participation via three pathways.

First, foreclosures may lead to a vicious circle, as a neighborhood's reputation is damaged, and additional families leave. Potential buyers will back away from declining neighborhoods, leaving more houses empty (Saegert et al. 2011). In turn, this downward spiral may diminish neighborhood ties and the size of social networks, limit the community's social capital and efficacy (Sampson and Raudenbush

[2] There is some evidence that economic hardship can increase political engagement when it is sufficiently politicized and de-personalized. For example, Burden and Wichowsky's (2014) study of unemployment suggests that economic downturns might stimulate greater attention to political information and vigilance in attributing blame, thus making it more likely that individuals vote; this might be particularly the case in times of high unemployment (see Incantalupo 2011).

1999; Sampson 2004), and otherwise impair community functioning (Abramovitz and Albrecht 2013).

Second, community loss may mean that neighborhoods are no longer seen as places of refuge, but rather as sources of stress. Abandoned homes increase crime, weaken social bonds, and reduce sense of safety. In creating residential turnover (Li and Morrow-Jones 2010), foreclosures make it more difficult for neighborhoods to maintain social control (Sampson et al. 1997) and reduce neighborhood-level civic engagement (Kang and Kwak 2003). And given that voting can be contagious (Nickerson 2008; Sinclair 2012) and subject to social pressures (Davenport et al. 2010), foreclosures may also lower neighborhood turnout by removing the social norms and motivations that stimulate voting participation.

Last, abandoned homes create socially disorganized neighborhoods, disrupting communication among community residents, weakening collective and individual efficacy, and diminishing capacities for mobilization (Baumer et al. 2012). Thus, the foreclosure crisis may isolate residents from the societal mainstream and reduce confidence in institutions, such as banks and local civic groups (Vidmar 2008; Saegert et al. 2011). The stigma, isolation and demoralization that are associated with loss are often experienced by many within the community. And this sense of loss may cause individuals to withdraw further from community life, thereby weakening the social fabric and social supports that could help manage these losses. In this way, individual losses accumulate and undermine community function.

To sum, individual factors matter, but previous research on voter behavior also finds that their effects can be conditioned by neighborhood context. Those threatened with the loss of their homes may be less likely to vote, but foreclosures might also affect voting participation more broadly by changing the composition of neighborhoods and the social dynamics within them. In this study, we capitalize on individual-level data that can be nested into neighborhoods to provide an empirical test of *both* the individual and community effects of foreclosure on voter turnout. In particular, we test two hypotheses:

H1 All else equal, individuals facing foreclosure will be less likely to vote (*Individual loss*).

H2 All else equal, voter turnout will be lower in neighborhoods with higher foreclosure rates. (*Community loss*).

Study Design

We examine the relationship between foreclosures and voter turnout in Milwaukee County, Wisconsin in the 2012 presidential election. As was the case in other real estate markets, Milwaukee County experienced a devastating increase in foreclosures between 2005 and 2011. Foreclosure filings in Milwaukee County increased from an average of 2617 foreclosure filings per year from 2000 to 2005 to almost 7000 per year in 2008 and 2009 (City of Milwaukee 2009). Milwaukee County shares much with the national picture of economic hardship, and is representative

of the greater foreclosure crisis, particularly of many mid-sized cities with racially heterogeneous populations.

Data and Methods[3]

We utilize the Wisconsin voter files for Milwaukee County to construct our dependent variable. The voter files include the name, residential address, estimated race/ethnicity, estimated household income, estimated education, estimated homeownership and vote history of registered voters in the county.[4] *Turnout* is defined by a dichotomous measure of whether the registered voter went to the polls in the 2012 presidential election (1 = yes, 0 = no). As we explain in detail below, we restrict our analysis to registered voters who own their homes.

We then geocode and match registered voters to a database of foreclosure filings (2006–2012).[5] (Detail about how we matched the voter file to foreclosure filings is available in Online Appendix.) Out of 225,287 registered voters who are estimated to be homeowners, we matched 1431 voters (or 0.64%) to owner-occupied residences that were in our database of foreclosure filings for the 2012 calendar year.

We use these matched data to construct a dichotomous measure of *Individual Foreclosure* that equals one if the individual faced foreclosure in 2012. Given the nature of the foreclosure dataset, which only identifies property owners facing foreclosure, we focus on homeowners and exclude renters who may have faced foreclosure-induced relocation. We code cohabitants of those listed in our database of foreclosure filings as also facing foreclosure. In total, 3017 registered voters in Milwaukee County lived in owner-occupied residences facing foreclosure in 2012.

We include the estimated race/ethnicity of the voter, captured by dichotomous measures for *Black*, *Latino*, or *Asian* (non-Hispanic whites are the excluded group), as well as the estimated *Education*, *Income*, and *Age* of the registered voter.[6] Because prior voting behavior is predictive of current voting behavior, we also control for prior turnout (*Voted in 2008*) to help account for other unobserved individual-level correlates of turnout that are unavailable in the voter file.

In addition to these individual-level variables, we utilize block group-level data from the 2010 US Census to capture demographic and socioeconomic variation across neighborhoods (*% Black*, *% Latino*, *% Asian*, *Median Household Income*,

[3] Data and replication files available at https://doi.org/10.7910/DVN/WTXEVY.

[4] Voter file information was purchased from L2Decisions (http://votermapping.com) and includes estimates of additional covariates including race/ethnicity, income, education, age, and homeownership. They use Census block-level data and other financial and lifestyle data to create estimates of demographic information.

[5] We thank the Fiscal and Economic Research Center (FERC) at the University of Wisconsin-Whitewater for providing us access to these data. Because data are often missing in real estate websites such as Zillow, FERC has carefully coded each foreclosure filing for the state of Wisconsin between 2006 and 2012.

[6] We assign those with missing data the median value and create a dummy indicator for missingness for age, education and income.

Table 1 Descriptive statistics—by foreclosure

Variable	Individuals facing foreclosure				Individuals not facing foreclosure			
	Mean	SD	Min	Max	Mean	SD	Min	Max
Individual-level								
Voted in 2012	0.91	0.29	0.00	1.00	0.92	0.27	0.00	1.00
Voted in 2008	0.85	0.36	0.00	1.00	0.88	0.32	0.00	1.00
Black	0.29	0.45	0.00	1.00	0.14	0.34	0.00	1.00
Latino	0.08	0.26	0.00	1.00	0.05	0.22	0.00	1.00
Asian	0.03	0.16	0.00	1.00	0.02	0.13	0.00	1.00
Age	52.37	11.26	20.00	89.00	55.43	11.45	20.00	99.00
Age missing	0.43	0.50	0.00	1.00	0.47	0.50	0.00	1.00
Income	5.07	2.05	1.00	11.00	5.43	2.13	1.00	11.00
Income missing	0.06	0.23	0.00	1.00	0.06	0.24	0.00	1.00
Education	3.25	1.06	1.00	5.00	3.24	1.07	1.00	5.00
Education missing	0.14	0.35	0.00	1.00	0.16	0.36	0.00	1.00
Neighborhood-level								
Foreclosure rate (2012)	0.02	0.01	0.00	0.06	0.01	0.01	0.00	0.06
% Black	0.34	0.34	0.00	0.99	0.19	0.29	0.00	0.99
% Latino	0.09	0.15	0.00	0.82	0.09	0.13	0.00	0.83
% Asian	0.03	0.03	0.00	0.44	0.03	0.03	0.00	0.57
% Homeowners	0.54	0.23	0.00	0.99	0.64	0.22	0.00	0.99
Median household income	48,652	20,686	11,402	186,154	57,057	26,661	7170	250,001

and *% Homeowners*). Census block groups represent roughly 1300 residents, a geographic unit that most closely approximates how individuals define their neighborhoods (see e.g., Sampson et al. 1997). We calculate the *Foreclosure Rate* for each block group by taking the number of foreclosures and dividing by the 2010 Census estimates of the total number of housing units for each block group. Foreclosure rates in 2012 ranged from 0 to 6% across neighborhoods.

Table 1 provides the descriptive statistics by foreclosure status, and a couple of points are noteworthy. Participation in the 2012 election was lower amongst those individuals facing foreclosure, but not by huge margins. Perhaps most striking is the racial differences between groups—following national trends, African American, Latino and Asian homeowners in Milwaukee county were more likely to face the loss of their homes (Li 2011; Bocian et al. 2008, 2010). Moreover, and not surprisingly, individuals facing foreclosure live in poorer neighborhoods, though the experience of foreclosure is not confined to low-wealth contexts.

To assess the effect of neighborhood context and our other control variables on turnout, we estimate a multilevel model, which allows us to account for the clustered structure to our data (Raudenbush and Bryk 2002; Steenbergen and Jones 2002). We model turnout as a function of individual-level covariates (*Individual Foreclosure*, *Black*, *Latino*, *Asian*, *Income*, *Education*, *Voter's Age*, *Voted in 2008*) and neighborhood-level covariates (*% Black*, *% Latino*, *% Asian*, *Median Household Income*, *% Homeowners*, and *Foreclosure Rate*), and we include random effects for census

Table 2 Model estimates

	(1) Individual	(2) Ind. + contextual	(3) Placebo Test	(4) Matched	(5) Matched
Dependent variable	Vote12	Vote12	Vote08	Vote12	Vote12
Individual foreclosure	−0.166*	−0.146*	−0.016	−0.246**	−0.245**
	(0.089)	(0.089)	(0.085)	(0.098)	(0.098)
Foreclosure rate (2012)		−1.933			−1.052
		(1.617)			(2.848)
Vote 2008	1.483***	1.470***			
	(0.028)	(0.028)			
Vote 2006			3.216***		
			(0.032)		
N (individual)	225,287	225,287	225,287	12,529	12,529
N (neighborhoods)	857	857	857		

Multilevel logistic regression with random effects for neighborhood (Census block groups) and households. Full models (with control variables) available in Appendix Table A

***p < 0.01; **p < 0.05; *p < 0.10

block groups and households to account for the non-independence of observations within our nested dataset.

Results

Table 2 presents our main results for hypothesis 1. We begin with a basic model (1) that includes individual-level covariates and random effects for household and neighborhood. Individuals facing foreclosure were less likely to vote in the 2012 presidential election, holding constant race, ethnicity and prior turnout in the 2008 presidential election. The substantive difference translates into about a one-percentage point decrease in the likelihood of voting for those registered voters facing foreclosure.[7] To put our estimated effect of foreclosure into context, treatment effects from field experiments of get-out-the-vote (GOTV) efforts tend to range from 7 to 10 points (Gerber and Green 2000; Gerber et al. 2003; Green et al. 2003). However, as Arceneaux and Nickerson (2009) point out, such mobilization efforts have little effect on high-propensity voters in salient elections. The estimated effect of foreclosure among our sample of high propensity voters—homeowners who are already registered to vote—is thus significant, likely larger than the effect of a campaign contact. Our findings are also in line with other research on the demobilizing effects

[7] As expected, prior turnout is a strong predictor of voting participation, and compared to non-Hispanic whites, the likelihood of voting participation was lower among Latino and Asian registered voters. Consistent with the diminishing black-white gap in voter turnout nationally (Taylor and Lopez 2013), we find no statistically significant turnout differences between black and white registered voters in our sample. Full results are available in Appendix A.

of economic hardship. For example, Levin et al. (2016) find that poor pocketbook evaluations are associated with about a 2–3 percentage point drop in the likelihood of voting.

Next, we consider Hypothesis 2, the influence of community loss. In model 2, we report the results when including the neighborhood foreclosure rate. The coefficient on individual foreclosure remains negative and statistically significant, suggesting that the individual loss of a home exacts an economic and psychological toll that depresses political engagement, even after accounting for neighborhood-level differences in income, homeownership, and racial composition. However, we do not find support for our community loss hypothesis, which posits lowered voter turnout in communities facing higher foreclosure rates. We examine the community loss hypothesis in greater detail below, but before those analyses, report on our robustness checks.

Though these results suggest that the threat of losing one's home depresses turnout, it is possible that the estimated coefficient on *Individual Foreclosure* is spurious, reflecting other unmeasured individual-level differences that are related to both political engagement and the likelihood of facing foreclosure. To address this possibility, we first estimate a placebo model that tests whether experiencing foreclosure in 2012 predicts voter turnout in the previous presidential election (model 3). The insignificant coefficient on *Individual Foreclosure* gives us greater confidence in our main finding.

Another potential weakness in the above analysis is that individuals facing foreclosure may simply be "incomparable" to individuals not facing foreclosure (King and Zeng 2006). Thus, as a final robustness check, we use Coarsened Exact Matching (CEM) (Iacus et al. 2008) to help eliminate differences between the treatment and control group (models 4 and 5).[8] We matched on age, race, ethnicity, education, income, voter history, municipality and block-level measures of racial and economic composition. The result was a treatment group of 1622 and a control group of 10,907.[9] After matching, we have two groups that differ solely on the treatment effect: individual foreclosures. The negative effects of individual foreclosure on voting remain significant, and substantively point to a 2-percentage point decrease in the likelihood of voting. Together, these results suggest our findings on the individual effects of foreclosure are robust: homeowners facing the loss of their homes were less likely to vote in 2012.

[8] See Appendix Table D for imbalance corrections. Coarsened Exact Matching takes into account missingness in variables.

[9] We did not match on contextual measures of foreclosures because we were interested in testing whether turnout was also affected by the neighborhood's foreclosure rate.

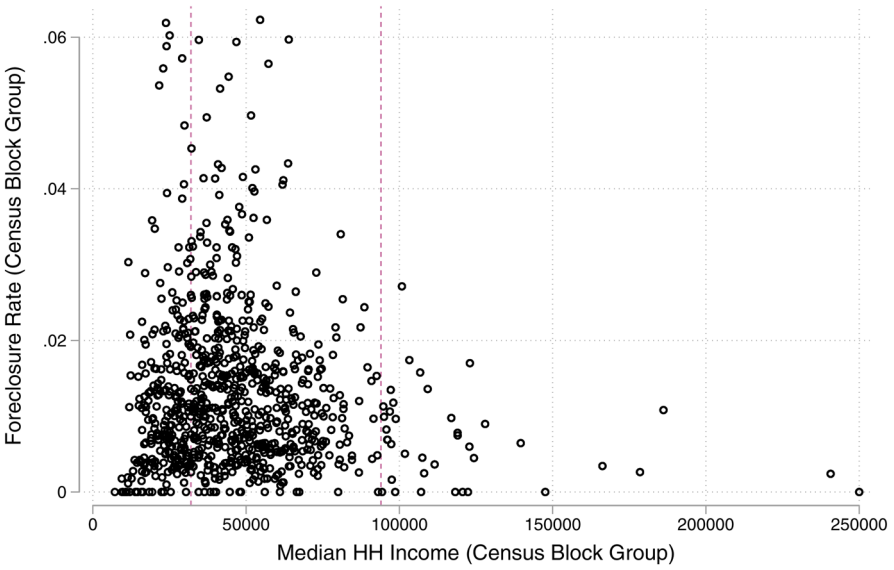

Fig. 1 Foreclosure rates by median household income. Dashed lines are cut-off points delineating lower-income communities (Census block groups with median household incomes that are two-thirds or less of area median household income), middle-income communities (Census block groups with median household incomes two-thirds to two times the area median household income) and higher-income communities (Census block groups with median household income more than twice as large as the area median household income)

Community Effects in Context

Existing residential patterns in the United States are characterized by high levels of inequality and differentiation between neighborhoods (Firebaugh and Farrell 2016; Michener 2013; Sharkey 2013; Soss and Weaver 2017). As we see in Fig. 1, the prevalence of foreclosures is higher in lower-income communities, adding an additional layer of unequal stratification. But though there is an inverse relationship between neighborhoods' median household income and foreclosure rates, the correlation between the two is modest (−0.09). To provide further insight into this contextual variation, we categorize neighborhoods by wealth (shown by the dashed lines in Fig. 1). Here we define middle-income neighborhoods as those with a median household income two-thirds to double the county's median household income (about $47,000), and low-income (high-income) neighborhoods below (above) those cutpoints.[10] Though foreclosure rates were higher in low-income neighborhoods, a substantial number of homes in middle-income neighborhoods were also beset by foreclosures, and we see some variation in foreclosure rates even within high-income neighborhoods.

[10] We follow Pew Research Center's definition of low-income, middle-income and high-income (see Pew Research Center 2016).

Table 3 Model estimates by neighborhood income

	(1) Low-income	(2) Middle-income	(3) High-income
Dependent variable	Vote12	Vote12	Vote12
Individual foreclosure	0.197	−0.246**	0.236
	(0.197)	(0.101)	(0.596)
Foreclosure rate (2012)	3.204	−4.504**	−36.301***
	(2.791)	(2.079)	(11.466)
Vote 2008	1.329***	1.472***	1.756***
	(0.063)	(0.032)	(0.117)
N (individual)	29,858	177,304	18,125
N (neighborhoods)	254	563	39

Multilevel logistic regression with random effects for neighborhood (Census block groups) and households. *Low-income* defined as Census tracts with median household income less than two-thirds area median household income. *Middle-income* defined as Census tracts with median household income two-thirds to two times area median household income. *High-income* defined as Census tracts with median household income more than two times area median household income. Full models (with control variables) available in Appendix Table B

***p < 0.01; **p < 0.05; *p < 0.10

As a result of this differentiation between neighborhoods, the experience of "everyday life" that we argue conditions the effects of foreclosure, may be quite different depending on the community context. For example, research suggests that low-income neighborhoods experience a high level of what we might call "baseline distress," characterized by greater economic uncertainty, more vacant homes, and more precarious housing options (Niedt and Martin 2013). In conjunction with a greater likelihood of foreclosure, we might expect low-income neighborhoods to fall more deeply into detachment from political life (see e.g., Cohen and Dawson 1993; Michener 2013).[11] On the other hand, it may be the case that the additional layer of distress goes mostly unnoticed. In her study of Boston, Graves (2012) finds that many residents in a low-income neighborhood did not differentiate or know the status of vacant homes versus foreclosed homes. Thus, the effects of foreclosures on voting behavior in low-income neighborhoods may be less pronounced.

The effects in middle- and high-income neighborhoods are equally speculative. We know voters in these communities have comparably low levels of baseline distress, and thus the experience of foreclosures in the community might be a greater shock and possibly more demobilizing, leading to lower voter turnout. But we also know that more affluent neighborhoods have access to the very resources and social

[11] Michener (2013) finds that under some conditions, perceptions of disorder (higher in lower-income neighborhoods) can spark greater engagement, increasing the likelihood of attending a community meeting. However, when it comes to engagement with formal political authorities, the relationship is curvilinear (likely reflecting concerns about, and experiences with, law enforcement), and objective measures of disorder remain negatively correlated with political engagement.

capital cited above that can maintain community stability in the face of crisis. Thus, these less-distressed neighborhoods may be insulated from the shocks of foreclosure.

Together then, the previous research suggests that the individual and community effects of foreclosure we examine above may be conditioned on the income-level of the community. To test this possibility, in Table 3 we report the results of individual and community variables on voting behavior for low-income (less than two-thirds the median income), middle-income (two-thirds the median income to two times the median income), and high-income (greater than two times the median income) neighborhoods.

The results provide suggestive evidence that community context influences the effects of foreclosures. First, the results from the multilevel model show that the political participation of individuals living in low-income neighborhoods is unaffected by housing disruptions, both to themselves and within their community. The cumulative impact of "additional distress" on already distressed communities that have lower voter turnout does not appear to drop participation further.

The demobilizing effects of foreclosures, on the other hand, appear to be largely concentrated in middle-income communities. Homeowners in these neighborhoods were approximately one percentage less likely to vote if they were facing foreclosure, all else equal. These results also suggest that the demobilizing effect of foreclosures may have extended to those not personally threatened with the loss of their homes. The coefficient on the neighborhood's foreclosure rate is negative and statistically significant, even after taking into account the individual-level experience of foreclosure. To help assess substantive meaning of these results, we estimate the predicted probabilities of voting across the observed range of foreclosure rates in the county.[12] Our results suggest that a homeowner not facing foreclosure was about 1 percentage point less likely to vote in 2012 if she lived in a neighborhood with the highest rate of foreclosures than if she lived in lived in a neighborhood without any. Overall, the depressive effect is small, though expected given our focus on the likelihood of voting among high-propensity voters in a competitive presidential election, and consistent with what Estrada-Correa and Johnson (2012) find in California in the 2008 election.

The individual and community-level effects in high-income communities are also different than those found in low- and middle-income places. Supporting our expectation that individuals with more resources may be more resilient to loss, we find no effect for individual loss. In other words, the voting behavior of individuals living in high-income neighborhoods who are themselves in foreclosure are not less likely to vote. The coefficient on the neighborhood's foreclosure rate, on the other hand, is significant and negative. Though we want to be careful in our interpretation given the smaller number of high-income neighborhoods in our dataset, these results suggest that political engagement fell a bit in places experiencing the shock of the foreclosure crisis.

[12] We estimate predicted probabilities for a non-Hispanic white homeowner who voted in the 2008 presidential election, holding all other variables at their means.

In conclusion, when we disaggregate our results by neighborhood wealth, our results do suggest that voting participation was most sensitive to foreclosures in middle-income neighborhoods, and that even those not personally facing foreclosure were affected. But we emphasize this result is suggestive; the large standard errors for the statistically insignificant coefficients in the other models mean that we are unable to reject the null hypothesis that the relationship between foreclosures (both at the individual-level and at the contextual-level) and turnout differed in low, middle and high-income neighborhoods.

Discussion and Conclusion

With the foreclosure crisis continuing to impact individuals and communities across the country, understanding the extent of the effect on *political* life is tantamount. We know that foreclosures result in lower rates of trust in particular institutions, but we know little about how foreclosures impact voting behaviors. Estrada-Correa and Johnson (2012) show that Californians living in zip codes with high rates of foreclosure were less likely to vote in the 2008 presidential election. However, their study was unable to test whether individuals facing foreclosure were less likely to go to the polls. In this paper, we take advantage of a unique dataset that allows us to estimate how the potential loss of home affects an individual's likelihood of voting.

We conclude that homeowners facing foreclosure were less likely to vote in the 2012 presidential election. Under a number of modeling specifications and tests, we find strong evidence to suggest that individual housing loss depressed voter turnout. Our unique dataset of individual-level voter and foreclosure data allowed a direct test of the relationship between the threat of losing one's home and political participation. In line with the resource theory of voting, and corroborating more recent research, our findings add to this scholarship, and demonstrate that *highly likely voters* (homeowners who are registered to vote) are not immune to the negative effects of loss. Moreover, we test the robustness of our central finding with a placebo test, showing that foreclosures were unrelated to the likelihood of voting in a previous election.

Our findings around community loss, on the other hand, are more nuanced. We replicate earlier work showing that neighborhood-level housing blight can depress turnout, but we find that this contextual variation was largely concentrated in middle-income neighborhoods, home to larger shares of working-class and middle-class homeowners. And these findings are speculative at best. A more refined analysis of contextual effects, such a spatial analysis of neighbors (see e.g., Rogers and Winter 2009), may reveal spillover effects that drive community impacts, and is one possible direction for further inquiry.

Together, our analysis makes several important contributions to the research on political inequality and political participation. Our results suggest that the bursting of the housing bubble exacerbated political inequality, depressing voting participation among those most directly affected by the financial and psychological costs of foreclosure. Though we find that the foreclosure crisis deepened political inequality, additional questions remain, and we encourage scholars to replicate our research in

other geographic contexts and to consider the interactions between economic and racial inequality. For example, the null results we find in low-income communities suggest that foreclosures alone do not differentiate these more distressed neighborhoods. However, there are also fewer homeowners in these neighborhoods, and it is possible that the effects of foreclosure were more likely to be experienced by renters who are not included in our analysis. Given recent research documenting the severity of evictions among those living in poverty, particularly in low-income communities of color (Desmond 2016), future research should consider how the residential instability, material deprivation, and mental stress induced by housing insecurity contributes to political inequality.

Moreover, we know that persons of color (Allen 2011) and low-income homeowners (Li 2011) have been more likely to experience foreclosure. Recent research also suggests that the banks have better maintained real-estate owned properties in non-Hispanic white and wealthier neighborhoods (Ihlanfeldt and Mayock 2014). We did examine whether race and ethnicity moderated the relationship between foreclosures and turnout. Our results suggest that black homeowners in Milwaukee County were more immune to the depressive effects of foreclosure (reported in Table C in the Appendix). However, we caution readers against making too much of these differences, as we suspect they may not generalize to other contexts given community organizing efforts around foreclosures in select neighborhoods in the county.[13] To be sure, more research on this relationship is warranted. Whether grassroots mobilization in response to the foreclosure crisis helped build or sustain political efficacy in the face of economic hardship remains unclear, though our observations of such efforts suggest that this may be a possibility.

Overall though our results point to a demobilizing effect Previous research finds that individuals withdraw from political life in response to economic hardship, but especially when they interpret their adversity as stemming from a personal rather than political failure (see e.g., SoRelle 2016).[14] As the wave of foreclosures caught millions of Americans in its wake, it appears that troubled homeowners responded with political quiescence. The crisis wiped out a substantial portion of Americans' wealth and helped reinforce high levels of racial and income inequality: about a quarter of families lost at least 75% of their wealth (more than half lost at least 25%) and these declines were concentrated among less advantaged Americans (Pfeffer et al. 2013). African American and Hispanic families, for example, lost almost twice as much wealth as white families (McKernan et al. 2014). Over the same time period, the top 1% saw gains in average wealth (Saez and Zucman 2016). Many have

[13] In 2009, Common Ground, an affiliate of the Industrial Areas Foundation (IAF), began a massive campaign to address the foreclosure crisis in Milwaukee's Sherman Park neighborhood, an area with some of the region's highest rates of black homeownership. Their efforts galvanized residents, and in response to substantial community organizing efforts, tens of millions of dollars have been reinvested in the neighborhood to help rehabilitate foreclosed properties and restore the housing market in Sherman Park. Common Ground and other organizations conducted GOTV campaigns in these same neighborhoods in 2012.

[14] That said, there is nothing automatic about this response; economic adversity can be politicized in ways that spur greater voting participation too (see Burden and Wichowsky 2014; Incantalupo 2011).

criticized the Obama Administration's and Congress's responses to the bursting of the housing bubble, arguing that the programs implemented to stem the fallout from the foreclosure crisis reflected the banking industry's preferred policy choices rather than those that could have helped troubled homeowners the most (Dayen 2015); some have even argued that US policy made more households vulnerable to foreclosure and extended the length of the crisis (Cooper and Bruenig 2017). Our results suggest that political elites may have faced less pressure to address the shortcoming and failures of the policies and programs implemented during the foreclosure crisis.

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