Housing and Political Efficacy*

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Abstract

It has long been established that education and income affect people's political efficacy. Surprisingly, the role of wealth - in particular, housing wealth - has thus far been ignored in this literature. We argue that that housing wealth may affect efficacy in three ways. First, it provides permanent income and security, increasing people's efficacy by creating a feeling that the political system works for them. Secondly, housing wealth creates incentives for people to engage in the political process as they have "skin in the game", with participation in turn increasing efficacy. Third, the literature on status expectations and the politics of resentment suggests that intergenerational housing mobility might influence efficacy. Using data from three large representative surveys administered in the UK, we find evidence for the first two mechanisms, but not the third. Housing wealth increases efficacy by providing security and at least part of the effect is mediated by political participation. However, intergenerational housing mobility does not affect efficacy beyond the first-order effect of homeownership, which are accentuated by age. The results of this study show that housing - and by extension wealth more generally - constitutes a hitherto neglected but crucial determinant of political efficacy, chiefly by providing security and incentivising political engagement.

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1 Introduction

The rise of populism and other challenges to democracy have spawned a large body of research on the determinants of political participation. While this recent literature focuses on the economic forces shaping political participation (Kurer and Palier 2019; Kurer 2020; Kurer and Van Staalduinen 2022), a separate strand of research points to political efficacy as another important influence on participation. Political efficacy has been defined as "citizens' perceptions of powerfulness (or powerlessness) in the political realm" (Morrell 2003, 589). More efficacious individuals tend to believe that it is worthwhile to perform one's civic duties such as voting. This makes high political efficacy an important characteristic of a functioning democracy. Inequalities in political efficacy, on the other hand, are likely to contribute to unequal political representation. There is a significant body of research which supports this conjecture (see, e.g., Clarke and Acock 1989; Condon and Holleque 2013; Emmenegger, Marx and Schraff 2015; Krause and Wagner 2021; Rico, Guinjoan and Anduiza 2020), as well as a smaller literature on the determinants of political efficacy.

In this latter literature, a consistent theme emerges: education is generally considered the most powerful correlate of political efficacy (Rasmussen and Nørgaard 2018; Shore 2020). Studies furthermore suggest that income and socio-economic status more broadly affect political efficacy (Marx and Nguyen 2016, 2018). However, one variable that is conspicuously absent from all these analyses is wealth. This is surprising, for "wealth is associated with important life-outcomes net of other socioeconomic predictors" (Pfeffer and Waitkus 2021, p. 568). Moreover, wealth inequality is often higher than income inequality and varies widely across countries (Nolan and Valenzuela 2019; Zucman 2019). Yet only in recent years, wealth has emerged from the shadow of income inequality as a previously overlooked dimension of social inequality (Killewald, Pfeffer and Schachner 2017). Therefore, continuing to ignore wealth is likely to lead to an incomplete understanding of political efficacy.

Housing wealth is likely to be particularly influential in this regard. For most people, it constitutes the bulk of their personal wealth and an asset of great emotional significance. (OECD Tax Policy Studies 2021). It is therefore a source of economic security and social status that may shape people's political attitudes and behaviors (Wiedemann 2021). For example, existing empirical evidence links people's housing situation to populism (Adler and Ansell 2020; Ansell et al. 2022), social policy preferences (Ansell 2014; Gingrich and Ansell 2014), and other outcomes. We can therefore theorise that differences in housing wealth affect people's political efficacy.

In this paper, we argue that home ownership and housing wealth contribute to higher political efficacy in three ways. First of all, home ownership provides an asset which insures against negative life events and whose value homeowners are concerned to protect, and individuals who are more financially secure tend

to have higher efficacy. Second, the intergenerational dimension of housing suggests that parents' housing situation might affect the political efficacy of their descendants. Finally, home ownership is a sign of local rootedness which has been linked to political involvement and efficacy.

These – non-mutually exclusive – mechanisms all suggest different facets of people's housing situation that might affect efficacy. For the asset mechanism, we would expect a homeowner's mortgage situation as well as the estimated value of their home and their relative position in the wealth distribution to matter. If there is an intergenerational dimension to the role of housing, parental homeownership should boost efficacy while downward intergenerational housing mobility should reduce efficacy. Finally, if homeowners develop stronger local ties, homeowners who have lived in a place for longer should show higher efficacy. We use data from three original surveys that we conducted in the United Kingdom in 2021 and 2022 to investigate these mechanisms. With detailed information about the housing situation of over 10,000 individuals, we are uniquely positioned to uncover hitherto unknown relationships.

We find that homeowners exhibit higher external and internal political efficacy, even after controlling for education, household income, and other individual-level factors. Our results furthermore indicate that the asset mechanism is the main driver of this relationship. It is driven by individuals who own their house outright, and it is more pronounced in people who own more expensive houses or who believe that they are higher up in the housing wealth distribution. All of this indicates that housing wealth performs an asset function and thereby raises political efficacy. However, we find little evidence that intergenerational housing mobility and local ties of homeowners shape efficacy. Overall, our findings show that people's housing situation explains a portion of individual-level variation in political efficacy that is not accounted for by education and income.

This paper contributes to a growing literature on the determinants of political efficacy. While other studies have focused on the effects of education and income, to our knowledge, we are the first to show an effect of people's housing situation and housing wealth on efficacy. With our findings, we also add to a nascent literature on the consequences of housing wealth - an often-neglected facet of overall socioeconomic inequality - on political behaviour, such as voting for populist parties. The paper proceeds as follows. In section 2, we discuss the existing literature and derive our hypotheses. Section 3 describes the data and contains some descriptive analyses. In section 4, we present the regression results. Section 5 concludes.

2 Literature and Theory

2.1 Defining and Explaining Political Efficacy

Political efficacy was originally defined as "the feeling that individual political action does have, or can have, an impact upon the political process" (Campbell, Gurin and Miller 1954, 187). As such, it has mainly been analysed as a determinant of political behaviour, especially political participation. The proper measurement of political efficacy has been the subject of some debate in political science. Balch (1974, 24) proposed to differentiate between internal and external political efficacy, internal efficacy being "the individual's belief that means of influence are available to him" and external efficacy being "the belief that the authorities or regime are responsive to influence attempts." This distinction has since become widely accepted. As will become clear, our arguments relate more strongly to external efficacy, which is less trait-like and more responsive to external circumstances. Consequently, in the remainder of the paper we focus on external efficacy, and where we refer to simply "(political) efficacy" we mean external political efficacy.

Political efficacy is considered an important predictor of political behaviour. Most importantly, higher efficacy is linked to higher voter turnout (Clarke and Acock 1989; Michelson 2000; Pattie and Johnston 1998) and political involvement (especially at the local level) (McCabe 2013; Marx and Nguyen 2016; Yamamura 2011). The link between efficacy and political participation has indeed been the main focus of the literature on the topic. Recent research also points to a rather complicated relationship with populism. High internal efficacy and low external efficacy are both associated with populist attitudes according to some studies (Rico, Guinjoan and Anduiza 2020; Spruyt, Keppens and Van Droogenbroeck 2016). Moreover, efficacy moderates the effect of other factors such as anger and labour market disadvantage on populist vote choices (Emmenegger, Marx and Schraff 2015; Magni 2017). Political efficacy is thus an important input in political processes at the individual level, but as long as it is not purely innate it must necessarily also be an outcome of individual and societal processes.

Yet, researchers have devoted very limited attention to explaining what shapes political efficacy. As Shore (2020, 2) remarks, political efficacy is "often discussed as a necessary condition for many forms of political participation", but is "far less frequently studied directly as a political outcome in and of itself." Yet, "studying political efficacy we can gain further insights into why and how socio-economic factors, such as income and education, matter for political participation." Despite this imbalance in the literature, there is a limited but consistent body of evidence linking efficacy to individual characteristics, most importantly education and income.

Education is generally considered the most powerful correlate of both internal and external efficacy. It enhances cognitive skills which have a straightforward positive relationship with internal efficacy, and is

furthermore linked to higher earnings potential and higher socioeconomic status. This eases access to political decision makers and thereby boosts external efficacy, which implicitly presupposes a comparison with other citizens (Shore 2020). A number of studies back up these and similar mechanisms.[1] Hayes and Bean (1993, 270) argue that "by far the most commonly documented finding regarding political efficacy concerns its relationship to social status." They estimate separate models for the United States, West Germany, Great Britain, and Australia to determine which socio-demographic factors predict political efficacy and find a fairly consistent pattern for external efficacy, where education and in some cases other socio-economic status variables exhibit a positive relationship. However, no consistent pattern emerges for internal efficacy.

Rasmussen and Nørgaard (2018) elaborate on the relationship between education and political efficacy, distinguishing between 'absolute' motivational and cognition effects and 'relative' resource effects. Using data from two surveys in the US and Denmark, they argue that education influences internal efficacy through motivation and cognition effects, as the highly educated "tend to be more politically interested and attentive ... as well as more knowledgeable and sophisticated" ((Rasmussen and Nørgaard 2018, 26). The effect of education is muted when controlling for Big-Five personality traits, suggesting that educational attainment is itself significantly determined by personality. With regard to external efficacy, Rasmussen and Nørgaard (2018) show that the effect of education operates by improving relative access to resources which can then be used to garner the attention of policymakers. This is in line with findings from the psychology literature where internal efficacy is considered rather trait-like while external efficacy is linked more closely to situational influences (Schneider et al. 2014).

Marx and Nguyen (2018) study the effect of anti-elite rhetoric on the income gradient in internal efficacy, based on data from 17 countries from the ESS and Chapel Hill Expert Survey and a survey experiment conducted in Germany. They hypothesise that while poorer individuals should exhibit lower internal efficacy, this gap should be "smaller in party systems characterised by pronounced anti-elite rhetoric" (Marx and Nguyen 2018, 924). They find that across countries, there is indeed a strong income gradient in internal efficacy, which is attenuated by anti-elite discourse or experimental exposure to anti-elite statements. Alongside the income effect, they also find a strong positive effect of education which is consistent with the evidence presented earlier. An earlier paper by the same authors reports a similar negative effect of unemployment on internal efficacy, which is found to be more pronounced in more unequal countries with a less generous welfare state (Marx and Nguyen 2016).

Thus, the existing literature shows that political efficacy affects outcomes such as political participation

[1]These studies use different operationalisations of political efficacy. While most studies focus on external efficacy as it is measured by the American National Election Study (ANES), others look at various measures of internal efficacy only, or at a combined index of internal and external political efficacy. This makes it more difficult to draw conclusions about the state of the literature.

and populism, and is itself influenced by education and income, among other factors. However, wealth and housing are missing entirely from this literature. This is surprising, but there are likely several reasons for this: firstly, until recently, the focus in the inequality and political behaviour literatures has been squarely on income. The growing interest in wealth and housing wealth is a fairly recent development (Killewald, Pfeffer and Schachner 2017). Secondly, wealth is more difficult to measure than income, and large surveys that ask about political efficacy such as the European Social Survey (ESS) and International Social Survey (ISSP) generally do not include questions about (housing) wealth. Thus, due to a lack of interest combined with a lack of data, the anyway limited literature on the determinants of political efficacy developed without consideration of one of the most important stratifying forces. With this article, we intend to address this oversight. The centrality of wealth for social processes is no longer contested (Killewald, Pfeffer and Schachner 2017; Pfeffer and Waitkus 2021; Zucman 2019). Moreover, while estimates of total wealth are fraught with difficulty, housing wealth can be quite reliably measured (Elkjaer et al. 2022; Zucman 2019), and Pfeffer and Waitkus (2021) show that the distribution of housing equity is by far the largest contributor to differences in wealth inequality across countries. Housing wealth is therefore both theoretically and empirically appealing for our investigation of political efficacy

2.2 The Asset Function of Housing Wealth

We argue that housing wealth affects political efficacy first and foremost by fulfilling an asset function. As an economic asset, housing wealth enables individuals to draw on this wealth as a form of private insurance, should they face a shock to their income. Even if no such shock materialises, it provides reassurance: wealth does not need to be consumed to be an effective resource (Hällsten and Pfeffer 2017). With this we follow Wiedemann (2021) and Ansell (2014) who argue that housing wealth provides a form of self-insurance. Wiedemann (2021) points to several mechanisms: for example, housing wealth can be used to obtain additional liquidity through home equity loans, serve as a "nest-egg" during retirement, or provide access to good neighbourhoods. Ansell (2014, 384) conceptualises housing wealth as "a store of permanent, as opposed to transitory, income and as a hedge against labor market risk". He shows that for these reasons, there exists a trade-off at the individual level between housing wealth and demand for redistribution and social insurance. As housing wealth provides private insurance, it crowds out demand for social insurance.

Individuals will also be highly concerned about protecting the perceived value of housing as an asset, whether to serve as insurance or in the hope of speculative gains from appreciation or to bequest to their children. Housing is a highly location specific asset and its value is thus highly dependent on local planning and infrastructure policies as well as national policies that affect the aggregate of housing.

But why should the wealthy and financially secure be more politically efficacious in the first place? Existing research such as Ansell (2014) links housing wealth to policy preferences, but does not make a connection to efficacy. Yet, there are strong reasons to expect an effect of wealth on efficacy as well. Most importantly, efficacy predicts political engagement (Putnam 2000), and research has long shown that wealthier citizens are more politically active (Brady, Verba and Schlozman 1995; Page, Bartels and Seawright 2013).[2] Hence, at least part of this relationship may be mediated by political efficacy. Cook, Page and Moskowitz (2014) surmise that the wealthy may be more politically active because more is at stake for them financially and because they can be confident that their participation will make a real difference. The latter reason, of course, is essentially the concept of external efficacy. Hence, without spelling it out directly, they posit that higher external efficacy is one of the reasons why wealthy Americans are more politically active. Furthermore, wealthy people might feel like the system was designed for people like themselves, increasing the perceived fairness of the system and hence, their efficacy. Indeed, there is some evidence that richer individuals in the US are more likely to underestimate inequality and perceive the economic system as meritocratic (Norton and Ariely 2011; Roex, Huijts and Sieben 2019). Thus, the literature suggests several reasons why affluent individuals might exhibit higher political efficacy.

Returning to the asset function of housing wealth, there is evidence from related outcomes that supports our view. Research from the US shows that an exogenous increase in housing wealth leads to sizeable increases in college enrolment and total fertility, by allowing people to borrow against the value of their home and relaxing credit constraints, especially for those with fewer resources (Lovenheim 2011; Lovenheim and Mumford 2013). One plausible interpretation of this finding is that people are more comfortable taking economic risks such as foregoing earnings to attend college or having children if they feel more secure due to the appreciating value of their home. Using Swedish register data, Hällsten and Pfeffer (2017) furthermore show that grandparents' wealth has an independent effect on grandchildren's educational attainment, net of parents' socio-economic characteristics. Again, a plausible explanation for this effect is that family wealth allows children to take greater risks and pursue their interests "without the immediate constraints created by economic calculations of expected human capital investment returns" (Hällsten and Pfeffer 2017, 333). Experimental research in psychology similarly finds that the expectation of future wealth incentivises greater risk-taking in the present (Greenberg 2013). Thus, there is ample evidence for an asset function of housing wealth, and one may reasonably expect that this translates into more confident actions of wealthy individuals in the political arena.

Considerations related to the "permanent income hypothesis" further support this reasoning. Insofar as

[2]The relationship between political efficacy and engagement is likely no one-way street: activity presumably enhances efficacy as well (Brady, Verba and Schlozman 1995).

housing wealth represents permanent income (Ansell 2014), the well-established relationship between income and efficacy should also apply to housing wealth. Additionally, housing wealth may have an indirect effect on efficacy through income. Under conditions of rapidly rising property prices and rents, as has been the case in the United Kingdom in recent years, income after housing costs of homeowners increases relative to renters who must expend a larger share of their income on rent. Thus, insofar as income is associated with higher political efficacy, rising house prices should increase the relative income after housing costs of homeowners and hence their efficacy.[3] The permanent income character of housing wealth therefore adds to its asset function.

Another reason why the asset function of housing wealth is likely to be linked to higher efficacy is that people who own wealth will want to protect the value of their investment. This creates a strong incentive for wealthy homeowners to stay informed and engage in politics, both reflecting and possibly further increasing their political efficacy (Brady, Verba and Schlozman 1995). This is related to the reasoning in Elkjaer et al. (2022) where we show that homeowners are more likely than non-owners to form preferences over inheritance taxation that correspond to their material self-interest. Wealthy individuals who have something to lose face strong incentives to use their political influence to ensure their economic interests are protected. This realisation necessitates internal efficacy, and - to the extent it is successful - boosts external efficacy. Housing wealth thus both creates the need and provides the means to insure against unwelcome political developments through active political engagement.

Based on this asset logic, we would expect homeowners to exhibit higher internal and external political efficacy than non-owners, and owners of more valuable houses to show higher efficacy than those with less valuable houses. This follows from an extension of Ansell's (2014) argument that housing wealth represents an alternative to social insurance. Moreover, we would expect homeowners who own their house outright to report higher efficacy than those who are still paying off a mortgage, who are exposed to repayment risk and the possiblity of negative equity (Fritsch and Heimer 2020). Since perceptions of security are to a large extent subjective, we furthermore expect people who believe they occupy a higher position in the housing wealth distribution to be more efficacious. Finally, the asset mechanism also suggests an effect of parental housing wealth. As argued by Greenberg (2013), expectations of future wealth, such as the prospect of inheriting a house, incentivise people to take greater risks in the present. Therefore, children of homeowners, and especially children of homeowners with valuable houses, should also exhibit higher political efficacy. Throughout our analyses, we expect stronger effects on external than on internal efficacy. This is because internal efficacy is more trait-like while external efficacy is linked more closely to situational influences

[3]There are additional ways in which housing wealth may contribute to political efficacy. For example, purchasing a house is a complicated process, and although it is administrative rather than political in nature, having successfully navigated it may further boost internal efficacy.

(Schneider et al. 2014). Thus, internal efficacy should be comparatively less responsive to material conditions. This leads to our first hypothesis, which we test using a battery of different measures of housing wealth:

H1: Housing wealth is associated with higher political efficacy.

2.3 Intergenerational Housing Mobility and Status Expectations

The intergenerational dimension of home ownership has received much less attention than other facets of social mobility (see, e.g., Bukodi and Goldthorpe 2019 for a detailed account of educational and class mobility in Britain, and Black and Devereux 2011 for a broad overview of earnings and educational mobility). However, intergenerational housing mobility is likely to be particularly pertinent in the UK context, where house prices have risen particularly fast by international standards (Arundel 2017; Blanden, Eyles and Machin 2023). Blanden, Eyles and Machin (2023) show that UK homeownership rates at age 42 have decreased dramatically for successive birth cohorts, and already high intergenerational persistence has increased further. They find that "those that reside in owner occupied housing as children are much more likely to themselves be home owners in middle age" (Blanden, Eyles and Machin 2023). Moreover, the extent to which homeownership is transmitted intergenerationally has increased: 42-year olds in 2000 were 14 percentage points more likely to be homeowners if their parents also owned a home. By 2015, this advantage at age 42 had increased to 27 percentage points, illustrating the high and growing intergenerational persistence of wealth (Pfeffer and Killewald 2018). This implies that experiences of upward mobility have become rarer while downward mobility and stagnation have become more common.

We expect these patterns of intergenerational housing mobility to affect political efficacy through fulfilled or disappointed status expectations. If people whose parents were renters make it onto the housing ladder, this experience of upward mobility should increase their efficacy. Conversely, individuals whose parents are homeowners but who fail to become homeowners themselves should react with reduced political efficacy to being downwardly mobile. We argue that this is due to people forming status expectations based on their parents' socioeconomic status. If they exceed their parents' position, their success should lead to feelings of greater efficacy, whereas failure to keep up with one's parents should reduce efficacy.

We base this argument on the large literature on intergenerational mobility which has firmly established that individuals who fall behind their parents in the socioeconomic hierarchy are less likely to vote, and if they do, it is more likely to be for populist parties. In particular, we extend the argument in Kurer and Van Staalduinen (2022), who show that disappointed status expectations increase the probability of

abstention and of voting for radical parties. In other words, downward mobility breeds resentment and apathy. We argue that this should be reflected in lower political efficacy as well. We are not aware of any studies that consider a direct relationship between social mobility and efficacy. However, Acciari, Polo and Violante (2022) find that self-efficacy, a measure closely related to internal efficacy, is correlated with upward mobility. More broadly, abstention and voting for radical parties are closely linked to political efficacy Emmenegger, Marx and Schraff (2015), which is why we argue that through the mechanism documented by Kurer and Van Staalduinen (2022), intergenerational housing mobility should also affect political efficacy.

We do not expect the consequences of success and failure to be perfectly symmetrical: the psychological phenomenon of loss aversion Kahneman and Tversky (1979) suggests that people should react more strongly to downward mobility than to upward mobility. Furthermore, disappointed status expectations should become more salient with age. While a young adult who has not bought a house yet may still hope to catch up with their parents, a 60-year-old renter will likely be disillusioned about their prospects. Thus, downward mobility for a 30-year-old may be temporary, whereas for a 60-year-old, it is likely to be final. Downward mobility at a later age should therefore have a much greater effect on efficacy.

The earlier mechanism indicates that at least part of the expected effect on efficacy has to do with blame-shifting. People who have not lived up to their expectations blame the system that is not working for them, which should above all reduce external efficacy. This discussion of status expectations and notions of success and failure in life suggests a second set of hypotheses:

H2: a) People who have experienced upward intergenerational housing mobility exhibit higher efficacy, whereas people who have experienced downward intergenerational housing mobility exhibit lower efficacy; b) the relationship is stronger for downward mobility.

2.4 Community Ties and Incentives for Representation

Finally, we argue that homeowners have stronger ties to their local community and that this incentivises them to seek better political representation, increasing their efficacy. Conversely, politicians face incentives to be particularly responsive to the demands of homeowners, since they are less likely to leave the constituency and more likely to turn out to vote. We therefore expect the community ties of homeowners, proxied by their length of residence in the local area, to increase their efficacy. We expect a stronger relationship with external efficacy, since we argue that representation is the main channel, but a closer familiarity with the local context should also boost internal efficacy.

In the words of McCabe (2013, 929), "belief in property ownership as a central component of political citizenship and community engagement has deep roots in American political thought". The UK, likewise, is a society that values home ownership as a marker of belonging to mainstream society (McKee 2012). Existing research backs up this notion and shows that strong community ties are associated with higher political efficacy. Anderson (2010) finds that community ties have positive and significant effects on internal and external efficacy as well as personal and political trust. She argues that the experience of "functioning meaningfully and effectively within a given community may signal to individuals that their capacity to exert influence extends outside of the context at hand", and that past political activity provides evidence of efficacious behaviour (Anderson 2010, 64). Thus, assuming that establishing community ties takes time, longer duration of residence should be associated with higher efficacy.[4] However, to argue convincingly that homeownership boosts efficacy, we need to establish that homeowners on average have stronger community ties.

Indeed, evidence suggests that homeowners tend to identify more strongly with their local community than renters, reflecting both the financial investment they have made in the community and their longer average duration of residence. Using a falsification strategy, McCabe (2013) shows that homeowners in the US are more likely to vote in local elections, participate in neighborhood groups and join civic associations because of the financial investment they make in their communities. This suggests that homeowners seek representation at the local level, which should increase their political efficacy. Looking more broadly at social capital, DiPasquale and Glaeser (1999) use an instrumental variable strategy to show that in the US, homeownership causes individuals to invest more in social capital. Furthermore, they find that this effect is substantially driven by community tenure. Replicating their analysis for Germany, the general pattern stands confirmed. Finally, using data from Japan, Yamamura (2011) likewise finds that homeownership as well as length of residence boost investment in social capital. Thus, in a variety of contexts researchers have established a link between homeownership and duration of residence and various forms of civic engagement. At least some of these papers moreover suggest that the underlying mechanism is a desire of homeowners to ensure political representation to protect their investments. This prompts us to expect homeownership to contribute to higher efficacy through a third mechanism centred on local ties and representation. Our third hypothesis therefore reads:

H3: Homeowners who have lived in an area for longer exhibit higher political efficacy.

[4]The opposite perspective would be that individuals who have lived in an area for a long time may come to resent change to the area through immigration, gentrification, and the like, and thus feel less efficacious over time. While certainly possible, we see no reason to *a priori* expect such a relationship.

These three hypotheses outline a set of non-mutually exclusive mechanisms which we argue underpin the relationship between housing wealth and political efficacy. Although we expect the asset function to be the main individual factor linking housing wealth and efficacy, the intergenerational and community-focused mechanisms add further nuance.

3 Data and Analytical Approach

3.1 Design and Structure of the Surveys

We use data from three original large-scale surveys that we conducted in the United Kingdom. The first survey (May/June 2021) included 3,186 respondents, the second (July/August 2022) comprised 3,532 individuals, and the third (October 2022) involved 3,592 participants. The first survey was administered in England and Wales, the second in England only, and the third in the entire United Kingdom. The samples are representative of the respective population on the dimensions of age, gender, income, region, and other demographics. For our main analyses, we merge the three datasets while including survey dummies. This yields a total N of 10,310 individuals.

All surveys follow a similar structure. Respondents were first asked about their housing situation (housing status, estimated value of their house as well as their parents' house, perceived position in the housing wealth and overall wealth distributions, duration of residency in the local area) and socio-demographic characteristics. In the second part, we surveyed respondents' political efficacy and their attitudes towards taxation, inequality and social mobility.[5] The surveys were pre-registered, although we formulated additional exploratory hypotheses.[6]

3.2 Key Variables and Descriptive Analyses

3.2.1 Political Efficacy

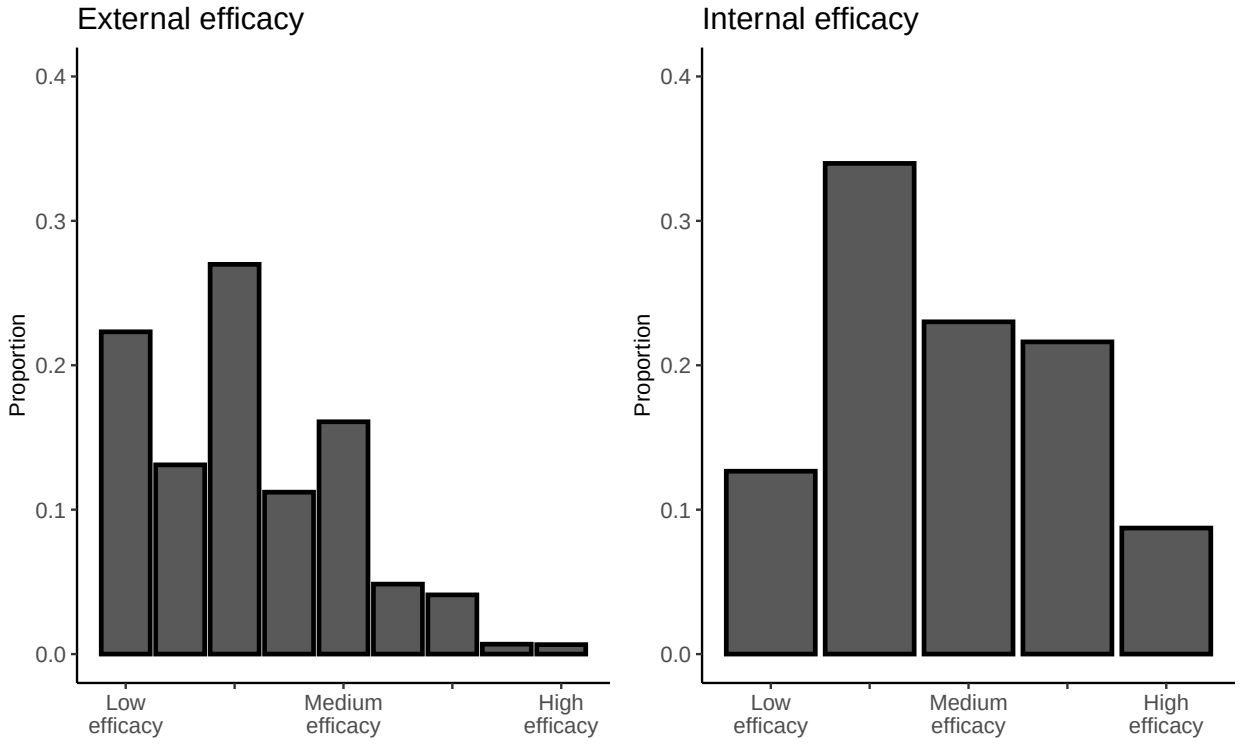
We follow the standard approach in the literature and operationalise external political efficacy as the average agreement with two statements originally from the American National Election Study (ANES): "People like me don't have any say about what the government does" and "Public officials don't care much what people like me think." This operationalisation continues to be used by the ANES and is widely accepted by scholars (Chamberlain 2012; Norris 2015). Both items are measured on a 5-point scale (from "strongly agree" to

[5] All surveys also included information experiments, which we do not analyse in this paper. In the appendix we will show that our findings stand when we limit our sample to the control groups which were not exposed to the information treatments. In the first and third surveys, we also randomly varied the position of the efficacy questions. Our main findings are unaffected by this, as we show in the appendix.

[6] The pre-analysis plans can be found under 10.17605/OSF.IO/PFN7Z, 10.17605/OSF.IO/E39YR and 10.17605/OSF.IO/PCVBH.

"strongly disagree"); we simply take the mean to obtain our external efficacy index. Figure 1 shows the distribution of self-reported external efficacy in our datasets.[7] The vast majority of respondents across all three surveys report low or medium-low levels of external efficacy; only a small minority believe that they have a say about what the government does and that public officials care about what people like them think. Given the timing of our surveys in relation to different stages of the Covid-19 pandemic, it is noteworthy that differences between the surveys are minor (see Figure C4), suggesting that the overall pattern of low efficacy does not simply reflect disaffection with the UK government's Covid response.

Figure 1: Distribution of external and internal political efficacy



3.2.2 Housing Wealth

We expect that greater absolute or relative housing wealth will be associated with higher efficacy. We therefore use a battery of variables related to respondents' housing situation to comprehensively analyse the proposed mechanisms. To capture the basic distinction between homeowners and non-owners, we use a simple dummy variable (1 = homeowner). To analyse the role of mortgage debt, we create a categorical

[7] In Appendix D we also show descriptive and regression results for internal efficacy, operationalised as agreement with the statement "Sometimes politics and government seem so complicated that a person like me can't really understand what's going on." In general, we obtain less consistent results for internal efficacy. This strengthens our argument, since the asset mechanism that we propose operates on external efficacy whereas the link to internal efficacy is weak.

variable that distinguishes non-owners, outright owners, owners with a mortgage, and a residual category. Here, we expect outright owners to exhibit significantly higher efficacy than renters and, crucially, owners with a mortgage. To test whether owners of more valuable houses exhibit higher efficacy, we use people's house value estimates.[8] Since house prices vary widely across the UK and people are most likely to compare themselves to others in their local area, we furthermore calculate respondents' housing wealth in relation to local median house prices. In a further test of the asset mechanism, we check how respondents' subjective perception of their relative position affects efficacy. To this end, we ask respondents to estimate which quintile of the distribution of housing wealth they fall into. Finally, to see whether expectations of future wealth matter, we create a variable capturing the estimated value of the respondent's parents' house. To assess the impact of intergenerational housing mobility on efficacy, we devise a categorical variable distinguishing between stable owners, upwardly mobile owners, stable non-owners, and downwardly mobile non-owners. To investigate the role of local ties, we use a 6-category variable measuring the amount of time a respondent has lived in the local area. Additional details on the housing wealth variables and detailed descriptive analyses are reported in Appendix C.

Finally, a comment on the relationship between housing wealth and total net wealth. According to Pfeffer (2018, 1042), "home values provide the most attractive proxy measure" for net wealth since "homeownership constitutes the main asset component in most families' wealth portfolio." The same is reported by the OECD Tax Policy Studies (2021). Additionally, Pfeffer and Waitkus (2021) show that the distribution of housing equity is by far the largest contributor to differences in wealth inequality across countries. Moreover, as mentioned above and reiterated by Pfeffer (2018), data on home values are by far the easiest to collect of the major asset classes. Thus, while our theoretical argument focuses specifically on the link between housing and efficacy, we expect that the asset logic should also extend to net wealth.

3.3 Analytical Approach

Our combined dataset includes 10,310 individuals from the three surveys. We estimate linear regression models with ordinary least squares (OLS); however, the results are substantively unchanged if we instead use ordered logistic regression or linear probability models on a dichotomised version of the dependent variable. We control for a range of individual socio-demographic variables, including sex, age, marital status (1 = married or living as married), education (1 = university degree), full-time employment, unemployment, and household income (15-category ordinal variable). We furthermore control for vote choice in the 2019

[8] In Appendix G, we assess the quality of the estimated house prices by comparing our survey estimates from the first survey (May/June 2021) to land registry data from the Office of National Statistics (ONS). Although homeowners in our survey are slightly overoptimistic (about £10,000 on average), they match the national distribution of homeowners very well, giving us confidence in our sample of homeowners and in their ability to accurately estimate the current value of their house.

general election (Conservative, Labour, Other). This accounts for the expectation that people who voted against the incumbent Conservative Party will feel less able to influence government policy and less well represented by public officials. We also control for local authority average weekly wages, as we expect differences in local economic performance to influence efficacy. In light of the vast regional inequalities in the UK, we also include dummies for administrative regions. Where we combine data from different surveys, we furthermore include survey dummies. We apply the survey weights provided by YouGov. Summary statistics can be found in Appendix B. In Appendix E we replicate our findings using data from the UK Household Longitudinal Survey, and in Appendix F we show that our findings are robust to various model specifications and sample restrictions.

4 Results

4.1 The Asset Function of Housing Wealth

Our first hypothesis holds that housing wealth contributes to higher political efficacy, by working as an asset which provides insurance and whose value homeowners are highly motivated to protect. To test this mechanism, we leverage the fact that not all homeowners are equal. Our data allow us to identify six dimensions along which individuals differ with regard to housing wealth: homeownership status, mortgage status, house value, house value relative to local area, perceived relative wealth, and parental housing wealth. While some own their house outright, many homeowners are still paying off a mortgage and owe regular payments to a lender. In this respect, they resemble renters. If homeownership performs an asset function, its positive effect on efficacy should therefore be limited to outright owners. Second, *ceteris paribus*, a more valuable house provides greater security. Hence, we expect the owners of more valuable houses to exhibit higher efficacy than both non-owners and people with less valuable houses. Third, perceptions matter. People who believe that they are higher up in the housing wealth distribution are likely to feel more secure and therefore more efficacious if our reasoning is correct. Finally, people whose parents own a valuable house can expect to receive a larger inheritance in the future, which provides further security.

Column 1 of Table 1 shows that being a homeowner is associated with higher external efficacy, conditional on a comprehensive set of control variables. Compared to non-owners, homeowners report approximately 0.09 points, or 0.1 standard deviations (SD), higher external efficacy. Since we control, among other variables, for household income and degree status, we can conclude that being a homeowner is associated with external efficacy independent of income and education, which are the most prominent predictors of efficacy in the existing literature.[9] However, we argue that is not homeownership per se, but full ownership without

[9]The correlation between income and net wealth is substantial, but not overly large: around 0.5 to 0.6, depending on the

Table 1: Housing wealth, security, and external efficacy

	(1)	(2)	(3)	(4)	(5)	(6)
Homeowner	0.086**					
	(0.027)					
Own outright		0.104**				
(Ref: Own with mortgage)		(0.033)				
Rent		−0.041				
(Ref: Own with mortgage)		(0.033)				
Other		−0.046				
(Ref: Own with mortgage)		(0.045)				
Own house value			0.013***			
			(0.003)			
Value rel. to LA				0.012***		
				(0.003)		
Perceived wealth quintile					0.174***	
					(0.016)	
Parents house value						0.002
						(0.003)
HH income	0.019***	0.020***	0.017***	0.017***	0.015***	0.020***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
Uni degree	0.127***	0.125***	0.144***	0.144***	0.098***	0.125***
	(0.024)	(0.024)	(0.025)	(0.025)	(0.027)	(0.031)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	1.933***	1.960***	1.945***	1.915***	1.618***	1.904***
	(0.104)	(0.106)	(0.108)	(0.109)	(0.120)	(0.131)
Observations	6,401	6,401	6,060	5,894	5,170	4,018
R^2	0.040	0.042	0.046	0.046	0.065	0.043
Note:						*p<0.05; **p<0.01; ***p<0.001

mortgage liabilities that provides efficacy-enhancing security. Column 2 of Table 1 provides support for this argument. People who own their home outright report 0.1 points higher external efficacy than owners with a mortgage, and 0.15 points higher efficacy than renters. Thus, owners with a mortgage are more similar to renters than to outright homeowners. The absolute difference is less than half in size and not statistically significant. This indicates that housing wealth indeed affects political efficacy by providing insurance to homeowners.

Another implication of the security function of housing wealth is that more wealth means more security. Indeed, column 3 of Table 1 shows that people with more valuable houses have higher external efficacy. The estimated effect of an increase in housing wealth by £100k is 0.013 points, comparable to moving up one income bracket.[10] Importantly, differences in house value are not what drives the earlier finding that only full ownership significantly increases external efficacy. As Figure C7 shows, house prices among outright owners and owners with a mortgage follow the same distribution. This is additional evidence that it is the security conferred by full asset ownership that enhances efficacy.

We further argued that relative and perceived housing wealth should predict efficacy as people compare themselves to others and external efficacy is influenced by situational factors (Schneider et al. 2014). Column 4 shows that the coefficient on a person's housing wealth relative to the median house price in their local authority is essentially the same as for the absolute house value. Column 5 underscores the importance of subjective perceptions for political efficacy. Moving up one quintile in the distribution of perceived housing wealth is associated with a 0.174 point boost to external efficacy, suggesting that moving from the bottom to the top quintile would boost efficacy by 0.77 SD. The comparatively large size of this estimate suggests that efficacy is influenced at least as much by relative social status than by actual material conditions. People consider themselves better represented when they believe that they are higher up in the social hierarchy than the people around them. Additional analyses show that this effect appears to trump the greater objective security provided by owning a more valuable house. This finding speaks to the literature on the importance of actual versus perceived measures of income and wealth. While a recent revisionist literature has challenged the idea that perceived income or wealth are better predictors of outcomes such as redistributive preferences (see, e.g., Weisstanner and Armingeon 2021), our finding is in line with the results of Cansunar (2021), Gimpelson and Treisman (2018), and others, who point to the importance of perceptions.

Finally, we also expected that people's parents' house values might influence efficacy through the promise of future wealth (Greenberg 2013). However, we find no consistent evidence for this conjecture. The co-

measure. Moreover, the correlation between income and wealth increases with age, underscoring the cumulative nature of wealth. Education also has a robust association with wealth, net of income (Killewald, Pfeffer and Schachner 2017).

[10] Our income variable has 15 brackets, with £5k increments for low and average incomes and larger increments for higher incomes.

efficient in column 6 of Table 1, while positive, is small and statistically insignificant. This indicates that the prospect of inheriting a property from one's parents may be too remote to materially affect political efficacy.[11] Furthermore, we have no information on the number of siblings among whom the inheritance might have to be shared, further limiting the usefulness of the estimated parental house values as a proxy for expected future wealth.

Overall, these analyses show conclusively that housing wealth has a positive impact on external political efficacy that is distinct from that of education or income. Both factors remain highly statistically significant in all our models, indicating that they each explain separate portions of the variance. By spelling out the implications of differences between homeowners, we furthermore presented evidence that housing wealth constitutes a form of "self-insurance" for people who own their house outright, who own a valuable property, or who consider themselves relatively wealthy. Their housing assets are a source of permanent income, allowing them to take risks, and incentivising them to protect their investment, all of which in turn boosts political efficacy (Ansell 2014; Wiedemann 2021). The documented relationships are robust to a comprehensive set of control variables (see Appendix A for full output) and are replicated in the Understanding Society survey (see Appendix E).

Cross-Pressured: Homeownership in a Poor Area

So far we have presented housing wealth as unambiguously associated with higher political efficacy. However, it is not obvious that this is always the case. Homeownership ties up a large share of ordinary people's assets and is characterised by low liquidity. And while worries about being able to sell one's house may be unwarranted in a booming city, there are underperforming and even depopulating regions where a house may not easily be sold. At the same time, we have seen that local economic performance affects efficacy. Homeowners in poor localities can therefore be seen as cross-pressured. On the one hand, their housing equity provides security (for example against temporary job loss, allowing them to take out a loan against the value of their house), which would seem all the more important in an area that is underperforming economically. This would imply a stronger effect of housing wealth on efficacy in poorer areas. On the other hand, having most of their assets tied up in an undesirable location may lock people into that location, preventing them from moving to areas with better economic opportunities (Adler and Ansell 2020). If the latter mechanism prevails, the relationship between housing wealth and efficacy should be muted in underperforming areas.

To test these arguments, we interact measures of housing wealth with indicators local economic performance. We use an absolute and a relative measure of housing wealth: people's estimated value of their house (with imputed zeros for non-homeowners) and the value of their house relative to the local median.

[11] This also holds if we limit the sample to respondents who do not yet own a house themselves.

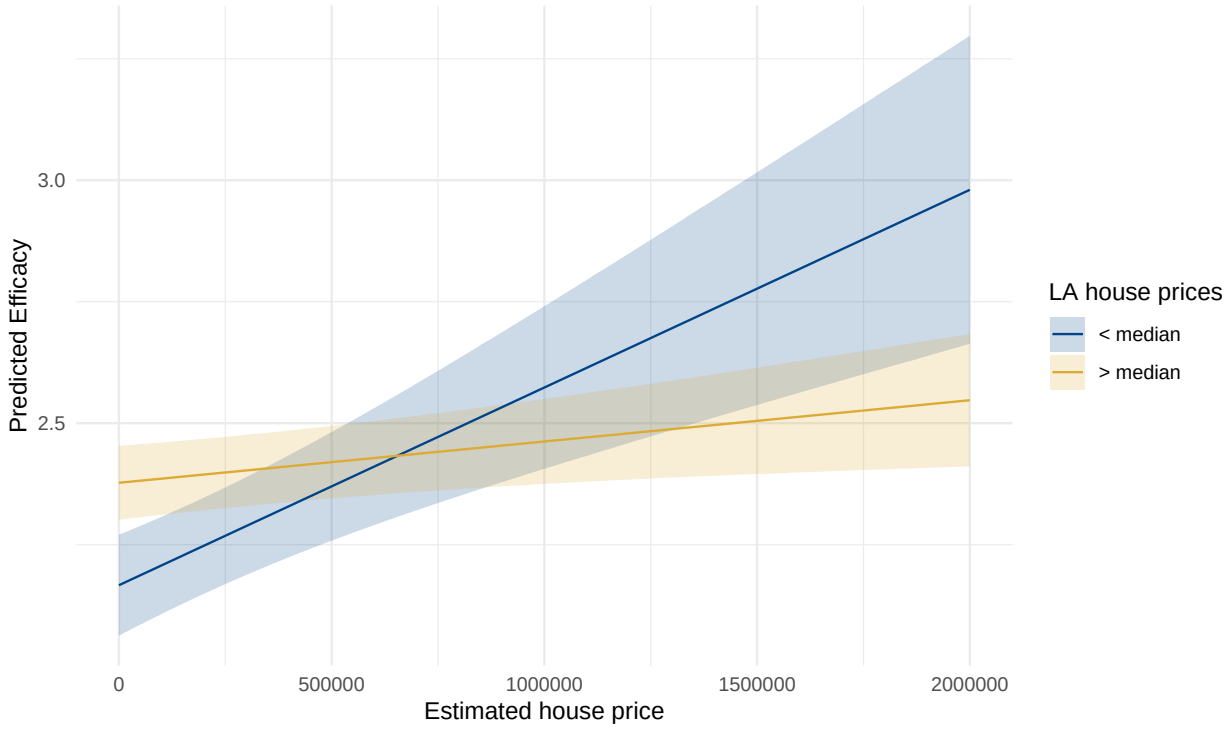
We supplement this with three indicators of economic performance at the local authority level: a dummy whether local house prices are above the sample median or not, the local median house price, and the local average weekly pay. The results, presented in Table 2, suggest that there is some truth to both arguments: all interaction terms are negative and highly statistically significant. This suggests that housing wealth has a stronger positive impact on efficacy in underperforming local authorities, as may also be seen in Figure 2. However, the main effect of the local house price dummy is substantial and positive, indicating that people with less than approximately £250k in housing wealth exhibit lower efficacy if they live in cheaper areas. In other words, being in a poor area is associated with lower efficacy in people with little or no housing wealth. This does support a lock-in narrative, but only for people whose housing wealth is not sufficient to insulate them from the economic conditions surrounding them. By contrast, housing wealth appears to shield wealthier people in left-behind areas from the efficacy-eroding effect of economic destitution. Thus, taking into account the local economic context we see further support for the asset argument.

Table 2: Do homeowners feel stuck in poor areas?

	Dependent variable:					
	(1)	(2)	(3)	(4)	(5)	(6)
Own house value	0.041***	0.056***	0.089***			
	(0.008)	(0.010)	(0.017)			
Value rel. to LA				0.042***	0.041***	0.067***
				(0.009)	(0.009)	(0.016)
Expensive LA	0.211***			0.150***		
	(0.042)			(0.038)		
LA median price		0.043**			0.019	
		(0.016)			(0.017)	
Mean LA pay			0.001***			0.0003
			(0.0002)			(0.0002)
Value x Expensive LA	−0.032***					
	(0.009)					
Value x LA median price		−0.009***				
		(0.002)				
Value x Mean LA pay			−0.0001***			
			(0.00002)			
Rel. value x Expensive LA				−0.033***		
				(0.009)		
Rel. value x LA median price					−0.006**	
					(0.002)	
Rel. value x Mean LA pay						−0.0001***
						(0.00002)
Constant	1.929***	1.870***	1.685***	2.012***	1.972***	1.884***
	(0.074)	(0.082)	(0.111)	(0.076)	(0.085)	(0.113)
Observations	5,919	5,919	6,060	5,919	5,919	5,894
R^2	0.050	0.049	0.049	0.050	0.047	0.048

Note: All models include the standard set of controls (minus average local wage). *p<0.05; **p<0.01; ***p<0.001

Figure 2: Housing wealth matters more in poorer areas



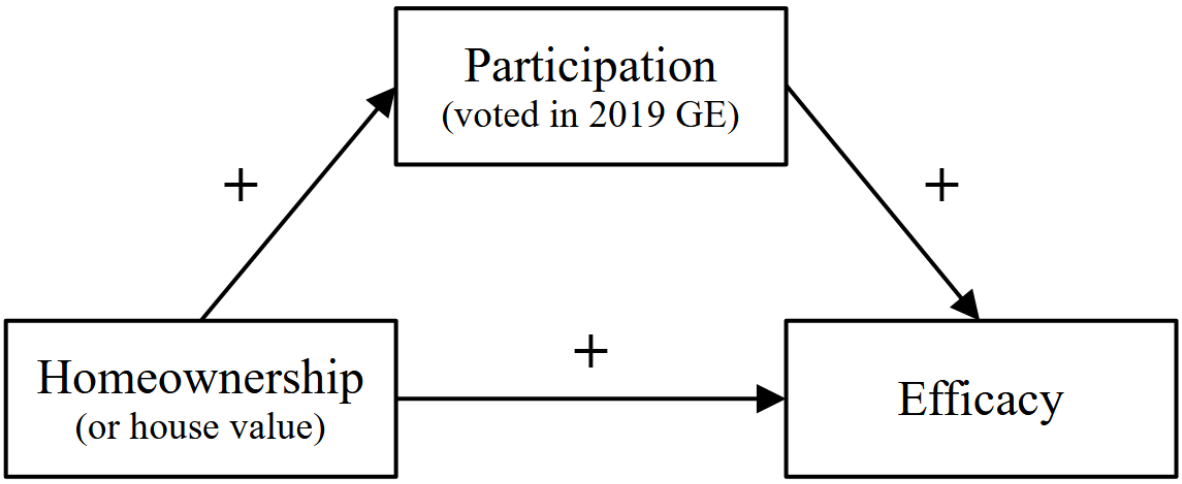
4.2 Incentives for Participation

We furthermore argued that housing wealth increases incentives for political participation, as homeowners have "skin in the game". We know that homeowners are are more likely to vote in elections, and to the extent that therefore election results better reflect their preferences, this should also improve identification and contentment with the political system, thus increasing external efficacy. The underlying model is depicted in Figure 3.[12] We test this line of argument by performing a causal mediation analysis using the method proposed by Tingley et al. (2014).

To capture political participation, we use a dummy whether a respondent voted in the 2019 general election. The result is displayed in Figure 4, where ACME denotes the indirect effect (Average Causal Mediation Effect) and ADE the average direct effect. We find both to be statistically significant, with participation mediating approximately 15% of the effect of homeownership on efficacy. Thus, we find evidence for the second mechanism by which we argue housing wealth increases political efficacy. While the figure of 15% being mediated is not overwhelmingly large, it is highly statistically significant and substantively

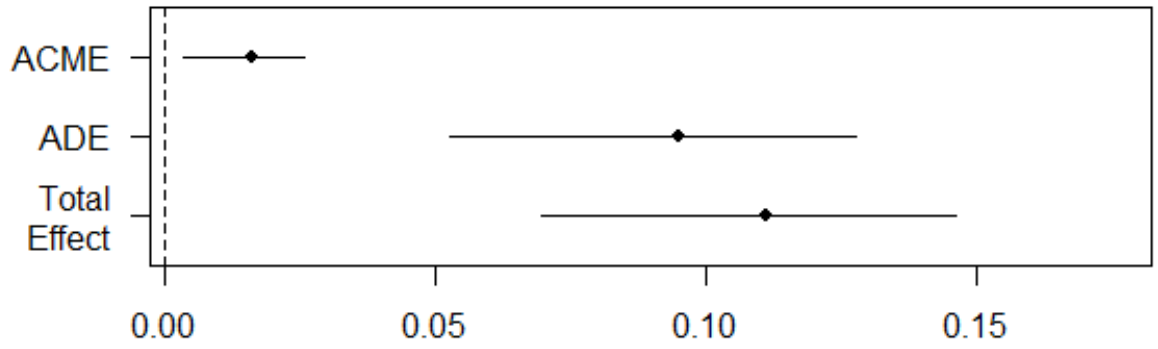
[12]The relationship between political participation and efficacy is in fact bidirectional, but for the sake of clarity, we show only the of participation on efficacy that is of interest here.

Figure 3: Mediation analysis



meaningful.

Figure 4: Mediation analysis



4.3 Intergenerational Housing Mobility and Status Expectations

We furthermore argued that housing shapes efficacy through an intergenerational component. Family background, including whether one's parents are homeowners, is likely to affect status expectations. Therefore, success or failure to meet these expectations may affect individuals' efficacy. That is, we would expect

upward housing mobility to be associated with enhanced efficacy and downward mobility to contribute to lower efficacy, especially as people age and changes to their social status become less likely.

To investigate this argument, is is instructive to first recall the descriptives displayed in Figure C2 and Table C6. Across our three surveys, 43% of respondents are homeowning children of homeowners. 17% are non-owning children of non-owners. Thus, 60% of people have not experienced social mobility in terms of their housing situation (ignoring possible differences in house values). Among those who have experienced mobility, downward mobility (24%) predominates over upward mobility (16%). Considering only respondents under 50, the picture is rather bleaker: The homeownership rate is down to 46%, and downward mobility (34%) dwarfs upward mobility (5%). For respondents aged 50 and older, we see almost the opposite pattern. While this is of course partly explained by life cycle effects, it still illustrates a huge change in intergenerational mobility patterns (see also Blanden, Eyles and Machin 2023).

In light of the literature on loss aversion and social mobility research on the political consequences of downward occupational and income mobility (Kahneman and Tversky 1979; Kurer and Van Staalduinen 2022), we might expect these mobility patterns to matter. That is, not just that someone is a homeowner, but also how they got there might affect their efficacy. Did they replicate their parents' trajectory or did they defy the odds to move up in the social hierarchy? Similarly for non-owners, are they merely following in their parents' footsteps, or have they failed to live up to loftier expectations by not attaining homeownership like their parents did? If loss aversion and status expectations do indeed play a role, we should see upward mobility positively affect efficacy and, especially, downward mobility have a negative impact.

Analysing this question is complicated by the fact that homeownership increases with age. Ideally, therefore, we would compare our respondents' housing situation to that of their parents at the same age, but this is not possible with our survey data. To (however imperfectly) address this issue, we interact our mobility indicators with age. This allows us to estimate how the effect of mobility develops over the lifecourse.[13] The results show that, while the overall impact of homeownership on external efficacy increases with age, there is no strong evidence that housing mobility affects people's efficacy. Figure 5 shows that non-mobile and upwardly mobile homeowners have virtually identical predicted external efficacy, and downwardly mobile non-owners exhibit only slightly lower external efficacy than non-mobile non-owners in old age. When it comes to internal efficacy, according to Figure **??** there appears to be no impact of mobility patterns whatsoever.[14] All groups see their internal efficacy rise with age, with no meaningful differences between them. Thus, we cannot conclude that intergenerational housing mobility affects political efficacy beyond the first-order effect of homeownership (which is itself only significant for external efficacy, see Tables **??** and

[13]To what extent it makes sense to speak of "mobility" in the case of, say, a 20-year-old who just entered the labour market, is of course questionable.

[14]The full regression output is shown in Table A1.

D7).

Figure 5: Intergenerational housing mobility and external efficacy

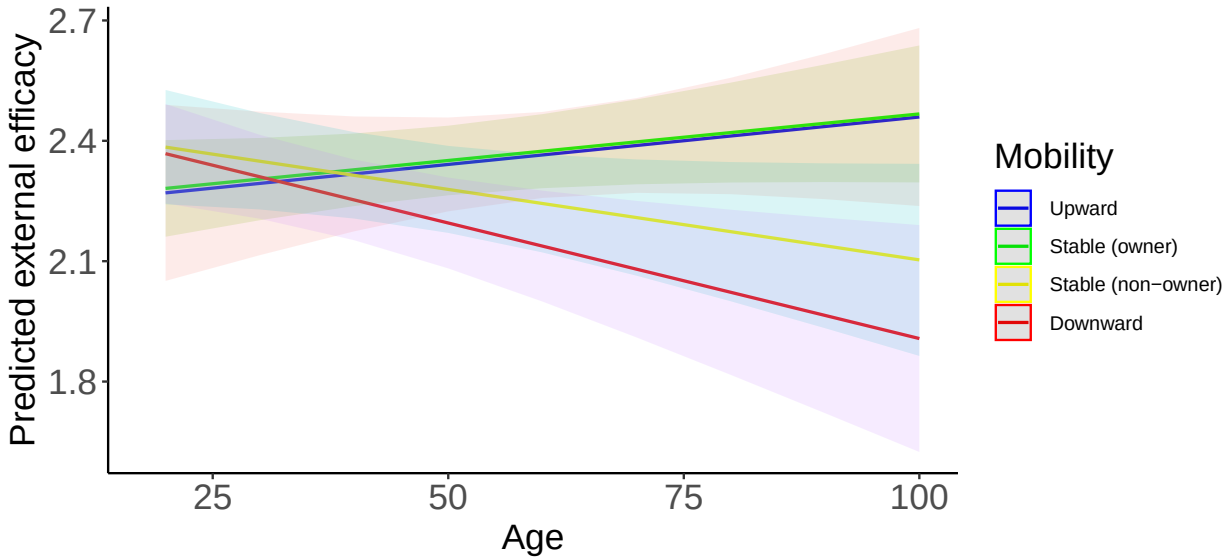
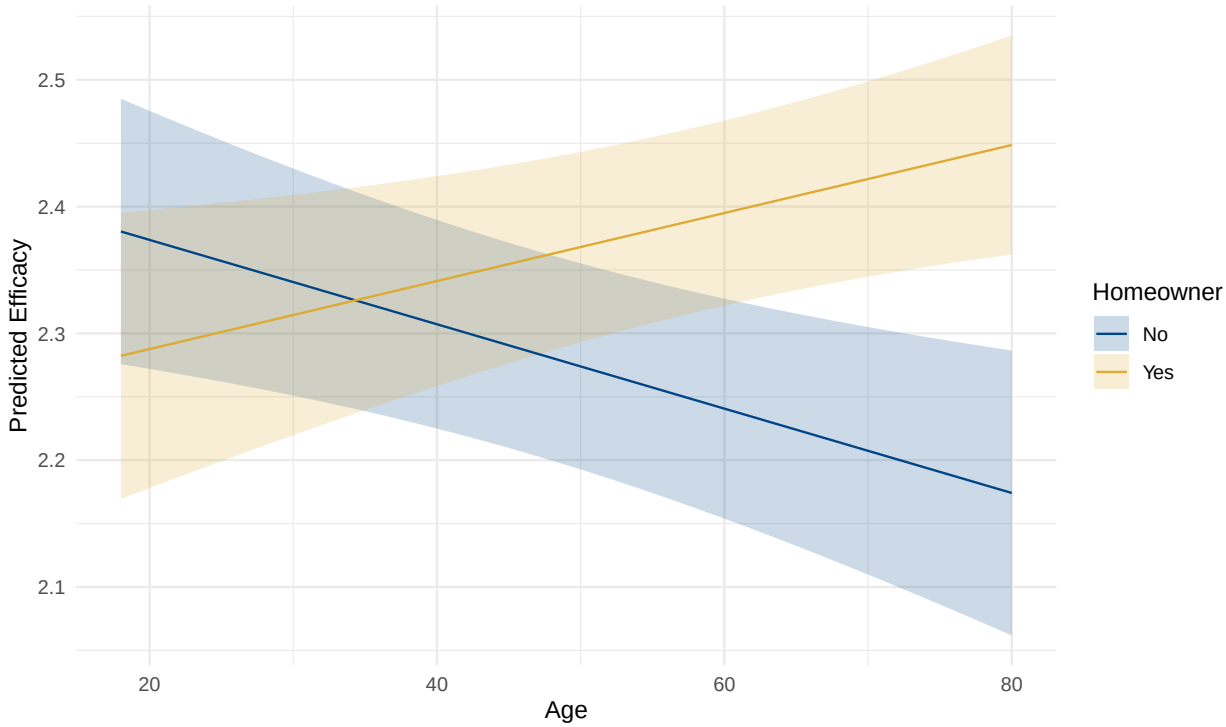


Figure 6: Homeownership matters most for efficacy in old age



This bit can probably go Finally, intergenerational transfers indicative of strong family ties also have the

potential to shape inequalities in the housing market and thereby affect political efficacy. To appraise the role of intergenerational motivations in shaping the political efficacy of homeowners vis-à-vis non-homeowners, we ideally would want to ask respondents directly about their ambitions to pass on property to their children. Lacking this information, we can still make use of questions that asked homeowning respondents whether they received financial help from their parents to buy a property or directly inherited their house, or non-owners whether they think their parents would help them financially if they were to buy a house. The vast majority of homeowners (81%) indicate that they did not receive any help from their parents. Just over 13% acknowledge financial help from their parents, while just over 2% state that they live in an inherited house. The rest declined to answer. In regressions in Table 3, we find no significant differences between these different groups of homeowners. Thus, there is no evidence that long-running intergenerational factors in relation to homeownership shape people's political efficacy.

Table 3: No effect of financial help from parents (homeowners only)

	Dependent variable:	
	External efficacy	Internal efficacy
Parental help (Ref.: No help)		
Parent helped buy	0.028	−0.091
	(0.048)	(0.060)
Inherited house	−0.002	−0.074
	(0.104)	(0.131)
Demographics		
Household income	0.034**	0.065**
	(0.006)	(0.007)
Degree	0.117**	0.388**
	(0.036)	(0.045)
Male	−0.034	0.339**
	(0.033)	(0.042)
Age	0.003*	0.012**
	(0.001)	(0.002)
Unemployed	−0.116	0.287
	(0.158)	(0.198)
Full-time	−0.151**	−0.115*
	(0.043)	(0.054)
Married	−0.125**	−0.065
	(0.041)	(0.051)
Vote in 2019 GE (Ref.: Other)		
Conservative	−0.120**	0.158**
	(0.042)	(0.052)
Labour	−0.121**	0.063
	(0.041)	(0.051)
Constant	1.755**	1.374**
	(0.123)	(0.155)
Observations	3,086	3,086
R^2	0.036	0.110

Note: All regressions include survey and region dummies and survey weights. *p<0.1; **p<0.05; ***p<0.01.

4.4 The Link to Populism

Space permitting, we'll add a brief analysis how efficacy relates to populist attitudes to round off the paper and relate back to the introduction.

5 Discussion and Conclusions

This article shows for the first time that housing wealth is associated with higher external political efficacy, above and beyond the effects of income and education. While previous research had established a link between the latter and efficacy, the role of wealth had hitherto been ignored. Against the background of increasing interest in housing wealth as a determinant of political behaviour (Adler and Ansell 2020), we show that political efficacy is no exception in being influenced by housing wealth.

We argue that housing wealth enhances political efficacy by performing an asset function, and show empirically using data from three large surveys administered in the UK that various measures of housing wealth are indeed correlated with political efficacy. Mortgage situation, estimated house value, and perceived position in the housing wealth distribution all are significantly associated with external and (in the latter two cases) internal political efficacy. These relationships are robust to a comprehensive set of controls, including income and education. We conclude from this that housing wealth, by on the one hand providing the financial security that allows people to engage in civic and political life, and on the other hand raising people's stakes in the outcomes of the political process, enhances political efficacy. We further hypothesised that intergenerational housing mobility would affect political efficacy. In particular, we expected people who fail to reach their status aspirations by failing to become homeowners like their parents to exhibit lower efficacy. This expectation, however, was not borne out in the empirical analysis. While the these mechanisms are not mutually exclusive, the results thus indicate that the material security aspect of housing wealth clearly dominates in its impact on political efficacy.

The finding that housing wealth is an independent predictor of how well people think they are able to influence politics is an important finding in its own right. To the extent that political efficacy is an antecedent of more tangible outcomes such as turnout, populist voting, and political representation (Shore 2020), our results assume wider significance. They point to an additional, previously neglected channel through which inequalities in wealth may engender further political inequalities.

While we believe that this paper addresses important blind spots in the literatures on political efficacy and on the political effects of wealth, it has several limitations. Most importantly, the observational nature of the data prevents us from establishing beyond doubt the causality of our proposed mechanisms. However, our

various measures of housing wealth allow us to formulate very granular expectations that are tied to these mechanisms. Finding, for example, that only outright homeownership and owning a relatively expensive house confers advantages in terms of external efficacy strengthens our confidence that financial security is a driving force in the relationship. Nevertheless, our theoretical argument certainly merits further refinement and, if possible, additional empirical tests.

As we have remarked before, we expect our findings for housing wealth to by and large generalise to net wealth. We focus on housing wealth because housing is the most important asset for most families (OECD Tax Policy Studies 2021; Pfeffer and Killewald 2018), and because housing wealth can be more easily and accurately measured in surveys than net wealth (Elkjaer et al. 2022; Killewald, Pfeffer and Schachner 2017). We furthermore believe that our findings should generalise well beyond the UK. The literature on the determinants of political efficacy finds very similar patterns across countries for education and income (Hayes and Bean 1993); there is no reason to expect this to be different for wealth. While it is perhaps true that housing has particular political salience in the UK due to a housing shortage that is more severe than in other countries, the best available evidence indicates that attitudes surrounding housing assets are remarkably similar across countries. Thus, prima facie, there are no reasons to expect our finding of a strong relationship between (housing) wealth and political efficacy to be peculiar to the UK. Nevertheless, these conjectures indicate promising avenues for further empirical research to build on our present findings and confirm (or reject) their wider applicability.

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Appendix: For Online Publication

Contents

A Full Model Output

Table A1: Full output: Intergenerational housing mobility

	Dependent variable:	
	External efficacy	Internal efficacy
Age	0.002	0.004
	(0.002)	(0.003)
Mobility (Ref.: Upward)		
Stable (owner)	0.012	−0.457*
	(0.162)	(0.206)
Stable (non-owner)	0.232	−0.042
	(0.175)	(0.224)
Downward	0.260	−0.170
	(0.171)	(0.218)
Interactions		
Stable (owner) x Age	−0.00004	0.008*
	(0.003)	(0.003)
Stable (non-owner) x Age	−0.006+	−0.002
	(0.003)	(0.004)
Downward x Age	−0.008*	0.003
	(0.003)	(0.004)
Demographics		
HH income	0.019**	0.046**
	(0.004)	(0.005)
Degree	0.123**	0.354**
	(0.027)	(0.035)
Male	0.022	0.361**
	(0.025)	(0.032)
Unemployed	−0.152*	−0.032
	(0.071)	(0.090)
Full-time	−0.089**	−0.134**
	(0.031)	(0.039)
Married	−0.059*	−0.066+
	(0.029)	(0.037)
Vote in 2019 GE (Ref.: Other)		
Conservative	0.127**	−0.021
	(0.032)	(0.041)
Labour	−0.107**	0.075+
	(0.033)	(0.042)
Constant	1.871**	2.126**
	(0.164)	(0.209)
Observations	5,080	5,080
R^2	0.040	0.085

Note: All regressions include survey and region dummies and survey weights. *p<0.1; **p<0.05; ***p<0.01.

B Summary Statistics

C Descriptive Statistics

C.1 Housing Wealth Variables

The descriptive patterns for these variables can be seen in Figure C1. The homeownership rate of just under 60% and the distribution of house values in our sample closely mimic the national distribution (see Appendix G). When it comes to people's housing situation, we have approximately equal shares of renters, owners with

Table A2: Full output: Local ties of homeowners

	Dependent variable:	
	External efficacy	Internal efficacy
Homeowner	0.107	−0.083
	(0.153)	(0.195)
Years in local area (Ref.: < 1 year)		
1 - 5 years	0.001	−0.046
	(0.116)	(0.148)
5 - 10 years	−0.080	−0.130
	(0.121)	(0.154)
10 - 20 years	−0.038	−0.136
	(0.117)	(0.149)
20 - 30 years	−0.114	−0.176
	(0.118)	(0.150)
> 30 years	−0.127	-0.257^{+}
	(0.116)	(0.147)
Interactions		
Homeowner x 1 - 5 years	−0.137	−0.042
	(0.163)	(0.208)
Homeowner x 5 - 10 years	0.004	0.192
	(0.166)	(0.211)
Homeowner x 10 - 20 years	−0.078	0.082
	(0.162)	(0.206)
Homeowner x 20 - 30 years	0.050	0.251
	(0.163)	(0.207)
Homeowner x > 30 years	0.008	0.146
	(0.158)	(0.202)
Demographics		
Household income	0.023^{**}	0.047^{**}
	(0.004)	(0.005)
Degree	0.143^{**}	0.377^{**}
	(0.024)	(0.031)
Male	−0.005	0.376^{**}
	(0.023)	(0.029)
Age	0.002^{+}	0.008^{**}
	(0.001)	(0.001)
Unemployed	−0.099	0.028
	(0.064)	(0.082)
Full-time	-0.110^{**}	-0.123^{**}
	(0.028)	(0.036)
Married	-0.048^{+}	-0.089^{**}
	(0.026)	(0.033)
Vote in 2019 GE (Ref.: Other)		
Conservative	0.143^{**}	−0.023
	(0.029)	(0.037)
Labour	-0.078^{**}	0.113^{**}
	(0.030)	(0.038)
Constant	1.892^{**}	1.880^{**}
	(0.125)	(0.160)
Observations	6,434	6,434
R^2	0.047	0.099

Note: All regressions include survey and region dummies and survey weights. *p<0.1; **p<0.05; ***p<0.01.

Table B3: Summary statistics

	Mean	SD	Min	Max	Observations
ext_eff	2.13	0.90	1.00	5.00	10310
int_eff	2.85	1.17	1.00	5.00	10310
homeowner	0.61	0.49	0.00	1.00	10310
house_value_bins	3.03	2.11	1.00	8.00	9417
perception_val_hou	2.61	0.87	1.00	5.00	7810
house_value_bins_parents	2.31	1.50	1.00	6.00	10310
hh_income	7.53	3.83	1.00	15.00	7955
degree	0.46	0.50	0.00	1.00	9821
gender_numeric	0.46	0.50	0.00	1.00	10310
age	49.96	17.43	18.00	94.00	10310
unemployed	0.05	0.21	0.00	1.00	10310
full_time	0.40	0.49	0.00	1.00	10310
married	0.57	0.49	0.00	1.00	10126

Table B4: Summary of housing situation, full sample

Overall		
house_tenure	n	percent
Live with others: free	548	5.3%
Live with others: pay	530	5.1%
Other	186	1.8%
Own mortgage	2764	26.8%
Own outright	3426	33.2%
Rent: private	1548	15.0%
Rent:HA	685	6.6%
Rent:LA	517	5.0%
Shared Ownership	106	1.0%

Table B5: Summary of housing situation, by survey

Survey 1		
house_tenure	n	percent
Live with others: free	162	5.1%
Live with others: pay	179	5.6%
Other	66	2.1%
Own mortgage	828	26.0%
Own outright	1029	32.3%
Rent: private	513	16.1%
Rent:HA	215	6.7%
Rent:LA	163	5.1%
Shared Ownership	31	1.0%

a mortgage, and outright owners, with a smaller residual category. The bottom right panel reveals that people tend to be poorly informed about the relative value of their house. We asked people to place themselves in quintiles which, given a balanced sample and perfect information, should each contain 20 percent of the

Survey 2		
house_tenure	n	percent
Live with others: free	218	6.2%
Live with others: pay	173	4.9%
Other	64	1.8%
Own mortgage	892	25.3%
Own outright	1227	34.7%
Rent: private	497	14.1%
Rent:HA	246	7.0%
Rent:LA	182	5.2%
Shared Ownership	33	0.9%

Survey 3		
house_tenure	n	percent
Live with others: free	168	4.7%
Live with others: pay	178	5.0%
Other	56	1.6%
Own mortgage	1044	29.1%
Own outright	1170	32.6%
Rent: private	538	15.0%
Rent:HA	224	6.2%
Rent:LA	172	4.8%
Shared Ownership	42	1.2%

respondents (indicated by the dashed line). Yet, the overwhelming majority of respondents locate themselves in the middle or lower-middle quintile, indicating strong middle class bias also in perceptions of housing wealth (Cansunar 2021; Fernández-Albertos and Kuo 2018).[15] [16]

To assess the impact on efficacy of intergenerational housing mobility, we devise a categorical variable distinguishing between stable owners, upwardly mobile owners, stable non-owners, and downwardly mobile non-owners. Figure C2 shows the descriptive results. Approximately 50% do not answer the question about their parents' housing situation - these are presumably mostly respondents whose parents are already deceased. Of the remaining respondents' parents, the majority are homeowners, with the estimated house values similar to those of the respondents themselves. In the bottom panel, we show intergenerational housing mobility separately for respondents under 50 and those 50 or older, as this reveals a stark pattern: of the under-50s, only 46% are homeowners, compared to 78% of the cohort aged 50+. Even more noteworthy are the differences in upward and downward mobility between the cohorts. 32% of those over 50 are upwardly mobile, while only 9% are downwardly mobile. Among those under 50, only 5% are upwardly mobile, whereas

[15] In Figure C5 in Appendix C we show heatmaps of people's perceptions of their housing wealth and their actual position, based on their estimates.

[16] The residual category comprises people who live with friends or family, in shared ownership, or other arrangements. It accounts for 13.29% of all respondents. For a detailed breakdown of the homeownership categories, see Tables B4 and B5.

Table C6: Trends in residential mobility

	Parents owners	Parents non-owners	Total
All respondents (N = 7,791)			
Owner	43	16	59
Non-owner	24	17	41
Under 50s (N = 4,633)			
Owner	41	5	46
Non-owner	34	20	54
Over 50s (N = 3,158)			
Owner	46	32	78
Non-owner	9	13	22

Note: All numbers in percent. Green = upward mobility; red = downward mobility; blue = no mobility.

34% are downwardly mobile. While the homeownership rate naturally increases with age, the reversal of the shares of upward and downward mobility reflects the increasing difficulty of entering the housing market for younger cohorts, a finding that is also replicated in other research (see, e.g., Blanden, Eyles and Machin 2023).

To investigate the role of local ties, we use a 6-category variable measuring the amount of time a respondent has lived in the local area. Figure C3 shows the years lived in the local area for homeowners and non-homeowners. About a quarter of non-homeowners, but over 40% of homeowners have lived in their local area for over 30 years. Only a relatively small share of people is new to their local area (up to 5 years), but those are predominantly non-owners. For housing tenures between 5 and 30 years, differences between the groups are small. Figure C6 shows that there are some differences between surveys, possibly driven by unusual moving patterns during the Covid-19 pandemic.

D Results for Internal Efficacy

The previous section showed strong empirical support for the insurance function of housing wealth with respect to external efficacy. We expect broadly similar but slightly weaker results for internal efficacy. In columns 1 and 2 of Table D7, we see that being a homeowner is also associated with higher internal efficacy, but that this relationship is not robust to the inclusion of individual-level control variables. Similarly, column 3 shows that outright owners exhibit higher efficacy than owners with a mortgage and renters, but these differences are smaller than for external efficacy and not statistically significant. Thus, for internal efficacy we are forced to reject hypotheses 1a and 1b.

Looking at people's home values, we do however see a clear gradient, with people whose houses are valued at £400k or above exhibiting significantly higher external efficacy than other homeowners or non-owners. Moreover, we see almost monotonically increasing positive effects of house values on internal efficacy. The

Figure C1: Housing wealth variables

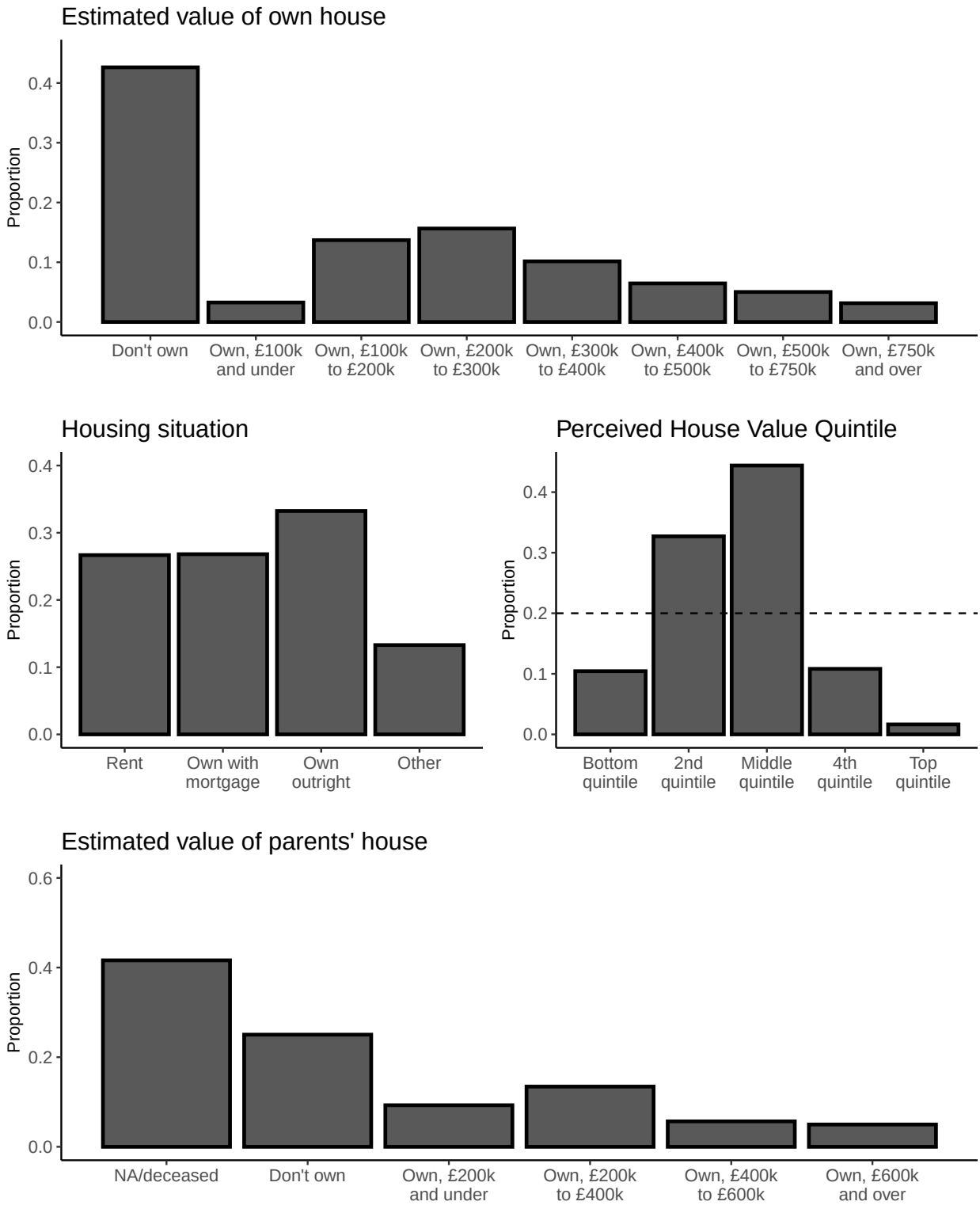


Figure C2: Intergenerational housing mobility variables

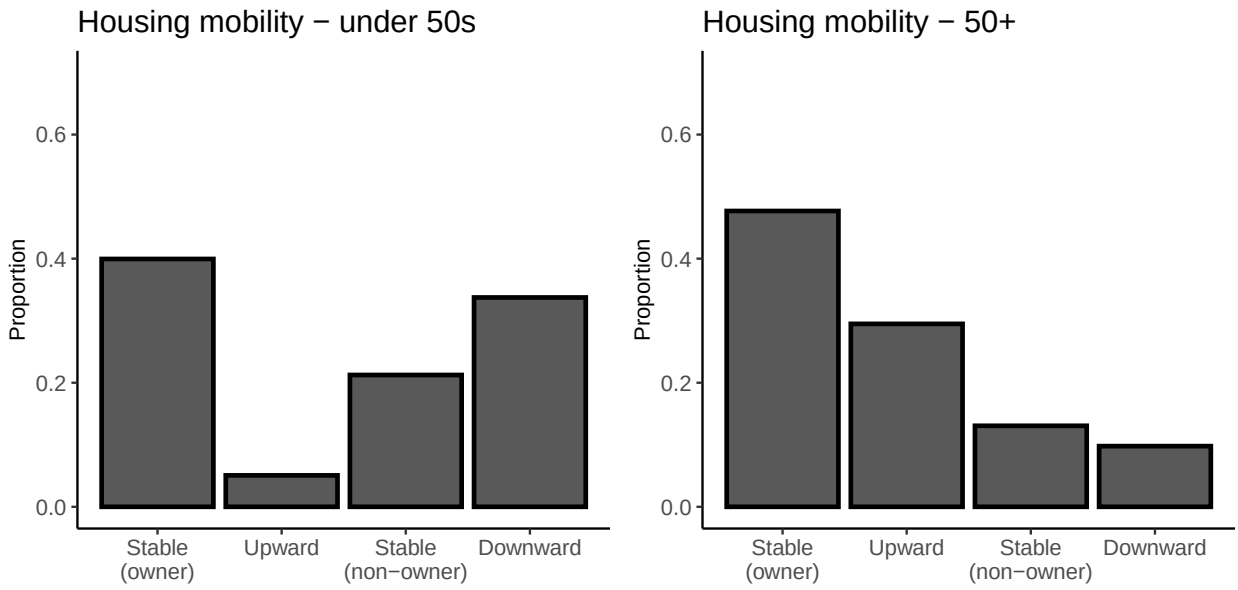


Figure C3: Local housing tenure

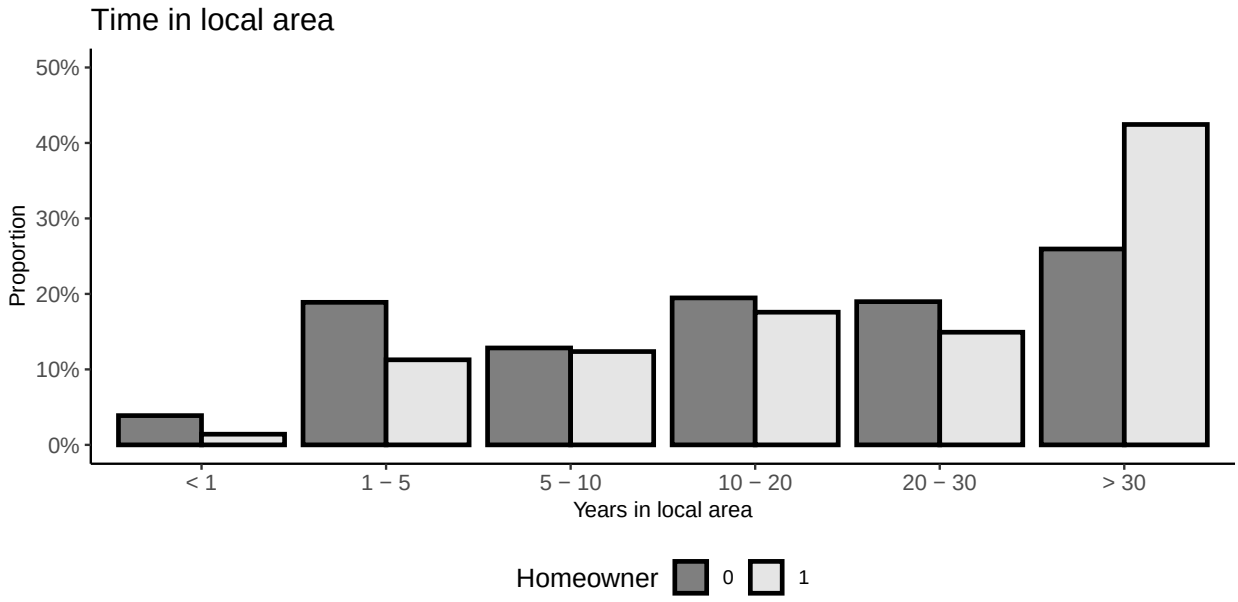


Figure C4: Distribution of efficacy, by survey

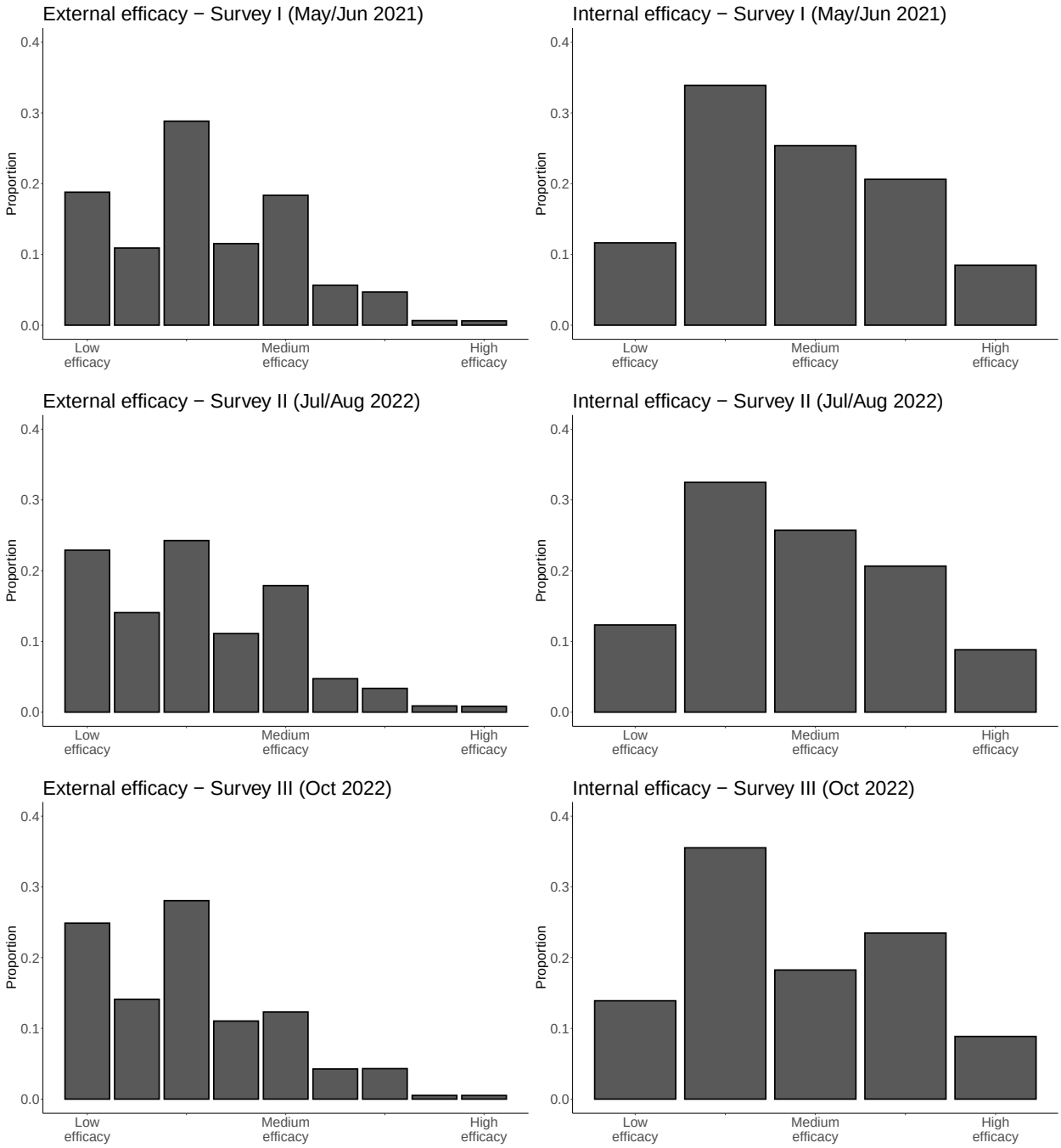


Figure C5: Misperceptions of housing wealth

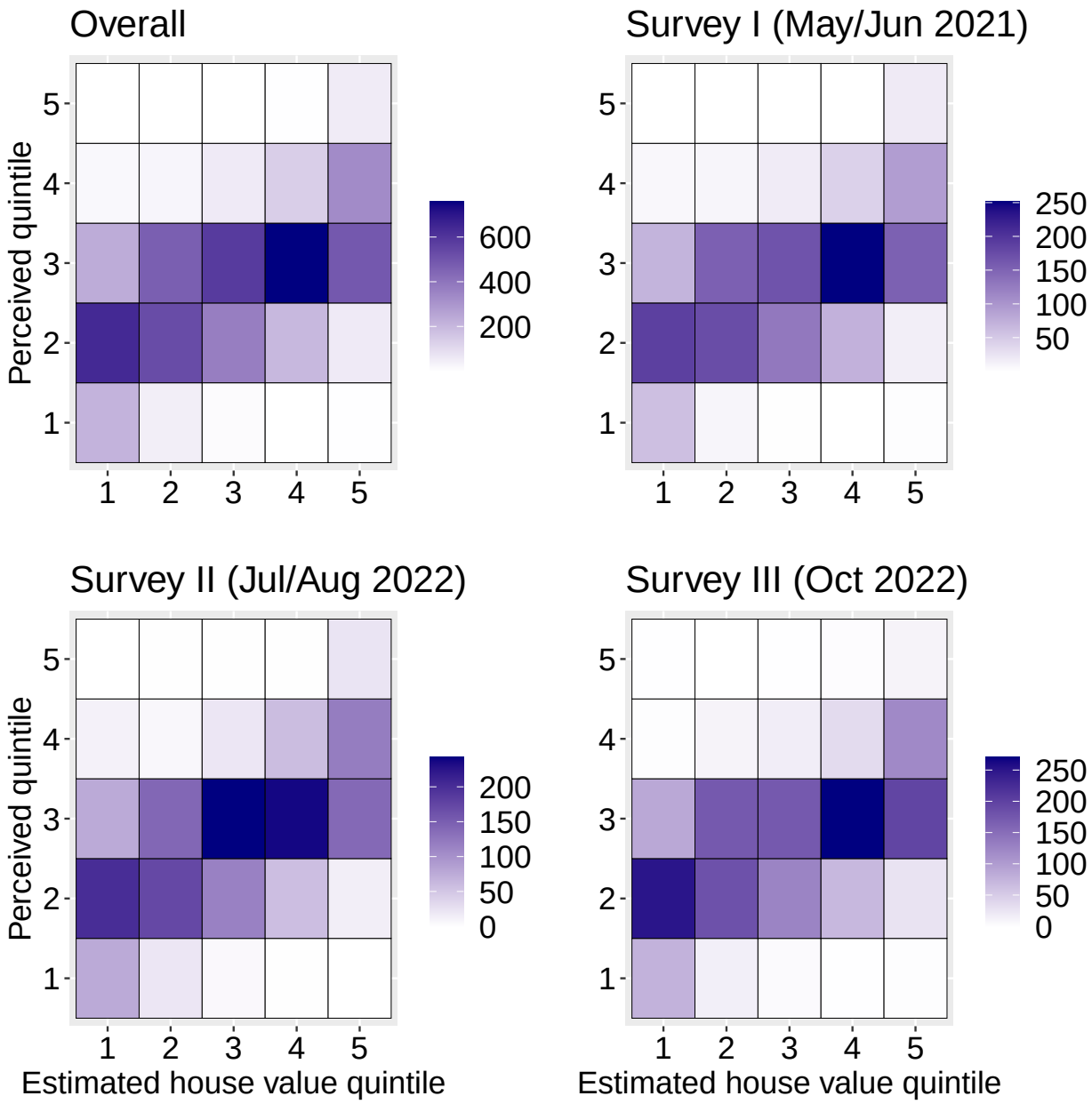


Figure C6: Local housing tenure, by survey

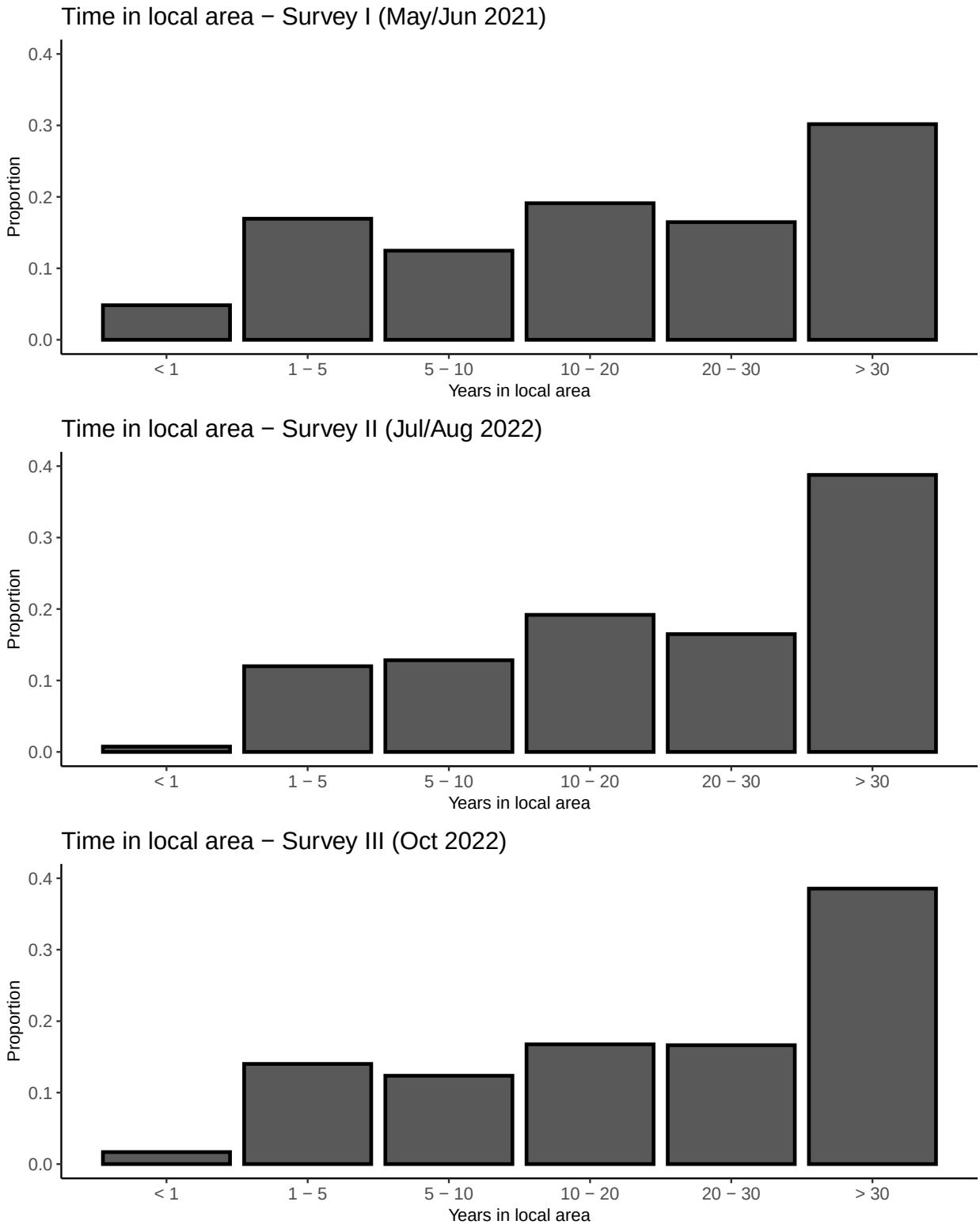
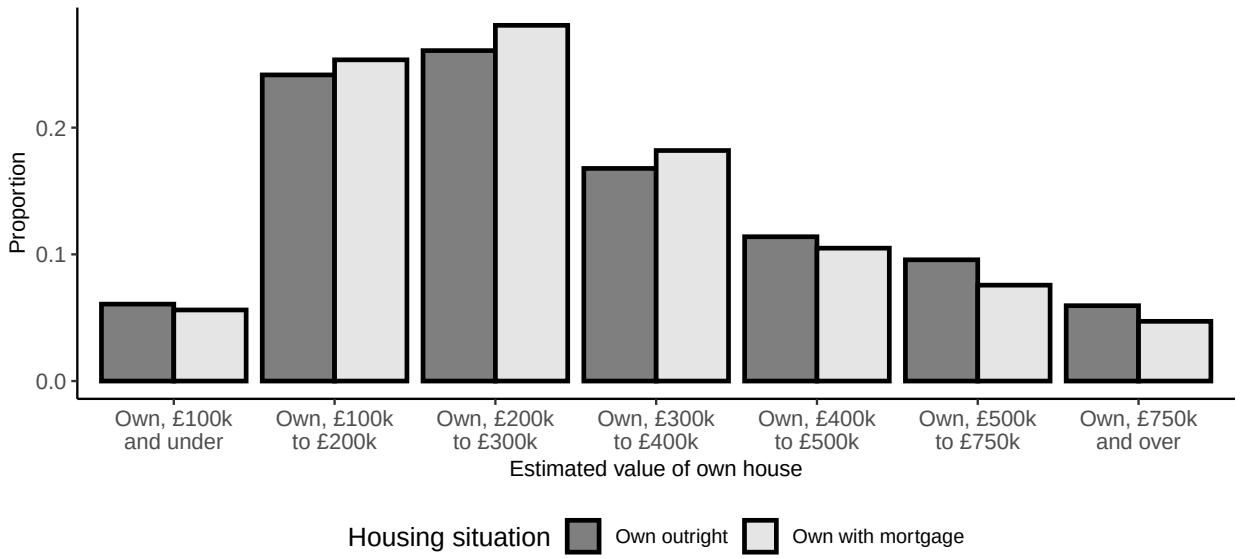


Table D7: Housing wealth, security, and internal efficacy

	Dependent variable: Internal efficacy					
	(1)	(2)	(3)	(4)	(5)	(6)
Homeowner	0.232***	0.029				
	(0.024)	(0.034)				
Housing situation (Ref: Own with mortgage)						
Own outright			0.061			
			(0.041)			
Rent			0.011			
			(0.041)			
Other			−0.028			
			(0.057)			
House value (Ref: Don't own)						
Own, £100k and under				0.011		
				(0.083)		
Own, £100k to 200k				−0.044		
				(0.048)		
Own, £200k to 300k				0.009		
				(0.046)		
Own, £300k to 400k				0.050		
				(0.053)		
Own, £400k to 500k				0.119+		
				(0.064)		
Own, £500k to 750k				0.236***		
				(0.070)		
Own, £750k and up				0.444***		
				(0.086)		
Perceived relative wealth						
Perceived quintile					0.088***	
					(0.019)	
Parents' house value (Ref: Don't own)						
Not applicable/deceased						−0.010
						(0.040)
Own, 200k and under						0.010
						(0.053)
Own, £200k to 400k						0.087+
						(0.048)
Own, £400k to 600k						−0.089
						(0.063)
Own, £600k and up						0.072
						(0.066)
Demographics						
Household income		0.046***	0.047***	0.036***	0.049***	0.046***
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Degree		0.391***	0.390***	0.386***	0.361***	0.392***
		(0.030)	(0.030)	(0.031)	(0.033)	(0.030)
Male		0.376***	0.374***	0.388***	0.358***	0.376***
		(0.028)	(0.028)	(0.029)	(0.031)	(0.028)
Age		0.007***	0.006***	0.006***	0.009***	0.008***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Unemployed		0.001	0.006	−0.006	0.074	−0.001
		(0.080)	(0.080)	(0.082)	(0.100)	(0.080)
Full-time		−0.135***	−0.125***	−0.106**	−0.098*	−0.138***
		(0.035)	(0.036)	(0.036)	(0.039)	(0.035)
Married		−0.086**	−0.087**	−0.082*	−0.105**	−0.083**
		(0.032)	(0.032)	(0.033)	(0.036)	(0.032)
Vote in 2019 general election (Ref: Other)						
Conservative		−0.046	−0.044	−0.038	−0.065	−0.046
		(0.036)	(0.036)	(0.037)	(0.040)	(0.036)
Labour		0.093*	0.093*	0.109**	0.081+	0.089*
		(0.038)	(0.038)	(0.039)	(0.042)	(0.038)
Constant	2.537***	1.856***	1.875***	1.948***	1.566***	1.831***
	(0.045)	(0.089)	(0.098)	(0.093)	(0.108)	(0.093)
Observations	10,310	6,585	6,585	6,232	5,327	6,585
R^2	0.012	0.092	0.092	0.101	0.100	0.093

Note: All regressions include survey and region dummies and survey weights. +p<0.1; *p<0.05; **p<0.01; ***p<0.001

Figure C7: House price estimates, homeowners with and without mortgage



effect sizes are generally commensurate with those for external efficacy. Perceived relative housing wealth likewise retains a significant positive effect on internal efficacy, even though it is smaller by half than for external efficacy. As we show in Figure C5, approximately 75 percent of all respondents place themselves in the middle or lower middle quintile of perceived housing wealth, illustrating strong middle-class bias. Those few individuals who are aware of their privileged position at the top of the social order appear to be very confident in their capacity to influence and understand what is going on in politics. Hypotheses 1c and 1d are therefore supported with regard to internal efficacy. Parental house values, like for external efficacy, exhibit no systematic relationship with internal efficacy, contradicting hypothesis 1e.

Overall, the results for internal efficacy lend support to H1f which stipulated that housing wealth should have a stronger effect on external efficacy than on internal efficacy. Interestingly, homeownership as such and being mortgage-free influence external but not internal efficacy, while house value and perceived relative position matter for both and the value of parents' house for neither.

E Results from Understanding Society Survey

We perform additional analyses with data from the UK Household Longitudinal Study (UKHLS, better known as Understanding Society). Wave 9, for which interviews were conducted from January 2017 until May 2019, includes information on respondents' house prices and political efficacy. To our knowledge, it is the only large-scale UK-based survey to include this information. The sample includes 36,055 individuals. Our models replicate the main analyses as much as possible and control for respondents' log equivalised

household income, degree status, sex, age, marital status, unemployment status, vote choice in the most recent general election, and region of residence. Compared to our surveys, the key advantage of the UKHLS is its larger sample size, while limitations include a lower response rate to questions about voting behaviour or wealth and the absence of measures of parental wealth, perceived wealth, and length of residence in the local area. Hence, we can only replicate some of analyses pertaining to the insurance mechanism.

Nevertheless, the results are consistent with the findings we report in the paper: First, homeownership is strongly associated with higher external political efficacy, unconditionally and net of other predictors of efficacy such as education and income. Second, owners with a mortgage occupy an intermediate position between outright owners and renters (although in the UKHLS data they are closer to outright owners whereas in our surveys they resemble renters more closely). Third, efficacy increases monotonically with house value. Even the estimated effect sizes are remarkably similar to the main analysis in most cases. Thus, we are able to successfully replicate our findings in the largest available survey of house values and political efficacy in the UK.

F Further Sensitivity Analyses

In this section, we show that our findings are unaffected by the various experimental components that were included in our surveys, but that are not the subject of this paper. To this end, we re-estimate the main analyses while including only respondents who were in the control group in our surveys. We furthermore demonstrate the robustness of our results to choosing a different model specification.

G Survey House Price Estimates versus ONS House Price Statistics

Our survey was conducted in England and Wales between the 28th of May and 7th of June 2021. Data from the ONS (at https://landregistry.data.gov.uk/app/ukhpi) shows that for June 2021 the average house price in England was £285,002 and in Wales was £196,536. Adjusting for the relative volumes of houses sold (138,270 in England and 6,110 in Wales) gives England and Wales an average of £281,112.

It is immediately apparent from Table G9 that the figures from ONS and our survey are very close at the regional level—the average deviation is £5,240 (an average gap of 1.7 percent). The largest differences are in the Midlands, where our respondents had slightly cheaper houses (by around £15,000 or seven percent). Figures G9 and G10 show histograms of (logged) individual house price estimates for England and Wales as a whole and each region and these largely follow a log-normal distribution.

Respondents were shown data on the local authority house median house price from the end of 2019 (i.e. before the pandemic to avoid the possible distortions introduced by the shock to housing sales of using

Table E8: Replication with UKHLS Data

	Dependent variable:			
	(1)	(2)	(3)	(4)
Homeowner	0.120**	0.088**		
	(0.013)	(0.014)		
Housing situation (Ref: Own with mortgage)				
Own outright			0.028+	
			(0.017)	
Rent			−0.086**	
			(0.016)	
Other			0.100*	
			(0.048)	
House value (Ref: Don't own				
Own, £100k and under				0.005
				(0.029)
Own, £100k to £200k				0.026
				(0.019)
Own, £200k to £300k				0.091**
				(0.020)
Own, £300k to £400k				0.144**
				(0.023)
Own, £400k to £500k				0.145**
				(0.028)
Own, £500k to £750k				0.152**
				(0.028)
Own, £750k and up				0.355**
				(0.034)
Socio-demographics				
Household income		0.088**	0.087**	0.060**
		(0.011)	(0.011)	(0.012)
Degree		0.132**	0.132**	0.119**
		(0.015)	(0.015)	(0.015)
Female		0.154**	0.154**	0.150**
		(0.012)	(0.012)	(0.012)
Age		−0.003**	−0.003**	−0.003**
		(0.0004)	(0.0004)	(0.0004)
Married		0.046**	0.047**	0.035*
		(0.013)	(0.013)	(0.014)
Unemployed		0.007	0.004	−0.010
		(0.014)	(0.014)	(0.014)
Vote in 2015/2017 GE (Ref: NA)				
Conservative		0.084**	0.083**	0.073**
		(0.018)	(0.018)	(0.019)
Labour		−0.003	−0.002	0.001
		(0.017)	(0.017)	(0.018)
Other		−0.071**	−0.072**	−0.075**
		(0.023)	(0.023)	(0.024)
Constant	2.338**	1.614**	1.709**	1.821**
	(0.582)	(0.580)	(0.580)	(0.584)
Observations	32,927	31,748	31,748	29,870
R^2	0.007	0.025	0.026	0.030

Note: All regressions include region dummies and survey weights. +p<0.1; **p<0.05; ***p<0.01

Figure G8: Histogram of estimated house prices

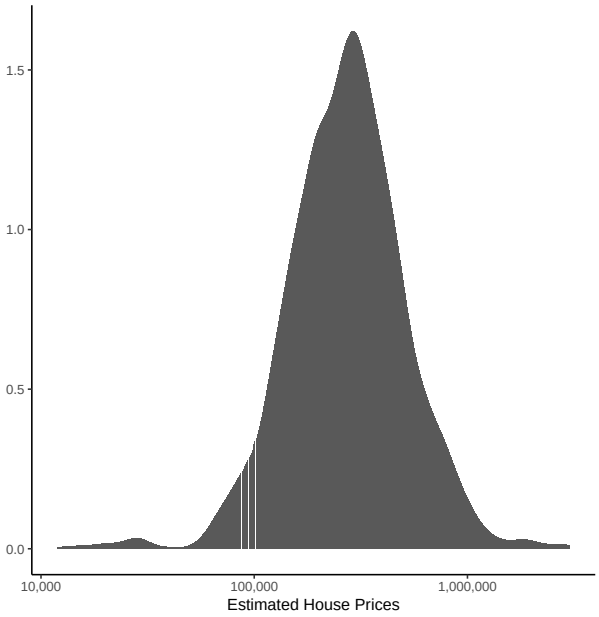
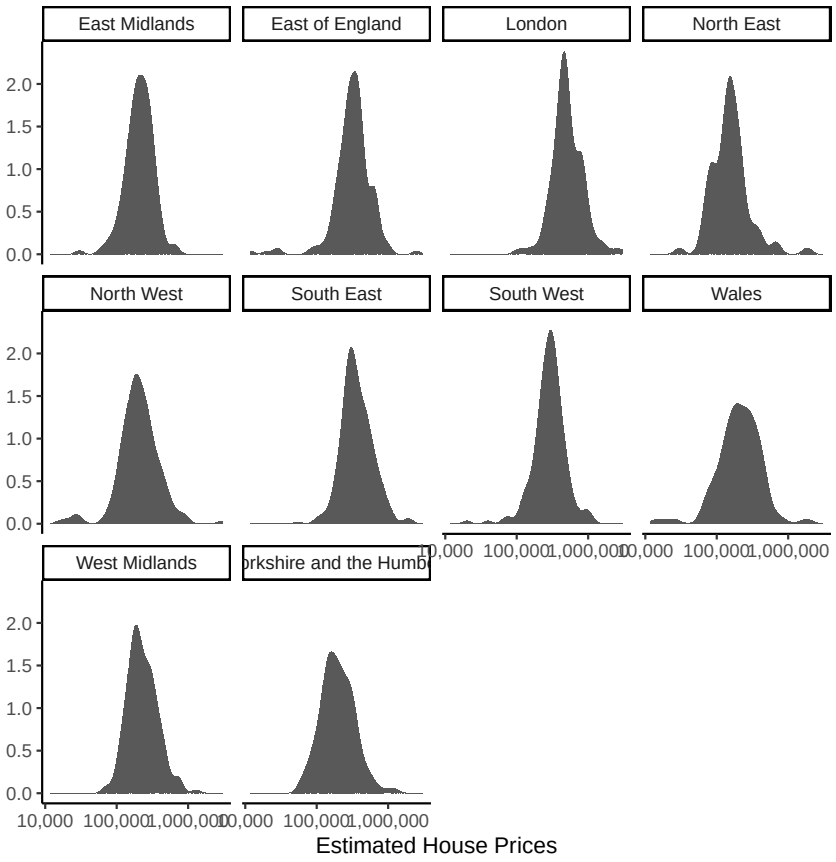


Figure G9: Histogram of estimated house prices, by Region



2020/2021 data). Average house prices in England at the end of 2019 were £248,097, whereas in the month of the survey they were somewhat higher £285,002 due to COVID's effects on the housing market which raised prices, particularly for detached housing in the countryside. So on average, median prices at the time of the survey were around £38,000 higher.

We now compare the 2019 local authority prices to the estimates given by respondents in May/June 2021 (note respondents gave their house price pre-treatment). Figure G10 shows the full data on people who owned houses (omitting those who put down a house price of more than £2m)—the corresponding regression table is shown in Table G10. The black line shows a 45 degree line, whereas the blue line and confidence interval are the best linear fit. We see a very close linear relationship but with an offset of around £60,000. This may reflect two things. First, house prices had increased by £38,000 over the time period on average —as noted above. The remaining £22,000 could come from either (a) over-optimistic estimates, (b) the fact that regression takes the mean (not median) of the conditional expectation, (c) that some residences sold are occupied by renters, who do not answer our house price question, (d) or some un-representativeness at the local authority level (though note the sample is highly representative of house prices at the regional level).

We can deal with problem (b) by taking the median house price offered by the sample of respondents for each local authority and removing local authorities with fewer than seven respondents. The numbers in Figure G11 reflect the number of observations in each local authority. Here we see the intercept has been reduced by £10,000 once we take the median answer into account (the corresponding regression table is shown in Table G11. This leaves over-optimism, different tenure status, and sample un-representativeness as potential explanations for the remaining difference of around £10,000. Our R squared measure of fit also more than doubles from 0.316 to 0.714, largely because we have reduced dispersion by aggregating. Finally, whereas the line of best fit was 1.05 in the previous analysis it is now 0.997—slightly closer to a one to one

Table G9: Comparing house price estimates from the YouGov survey to those from ONS

Region	Median Price from ONS (June 2021)	Median Price in Survey
East Midlands	£225,824	£210,000
East of England	£323,910	£327,500
London	£506,583	£500,000
North-East	£152,416	£150,000
North-West	£200,568	£200,000
South-East	£359,672	£350,000
South-West	£299,218	£300,000
Wales	£196,536	£200,000
West Midlands	£231,513	£217,500
Yorkshire and Humber	£196,452	£197,500

Figure G10: Association between estimated house price and actual house, local authority level

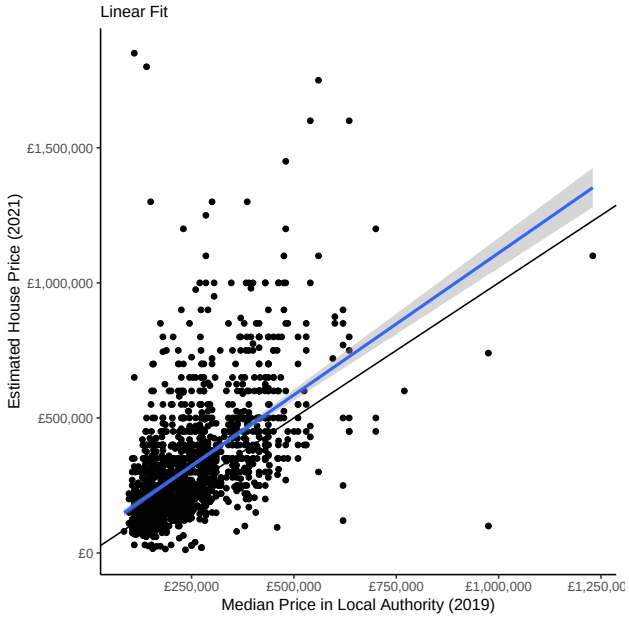


Table G10: DV: Individual House Price Estimate

(Intercept)	59955.2
	-10210
Median Local Authority Price	1.051
	-0.037
Num.Obs.	1700
R2	0.317

relationship.

Table G11: DV: Median House Price Estimate by Local Authority

(Intercept)	49223.771
	(12746.289)
Median Local Authority Price	0.997
	(0.045)
Num.Obs.	200
R2	0.715

Figure G11: Association between estimated house price and actual house, local authority level

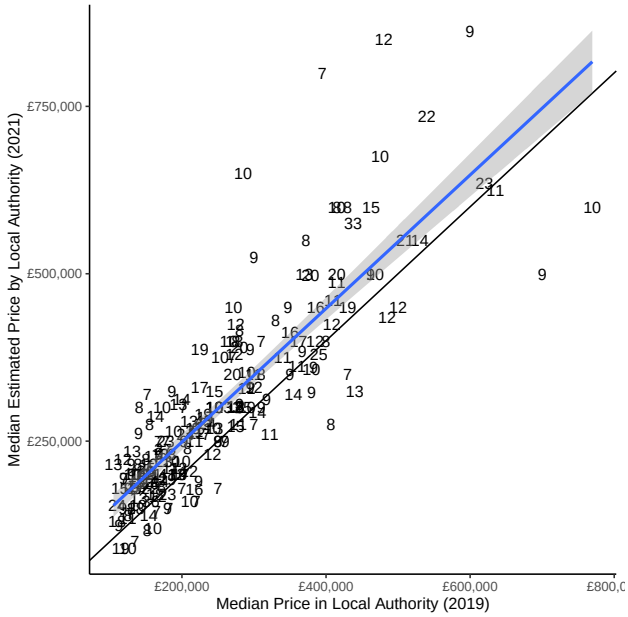


Figure G12: Distributions of The Grouped House Price Variables