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An empirical test.

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Is unequal responsiveness caused by high-income earners having more informed opinions? An empirical test.

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Abstract

Previous research has shown that the affluent see more of their preferred policies realized, which scholars of opinion—policy responsiveness attribute to unequal influence. A rival theory instead states that the reason is informational asymmetry: High-income earners have more informed opinions, which align better with policymakers' decisions. We test this rival theory in a most-likely case, where other sources of unequal opinion—policy responsiveness are minimized: monetary policy, set by an independent central bank. Analyses of survey data from more than 100,000 UK respondents initially reveal several findings in line with the theory: The official interest rate develops in ways relatively more favored by high-income earners, and high-income earners also exhibit better understanding of central bank policy and the economy. Nevertheless, informational asymmetries only explain part of why high-income earners get more of the policy they prefer, even in this most-likely setting. Case-specific reasons for unequal congruence are then explored.

Introduction

A large body of research has documented that public policy seems to respond more to the preferences of high-income citizens than to that of low-income citizens (Gilens, 2012; Elkjær and Klitgaard, 2021; Persson and Sundell, 2023). The sources of this inequality are less well understood. Dominant theories suggest that this is due to a causal effect of high-income preferences on policy. Possible mechanisms include greater participation in politics, direct influence on the behavior of decision-makers or systematic misperceptions of public opinion among decision-makers (mistaking affluent opinion as general opinion). Such unequal responsiveness constitutes a serious normative problem, given that democratic theorists have long emphasized the need for all voters' interests to be given equal consideration (see Marien, Hooghe, and Quintelier, 2010, pp. 189–192, for an overview).

Mads Andreas Elkjær and Torben Iversen (Elkjær, 2020; Elkjær and Iversen, 2020) suggest an alternative theory. They argue that the apparent unequal causal influence is a mirage. Decision-makers and the affluent just follow the same principles when they form opinions. The reason is that there are widely followed principles in macroeconomic matters, such as increasing public spending in recessions and decreasing it when times are good. The affluent are better informed of these principles and adjust their preferences to economic information in the same way as policy-makers. The result is a coincidental correlation between policy and affluent opinion. Elkjær (2020) labels this the *informational asymmetry argument*. If the argument is true then unequal responsiveness is not an important democratic problem. There are, however, few empirical tests of the argument.

In this paper, we aim to shed further light on this important question by studying an interesting yet highly salient case of correspondence between public opinion and political outcomes, namely monetary policy, determined by an independent central bank. By studying the potentially unequal alignment of conducted monetary policy to voters' policy preferences, we can examine the informational asymmetry argument in a setting where there are no political incentives to respond to the preferences of the affluent. In other words, we

can be relatively confident that any observed association between opinion and policy is not caused by actual responsiveness to public opinion. It thus allows us to test the informational asymmetry argument separately. Furthermore, other channels of unequal influence are minimized in this setting, given that apolitical policymakers are constrained: Monetary policy has clear objectives, and broad consensus on how policy instruments—primarily the interest rate—affects the outcome. This constraint also means that information about the state of the economy, as well as information about how the interest rate affects inflation, plays an important role in both opinion formation and policy-making - creating a closer alignment between the two (opinion–policy congruence). We thus consider central bank policy a most-likely case for the informational-asymmetry hypothesis: If this mechanism can be observed anywhere, it should be in this setting.

Using comprehensive survey data from the United Kingdom on perceptions of the economy as well as preferences for monetary policy we are able to test all parts of the informational asymmetry argument fully. The results both support and contradict the predictions from the theory. In line with the theory, we first find that changes to the interest rate follows the preferences of high income earners more than the preferences of low-income earners. This “placebo test” shows that unequal opinion–policy responsiveness does not need be caused by politicians seeking reelection, which has important implications for the interpretation of findings in previous literature. We also find that high-income respondents have more accurate economic perceptions, in line with the predictions of the informational asymmetry argument.

However, our analysis also reveals that observed income differences in economic sophistication are not large enough to explain the difference in responsiveness. The main prediction of the informational asymmetry argument is hence not borne out. Instead, unequal responsiveness in this case is due to material circumstances: high-income earners are more likely to hold mortgages, and mortgage-holders were in the period of low interest rates between the financial crisis 2008 and the Covid pandemic more satisfied with the status quo. And

since the status quo often held, policy seemingly responded to their preferences more. We thus agree with Elkjær and Iversen in that unequal responsiveness need not be caused by active pandering to the preferences of the affluent, but it may still be a democratic problem if policy still benefits some groups more than others.

Previous research and theory

Previous research has consistently documented that those with higher incomes see more of their preferred policy realized (Gilens, 2012; Gilens and Page, 2014; Bartels, 2016; Persson, 2023; Schakel, 2021; Mathisen, 2023; Lupu and Tirado Castro, 2023; Elsässer, Hense, and Schäfer, 2021; Persson and Sundell, 2023). How important this inequality in responsiveness is from a democratic perspective to a large extent depends on the mechanisms underlying it. Is it a mere correlation, or the result of a causal effect, meaning that higher income earners have greater influence over policy? If so, democratic equality is undermined (Dahl, 1989, pp. 86–87). Existing literature has been unable to answer this question.

Given the large number of possible mechanisms that could cause unequal opinion–policy responsiveness, we focus our discussion on arguably the most common perspective. If we synthesize and simplify the arguments in previous research, this perspective builds on two main assumptions. First, decision-makers set policy that maximizes their chances of re-election. Second, to secure campaign funding and support from influential groups and thereby increase chances of re-election, it is more important to satisfy the preferences of high-income earners than low-income earners. Therefore, decision-makers will set policy that satisfies the preferences of high-income earners. These latter mechanisms are in line with Martin Gilens and Benjamin Page’s (2014) *economic-elite domination model*.

The first assumption of office-seeking politicians is common and needs little justification. There are also several justifications for the second assumption, that it is more important for representatives to secure the support of high-income earners. They are more likely to

contribute financially to campaigns (Gilens, 2012; Gilens and Page, 2014), they are more politically active, and tend to be better at selecting parties that represent them well (Rosset and Kurella, 2021).

A slight variation on the second assumption is that decision-makers do not intend to prioritize high-income earners, but do so because of misjudgement of true public opinion. Empirical studies show that representatives can mistake high-income opinions for general public opinion (Pereira, 2021). High-income citizens are also over-represented among politicians (Carnes and Lupu, 2023; Persson, 2021), and may for this reason also be more attuned to the demands of that electorate. Regardless, the assumption is that there is a greater causal influence of high-income preferences on policy, and that this is the reason for unequal opinion–policy congruence.

Our focus in this paper is however on Mads Elkjær and Torben Iversen’s rival hypothesis, a radically different explanation for the empirical findings of previous research: the *informational asymmetry model*. For ease of comparison we have reduced it to three key assumptions. The first assumption is the same as in the economic-elite domination model: Decision-makers set policy that maximizes their chances of re-election. Second, to maximize chances of re-election, decision-makers try to make the economy perform well, and therefore follow standard economic policy recommendations (such as engaging in counter-cyclical fiscal policy). Third, high-income earners are better informed of standard economic policy than low-income earners, and form their preferences accordingly. Therefore, the conclusion is that decision-makers will set policy that (coincidentally) satisfies the preferences of high-income earners.

The expected outcome in both models is hence the same, but the underlying assumptions are different. The informational asymmetry model is interesting as it shows how unequal opinion–policy responsiveness between income groups can arise without, crucially, assuming unequal influence. If true, the normative implication is that unequal opinion–policy responsiveness does not pose a threat to equality of democratic influence.

What support is there for the new assumptions of the informational asymmetry model? The second assumption of the model is that decision-makers pursue standard economic policy for the sake of promoting a healthy economy, in order to maximize chances of re-election. Empirical research has shown that governments do better when the economy is doing well (Healy and Malhotra, 2013), which provides decision-makers with a clear incentive to improve the state of the economy—at least on election day.

There is also ample support for the third assumption of the model, that high-income earners are better informed of standard economic policy, causing them to agree with policy-makers. High-income individuals are more educated, and standard economic policy is part of the curriculum of many educations. It also makes it easier for them to understand economic information relayed to them (Iversen and Soskice, 2015; Elkjær and Iversen, 2020, p. 260). They make more economic investments and therefore have an incentive to be better informed (Elkjær and Iversen, 2020, p. 259). Their social circles tend to have other high-income individuals in them (McPherson, Smith-Lovin, and Cook, 2001), increasing the chances that they will acquire this information by their own volition or simply because this information is passed on to them (Iversen and Soskice, 2015; Elkjær, 2020, p. 2223). That wealthier individuals have better financial literacy than those with lower incomes and wealth is thus both logical (Larcinese, 2005) and empirically observed (Monticone, 2010). Research also suggests that higher levels of political sophistication is associated with more counter-cyclical preferences (Kölln, 2018). All of this suggests that high-income earners are better informed about economic policy.

Testing the models

The main predictions of the two models described above are identical: Implemented policy will align better with the preferences of high-income earners. A test of whether this is true in general can therefore not be used to distinguish the relative credibility of the models. We need to identify specific instances in which the two models yield different predictions.

In a study of unequal responsiveness, Elkjær (2020) argues that Denmark constitutes a good test case because it is an egalitarian country with an inclusive political system in which unequal political influence is unlikely, meaning that the economic-elite domination model would be less relevant. Therefore, if unequal opinion–policy responsiveness is observed, it is likely due to informational asymmetry. But in this case, it would not be responsiveness, but rather simple opinion-policy *congruence*, a match between preferences and policy, but without causal influence.

The fact that such inequalities have been found in several countries with relatively low levels of income inequality such as Sweden (Persson, 2023), Norway (Mathisen, 2023) and the Netherlands (Schakel, 2019) has indeed led to doubts about initial hypotheses in the economic-elite domination model, such as the importance of campaign contributions. But many other potential mechanisms remain. High-income earners are still more active in politics and generally have more political leverage even in these cases, casting doubts on the approach.

We follow a similar strategy to Elkjær but study a case where we can be even more sure that the mechanisms discussed in the economic-elite domination model are absent: monetary policy, set by an independent central bank. The logic behind delegating monetary policy to an independent body is that monetary policy can enhance the economy in the short term even though such actions may increase inflation and therefore have little to no gain for the economy in the long-term (Fernández-Albertos, 2015). Politicians that are pressured by the public may resort to such policy, creating an “inflationary bias” (Fernández-Albertos, 2015, p. 218). In contrast, decisions in independent central banks are taken by civil servants and experts who are not dependent on re-election to stay in office. This means that monetary policy conducted by an independent central bank should in theory not be affected by public opinion. Instead, it primarily reacts to, and aims to influence, inflation rates (Friedman and Kuttner, 2010). Importantly, central bank policymakers are highly constrained in what actions they can and should take, limiting other potential causal mechanisms where high-

income earners have influence.¹

Incentives related to re-election are also a key part of the informational asymmetry model, which states that decision-makers try to promote a healthy economy in order to curry favor with voters. However, central banks usually have explicit instructions to promote a healthy economy, at least in the sense of keeping inflation low. To this end they often follow standard economic policy recommendations, such as raising the interest rate when inflation is high and lowering it when inflation is low. For this reason we could still expect to see unequal opinion–policy congruence due to informational asymmetry in monetary policy. Our first hypotheses is thus:

Hypothesis 1. *Interest rate changes are more strongly associated with the preferences of higher income respondents than with lower income respondents.*

We can also derive additional empirical predictions from the informational asymmetry model. By testing these predictions we subject the model to additional attempts at falsification, further strengthening it if the tests are passed. However, to the extent that the predictions are on matters on which the economic-elite domination model is silent, the tests will not be as helpful in distinguishing between the models.

One such additional prediction is derived from the third assumption of the informational asymmetry model: High-income earners are better informed of standard economic policy, and presumably monetary policy as well. Moreover, Elkjær and Iversen also assumed that these individuals are better informed of the state of the economy, and are thus able to adjust their policy preferences in an accurate fashion. Our second hypothesis is thus:

Hypothesis 2. *High-income respondents have more accurate perceptions of the state of the economy, and better understanding of standard monetary policy.*

¹While other mechanisms of unequal influence are minimized, they cannot be completely ruled out. For example, the likely over-representation of individuals with an upper-class background among policymakers in central banks, is a possible, yet not very likely, source of unequal influence given the already discussed constraints on policy-making.

Finally, since the informational asymmetry model is clear about the reason for why high-income earners have higher opinion–policy congruence, we can also make a specific prediction about the sources of the variation in congruence:

Hypothesis 3. *Income differences in unequal opinion–policy congruence can be explained by differences in accuracy of perceptions.*

That is, high-income earners have more congruence because they are better informed. High-income earners that are poorly informed should not see more congruence, according to the model.

To summarize, we will study a case in which unequal opinion–policy responsiveness is unlikely to be observed according to the economic-elite domination model, but where we still are likely to observe opinion–policy congruence according to the informational asymmetry model. We will also test additional predictions from the informational asymmetry model. If we find it likely that the informational asymmetry model is at work here, it can very well be at work also in other cases where there are conventions or standard policies, for instance in fiscal policy or legal matters. It would thus undermine the economic-elite domination model in a broader perspective. In the following section, we describe the data used to test these predictions.

Data and methods

As mentioned above, our case is monetary policy and inflation. It is a highly salient policy issue with large consequences for citizens. The main policy instrument—the central bank interest rate—is also relatively visible and concrete, compared to for instance “government spending” (sometimes asked about in surveys) which can come in a myriad of forms. People should thus be able to form preferences over the development of the interest rate. At the same time, it has been documented that there are widespread misconceptions about the nature of inflation. Standard models state that inflation can arise as the byproduct of other

economic conditions that are generally seen as desirable, such as low unemployment or high growth. Conversely, combating inflation can require cooling the economy, generally by raising interest rates. A recent survey in the United States, however, revealed that most respondents perceived inflation “as an unambiguously negative phenomenon” and that fighting inflation would not require important trade-offs. Specifically, “the widespread misconception that inflation rises following increases in interest rates even leads to support for *rate cuts* to reduce inflation” (Binetti, Nuzzi, and Stantcheva, 2024, p. 1). Another cross-country study also revealed that respondents seem to think that “good” things such as low unemployment, high growth and low inflation are all correlated, whereas high growth and low unemployment in reality tends to correlate with high inflation (Christensen, Persson, and Schwenk, 2024).

As such, it can be considered a most-likely case for the informational asymmetry model. There is a clear “correct” understanding of the policy dynamics, which is explicitly adhered to by policy-makers. For instance, the Bank of England writes on its own website that “Raising interest rates is the best way the Bank of England has to make sure inflation comes down and stays low.”² Citizens with a good understanding of standard economic models and accurate perceptions of the state of the economy should thus have a high probability at arriving at the same policy conclusions as the policy-makers. The results of our test will thus have asymmetric implications for the theory. If we find support for the predictions of the informational asymmetry model it does not mean that the model necessarily would be applicable in other settings where there is less of a “correct” policy answer, such as culture or redistribution. If we on the other hand fail to find support for the model we are unlikely to find support for it in other policy areas.

In order to fully test the predictions of the informational asymmetry model one needs information about policy preferences, as well as issue-specific information and knowledge, in different income groups. As put by Elkjær, “to account for the information bias one would need highly precise measures of information [...] and separate out the informed from the

²<https://www.bankofengland.co.uk/explainers/how-do-higher-interest-rates-help-to-lower-inflation>

uninformed in each income class [... but] questions tapping in to this kind of information are rarely part of surveys, [and] it is [therefore] in practice not a feasible strategy” (Elkjær, 2020, p. 2224). We believe that there in fact is a data source that fulfills these conditions. We will study the correspondence between preferences for the interest rate and the policy outcomes of it in the United Kingdom, with the aid of a recurring survey that the Bank of England conducts every quarter. The survey contains questions about perceptions of economic conditions as well as policy preferences. Below we describe the different variables used in our analysis, beginning with the relevant policy outcomes before moving on to the specific items in the survey.

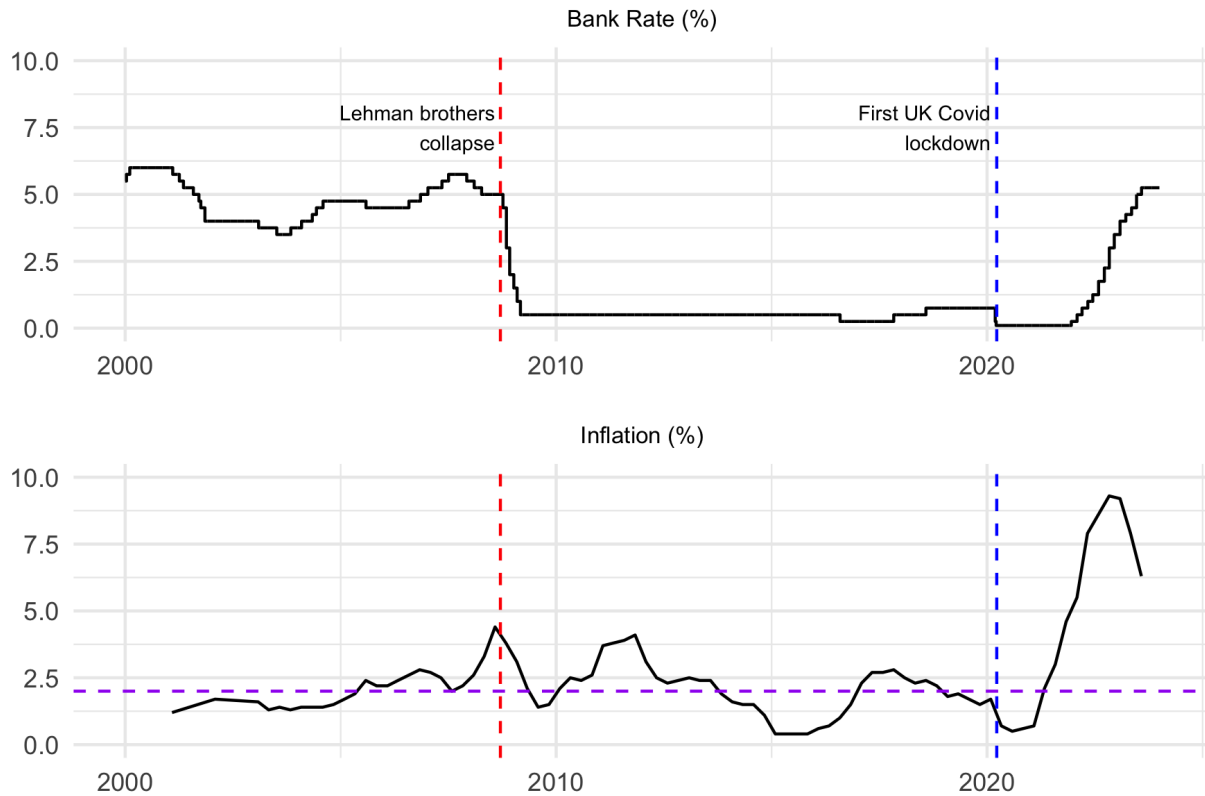
Policy outcomes: Interest rate changes

In 1997, the Bank of England gained “operational independence” under a limited mandate of adjusting the interest rate to arrive at the inflation target. The target was until February 2004 defined in terms of the Retail Price Index excluding mortgage interest payments (RPIX) and set at 2.5 percent. After February 2004 the inflation target was based on the Consumer Price Index (CPI) and set at 2 percent, with the lower target reflecting differences in the way the measures were calculated rather than a policy shift. We use the bank rate set by the Bank of England as the policy outcome under study.

Figure 1 shows the development of the bank rate and the level of inflation, as measured by yearly changes in the Consumer Price Index. The interest rate was around four to five percent until the financial crisis of 2008, when the rate was slashed and kept at a very low level for over a decade. Inflation, however, remained low and close to the two percent target (marked with the horizontal dashed line in the middle panel) until the post-pandemic inflation spike. Only then did the bank rate rise to pre-crisis levels.

Moreover, the graphs show that there is considerable variation in both the outcome variable of interest, the bank rate, and inflation. But the correlation is weak. Conventional

Figure 1: Bank rate and CPI inflation in the UK over time



economic wisdom says that higher interest rates push inflation down, and we can see that the post-pandemic inflation spike was followed by sharply rising interest rates. But inflation hovered around the 2 percent target in both periods before and after the financial crisis of 2009, despite radically different interest rate levels.

Survey data

We use the Bank of England's *Inflation Attitudes Survey*. The survey contains quarterly data on inflation attitudes in the British population from February 2001 to November 2023, and allows us to determine whether there is unequal opinion-policy congruence when it comes to monetary policy. The survey queries adults in the United Kingdom through both face-to-face interviews and an online survey, designed to be representative of the whole population.³

³For more information, see the document "Methodology and notes" on the following webpage: <https://www.bankofengland.co.uk/inflation-attitudes-survey/2023/november-2023>.

The survey comprises several questions that are useful for our purposes, and which we include in our analysis. We use the survey responses to measure respondents' 1) policy preferences, 2) income and, finally, 3) perceptions of economic conditions and understanding of monetary policy.

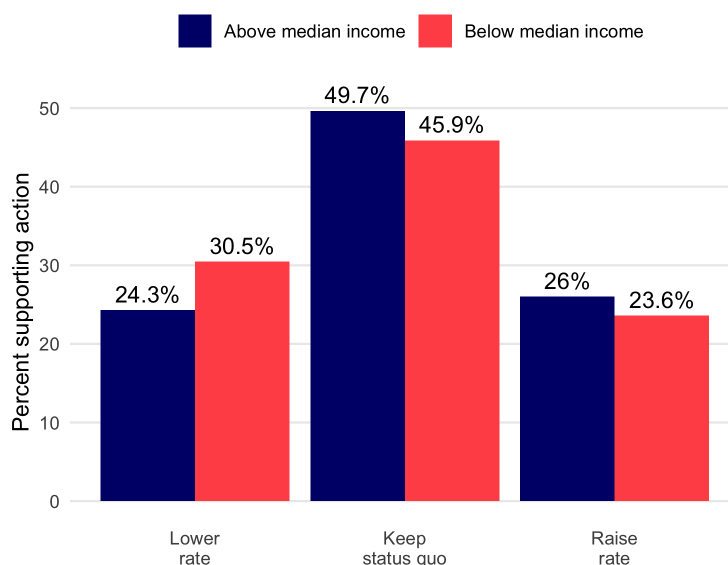
Policy preference

A central variable in the analysis is policy preference. Studies of opinion–policy congruence generally use survey questions where the respondent answers whether they support a specific proposal, or if they think that a proposal is good or bad. Unfortunately no such question is included in the survey, but one comes close. The respondents are asked “*Q.8 What do you think would be best for the British economy - for interest rates to go up over the next few months, or to go down, or to stay where they are now, or would it make no difference either way?*” with response options “Go up,” “Go down,” “Stay where they are,” “Make no difference” or “Don’t know.” The last two alternatives are treated as missing in most analyses.⁴

Figure 2 shows the preference for interest rate changes among respondents above and below median income in the data. A plurality of respondents in both groups support keeping the interest rate at the same level: 49.7% among respondents above the median, and 45.9% among those below. But while more low-income respondents prefer lowering the rate (30.5%) than raising it (23.6%), higher-income respondents are more positive to raising the rate (26.0%) than to lowering it (24.3%).

⁴There is also a corresponding question with identical response options, in which the respondent is asked about what would be best for the respondent personally. 60 percent in the pooled sample make the same evaluation for both the personal and the national economy (as can be seen in Appendix Table A.1), while nine percent make the opposite evaluation. Which of the evaluations comes closest to the political preference the respondent would express, if asked? Research on economic voting have shown that voters generally seem to place greater weight on “sociotropic” rather than “pocketbook” considerations, at least when asked outright (Healy, Persson, and Snowberg, 2017). We will therefore focus on the measure of what is best for the economy, but provide alternative analyses using this measure in the Appendix.

Figure 2: Preference for changes to the interest rate (lower, keep at status quo, raise) among respondents above and below median income.



Note: n=103916. Data pooled from all survey waves. Survey question: “What do you think would be best for the British economy - for interest rates to go up over the next few months, or to go down, or to stay where they are now, or would it make no difference either way?” Responses of “Don’t know” and “Make no difference” were excluded from the analysis.

Income level

Income in the survey is measured with a question on annual income, with response options in four or five intervals at different periods of the study period. Comparison over time is difficult, however, as the amounts that delimit the intervals have changed over time, as has the income distribution in the British public. We use the same approach as Martin Gilens (2012) and assign respondents a place in the income distribution on the basis of the distribution of responses in the survey. For instance, if 20 percent of respondents select the top income response option, each who did is assigned an income score of 0.90. If 30 percent select the top response option, they get an income score of 0.85, and so on.

Accuracy of economic perceptions and understanding of monetary policy

Respondents' perceptions of economic conditions are a key component of the informational asymmetry model. This is in the survey gauged with several questions, beginning with "*Q.1 Which of these options best describes how prices have changed over the last 12 months?*" with the respondent being able to choose from "Gone down," "Not changed," "Don't know," or to specify a price increase in one percent intervals. We score these answers as accurate if the 12-month change in Consumer Price Index (measured in percent) is in the interval specified by the respondent and incorrect if the increase of CPI was outside the interval. Don't know-responses are also coded as not being a correct perception of inflation.⁵

The survey furthermore includes a question about how interest rates have developed over the last year: "*How would you say interest rates on things such as mortgages, bank loans and savings have changed over the last twelve months?*" with response options "Risen a lot," "Risen a little," "Stayed about the same," "Fallen a little," "Fallen a lot" and "Don't know." We create a variable for whether the respondent has a correct perception of the development of interest rates by comparing the bank rate at the time of the survey with the same date a year before. Respondents who have answered that interest rates have risen (a little or a lot) get a correct answer if the bank rate is higher than the year before, and the opposite is true for respondents who answered that rates have fallen (a little or a lot) and the bank rate is lower than the year before. We code those who answered that it has stayed about the same as correct if the rate did not increase or decrease more than 0.25 percentage points. Don't know-answers are also coded as incorrect.

Respondents are also asked to estimate future inflation, with the question "*Q.2 How much would you expect prices in the shops generally to change over the next twelve months?*" with response options similar to the question about past inflation: "Go down," "Not change"

⁵There is some room for interpretation in what the answer "Not changed" means. We therefore count respondents answering "Not changed" as correct if the CPI change was between -0.5 and +0.5 percent. There is thus some overlap between the response categories. When the CPI decreased by 0.2 percent a respondent could answer correctly both by choosing the "Gone down" and "Not changed" alternatives.

and go up in one percent intervals. It also includes a “No idea” answer. We compare this question not with the actual inflation that followed, but with forecasts about inflation made by the bank at the same time. Elkjær and Iversen argue that high-income individuals have greater opinion–policy congruence because they reason in the same way as policy-makers. Respondents who have the same estimate of future inflation as the bank could logically be assumed to draw the same conclusions about what to do with the interest rate. The Bank’s current forecasts are presented each quarter in their Monetary Policy Report, and it also provides data on historical forecasts on its webpage.⁶ We use the modal forecast for CPI one year ahead of the forecast to match the survey question, and respondents are scored as having correct perceptions when the modal forecast is in the range specified by the respondent.

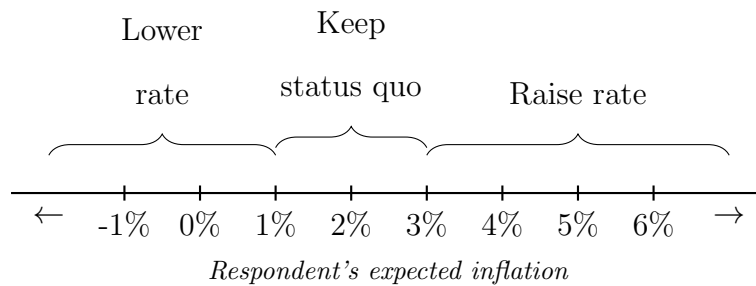
In addition to having an accurate perception of the state of the economy, respondents also need to draw the ‘correct’ policy conclusion on the basis of that information. Conventional economic theory says that higher interest rates cause inflation to fall, and lower interest rates increases inflation. In the survey, respondents are asked exactly whether they believe this to be true by agreeing or disagreeing with the following statement: *“Q9b: A rise in interest rates would make prices in the high street rise more slowly in the medium term - say a year or two.”* Respondents that have answered “Agree” or “Strongly agree” are coded as understanding the interest rate–inflation relationship. A respondent that does so and has the correct perception of economic conditions is likely to reach the same conclusion about what to do with the interest rate as the central bank. But as mentioned previously, recent research has found that many people have the wrong view of this dynamic, with a majority believing that inflation would increase following rising interest rates. Among high-income respondents the wrong view was less common, but was still held by a majority (Binetti, Nuzzi, and Stantcheva, 2024, Appendix, Figure 5).

Finally, we construct a dummy variable combining the respondent’s expectation of future

⁶The data is found in the Excel file “Parameters for MPC CPI inflation projections from February 2004”. For the period before 2004 we take data from the Excel file “rpixinternet.xls” which was previously published on the Bank’s webpage, but now accessible through the Internet archive’s Wayback Machine.

inflation and policy preference. Only individuals who a) have the same forecast as the bank (described earlier) and b) react to level of expected inflation in the forecast in the way described in Figure 3 score a 1 on the variable. The decision rules correspond to the instructions to the Bank of England. When inflation deviates more than one percentage point from the two percent target it triggers an exchange of letters between the Governor of the Bank of England and the Chancellor of the Exchequer, in which the Governor has to explain the Bank’s planned policy actions. The range between 1 and 3 percent inflation is thus considered acceptable here, and the bank is likely to prefer keeping the interest rate at the status quo. When inflation is above this range, the likely response is to raise the interest rate, and if inflation is below the target, the likely response is to cut it. This is obviously a crude measure, but as our aim is to provide a most-likely case for the informational asymmetry argument we still think that this composite variable serves to better capture economic sophistication than simple perception measures.

Figure 3: Policy preferences that are seen as ‘correct’ in relation to expected inflation in construction of composite forecast/preference variable.



Estimating opinion–policy congruence

While the literature tends to discuss responsiveness, as this is the theoretically important concept, regression analyses with observational data cannot in the absence of specific designs determine causality. We therefore refer to congruence instead of responsiveness when discussing the associations in our models. To determine whether there is unequal opinion–policy congruence in monetary policy, we conduct a number of different analyses. First,

to ensure comparability with existing research in the field of opinion–policy responsiveness, we estimate the same type of regression model as is common in that field. Opinion–policy congruence is estimated by regressing policy outcome on support for the proposal in different income groups, both for each group separately in bivariate models and in models where all income groups are included. The typical result in this type of analysis is that support for the proposal is positively associated with implementation for all income groups in the bivariate case, but when included in the same model the coefficient for the top income group is more positive. In fact, the coefficient for support in the bottom income group often turns negative (Gilens, 2012).

We use each survey wave from February 2001 to November 2023 to estimate the share of respondents who think that it would be better for the national economy (survey question *Q8*) to *increase*, *keep* or *reduce* the bank rate. This is done separately for respondents who are above and below median income. However, as there are three qualitatively different policy outcomes we stack the data so each survey wave is included as three observations, one for each type of outcome. The dependent variable is whether the policy outcome materialized or not, and the independent variables are the level of support for that particular outcome in each income group. These data are used to estimate the parameters of the following regression model:

$$y_{pt} = \alpha^j + \beta^j \text{Share_Opinion}_{pt}^j + \varepsilon_{pt}^j, \quad (1)$$

where $\text{Share_Opinion}_{pt}^j$ is the share of respondents in income group $j \in J = \{Low, High\}$ in survey wave t who prefers policy $p \in \{Increase, Status\ quo, Reduce\}$. The dependent variable y_{pt} takes the value 1 if policy p was implemented following survey wave t , 0 otherwise. As mentioned above, we also estimate a model where we include these shares for both income

groups:

$$y_{pt} = \alpha + \beta_1 \text{Share_Opinion}_{pt}^{\text{Low}} + \beta_2 \text{Share_Opinion}_{pt}^{\text{High}} + \varepsilon_{pt}, \quad (2)$$

We can conclude that there is unequal opinion–policy congruence in favor of higher income citizens if the estimated regression coefficient for higher income respondents β_2 is more positive than for the coefficient for lower income respondents β_1 in (1).

We use a time frame of three months to evaluate policy changes.⁷ The reason for this is twofold: the time between survey waves is three months, and the question about rate changes asks about “the next few months”. The Monetary Policy Committee, which sets the bank Rate, meets eight times a year, which means that there is opportunity for the policy change to happen between surveys. The evaluation period of three months is much shorter than what is normally used in this line of research (four or five years), but the policy instrument in question is also much more fast-moving, necessitating a shorter time period.

We then shift our focus to the information asymmetry model. We make use of the individual-level data by considering each individual i ’s policy preferences: $\text{Opinion}_i \in \{\text{Increase}, \text{Status quo}, \text{Reduce}\}$.⁸ We generate a measure of individual-level congruence, Congruence_i , taking the value 1 if policy change p was implemented ($y_{pt} = 1$) at the same time as the respondent had preferences for policy change p , such that $\text{Opinion}_i = p$. To estimate the difference in congruence between respondents with different incomes, we define a variable Income_i which describes the respondent’s place in the income distribution, which we use together with the congruence measure in [Equation 3](#).

$$\text{Congruence}_i = \theta + \gamma \text{Income}_i + \lambda_t + \eta_i, \quad (3)$$

⁷For example, $y_{\text{Increase},t}$ takes the value 1 if the interest rate increased within three months from the time of the survey (0 otherwise).

⁸Note that we generate the variable $\text{Share_Opinion}_{pt}^j$ in (1) and (2) by creating separate dummy variables indicating preferences for each policy change p and then taking the sum of these by wave and income group.

where the parameter γ measures the difference in opinion–policy congruence between the individuals at opposite ends of the income distribution, and λ_t absorbs survey wave-specific variation. We expect γ to be positive in model (3).

We next examine whether higher income respondents are better informed about the state of the economy and more knowledgeable about the relationship between the interest rate and inflation. Using the individual-level data, we estimate the difference in information between higher and lower income respondents in the following regression model:

$$Correct_i^v = \pi^v + \delta^v Income_i + \lambda_t^v + \zeta_i^v, \quad (4)$$

where $Correct_i^v$ indicates whether the respondent’s perception of the level of inflation, interest rates, and monetary policy is correct, as described in the preceding section. The different variables are indicated by v . The parameter δ measures the difference in the share of correct perceptions between the highest and the lowest income group. If higher income respondents have a better perception of the state of the economy, as theorized by Elkjær and Iversen, then δ should be positive.

We then proceed to try to explain γ from model (3) by controlling for the perception indicators. The motivation for these specifications is that we expect the estimated difference in congruence due to income to vanish, or be greatly reduced, when we also consider potential differences in information. In other words, when holding knowledge about monetary policy or perception about inflation constant, there should be no difference in congruence due to differences in income.

By exploring the relationship between income and respondents’ perception of inflation or knowledge about monetary policy, we can test the informational asymmetries argument that greater congruence of higher-income respondents can be explained by them to a larger extent wanting the “correct” policy change motivated by economic conditions.

Results

The presentation of the empirical results follows the three hypotheses. First, can we reproduce the typical finding of unequal responsiveness between income groups? Second, do individuals with higher incomes have more accurate economic perceptions and better understanding of which policies achieve desired outcomes? Third, if so, does higher economic sophistication explain why individuals with higher incomes see more of their preferred policies realized?

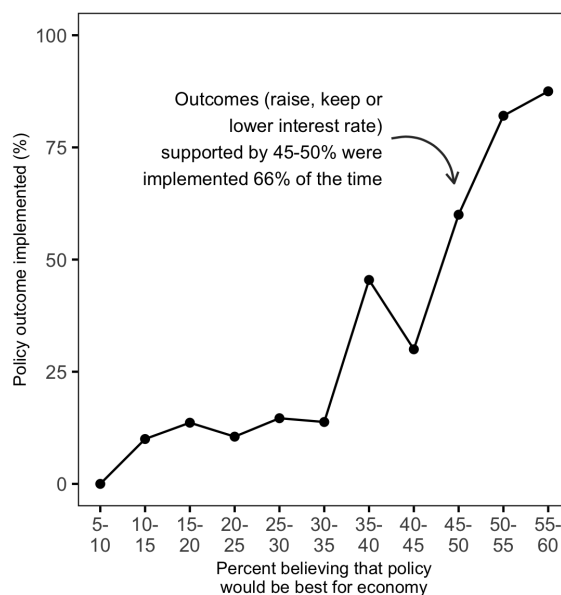
Testing *H1*: Does the interest rate follow the preferences of high-income earners?

As a first stage of our analysis, we aim to reproduce the type of analysis common in opinion–policy responsiveness research, where policy outcomes are regressed on the support for the policy in the public. [Figure 4](#) shows the correspondence between preferences and what happens with the bank rate in the three months following the survey, calculated as simple means over five percent-intervals of support. There is a clear positive relationship: Policy follows public preferences.⁹

Associations of this kind is generally interpreted as responsiveness of policy to public opinion. Nevertheless, we can be fairly certain that true responsiveness of policy-makers to the public is not the driver of the relationship in this case. The Bank of England’s instruction is to keep inflation at the two percent target, not to follow public opinion. Patterns in the data that could arise from responsiveness can thus also appear for other reasons, if both citizens and policy-makers react to the same underlying conditions.

⁹These graphs combine support for and implementation of all three rate outcomes. Appendix Figure A.2 shows the correspondence divided by type of outcome.

Figure 4: Changes to the interest rate seemingly follows the preferences of the public.



Note: Graph shows how often a given policy change (lower, keep or raise the interest rate) were implemented, divided according to the level of support for the particular policy action in the public. n=258 (86 survey waves \times 3 policy actions).

But do we also see *unequal* opinion-policy congruence? To answer this question we estimate Linear Probability Models on the stacked data, but divide the support variable according to the income of the respondent, below and above the median. We first include the variables separately and then together. In the final model the identifying variation is thus in differences in support for the different policy outcomes between the income groups.

Models 1 and 2 in [Table 1](#) model policy outcomes as a function of preferences among the below median income group (model 1) and the above median income group (model 2). The coefficient is positive for both income groups: when more people think that a specific interest rate outcome is better for the economy, the probability of that interest rate change being implemented increases in the three months following the survey. The proportion explained variance is however larger in model 2, indicating a better fit between high income preferences and policy outcomes. In model 3 preferences for both groups are included together, which renders the coefficient for the low income group statistically insignificant. Controlling for

Table 1: Regression analysis: Dependent variable is policy outcome implemented. When controlled for each other, only high-income preferences have an association with policy outcomes.

	(1)	(2)	(3)
Support among low-income respondents	1.962*** (0.256)		-0.229 (0.530)
Support among high-income respondents		1.864*** (0.183)	2.032*** (0.403)
Constant	-0.324*** (0.085)	-0.292*** (0.060)	-0.272*** (0.082)
Survey waves	86	86	86
Observations	258	258	258
R ²	0.269	0.357	0.357
Adjusted R ²	0.266	0.354	0.352

Note: *p<0.05; **p<0.01; ***p<0.001. Standard errors clustered on each survey wave. Unit of analysis is policy outcome - raise, status quo or lower - for each survey wave, totaling 86 * 3 = 248 observations. Independent variables are support for each respective outcome, and the dependent variable is whether the outcome in question was implemented or not.

each other, only the preferences of the above median income group seems to matter.

The results of this analysis provide support for H1 and are in line with the typical findings in the literature on unequal responsiveness (Gilens, 2012; Elkjær and Klitgaard, 2021): There is a connection between preferences and policy, but when high- and low-income earners disagree, policy tends to follow the preferences of the high-income earners. That this pattern emerges even in an institutional setting where we do not expect policy-makers to be guided by high-income preferences for electoral reasons suggest a kind of placebo effect also for unequal congruence and therefore speak against the economic-elite domination model. It would, however, make sense if information asymmetries cause unequal congruence and therefore the appearance of unequal responsiveness.

We now turn to the individual level. Our main dependent variable in the next analysis is whether the interest rate policy seen by the respondent as best for the economy is implemented in the three months following the survey. The independent variable is the respondent's income position, from 0 (lowest) to 1 (highest, with 0.98 being the highest

observed value in the data).

Table 2 contains two models, without and with fixed effects for each survey wave. Both models show that respondents with higher incomes are more likely to see the outcomes they think is better for the economy realized, mirroring the association between high-income preferences and policy outcomes in Table 1. The resulting difference in individual-level congruence is relatively small: the income coefficient in Model 2 is 0.068, which means that individuals at the very top of the income distribution see their preferred policy outcomes realized 6.8 percentage points more often than individuals at the very bottom. Small differences in congruence are however common in the literature (Persson and Sundell, 2023; Enns, 2015). Our aim in the later stages of the paper is to account for the small but statistically significant difference in congruence.

Table 2: OLS estimates of the parameters of (3). The dependent variable measures whether the interest rate outcome $\{Increase, Status\ quo, Reduce\}$ in the months following the survey matches the preference of the respondent.

	Dependent variable: Policy follows respondent preference	
	(1)	(2)
Place in income distribution (0-1)	0.091*** (0.006)	0.068*** (0.006)
Constant	0.391*** (0.003)	
Survey wave FE	No	Yes
Observations	102,334	102,334
R ²	0.003	0.062
Adjusted R ²	0.002	0.061

Note: *p<0.05; **p<0.01; ***p<0.001. Unit of analysis is the individual, weighted using survey weights in the data. Dependent variable is whether changes to the interest rate (raise, status quo, lower) in the three months following the survey matched with what the respondent thought would be best for the national economy. Independent variable is respondent's place in the income distribution, with 0.5 = median income.

To better determine which theoretical model that has better support we now turn to the additional predictions of the informational asymmetry model, that higher income respon-

dents have more accurate perceptions of the state of the economy and better understanding of standard monetary policy (H2). If so, it is possible that these differences explain the differences in congruence.

Testing *H2*: Do high-income earners have more accurate economic perceptions?

Several survey questions lets us explore both accuracy of perceptions and understanding of dynamics. In [Table 3](#) we examine the relationship between the respondents' income and three dependent variables related to accuracy of perceptions: whether they have the correct perception of inflation (model 1), make the same estimate of future inflation as the Bank of England does (model 2) and have a correct perception of the development of the interest rate the last year (model 3). In models 4 and 5 we focus on the association between information and policy, as the informational asymmetry hypothesis posits that higher income individuals have “a closer adjustment of preferences to the state of the economy” (Elkjær, 2020, p. 2213).

We first construct a variable that takes the value 1 when the respondent has the same forecast as the bank *and* draws the “correct” conclusion in relation to those expectations. Specifically, respondents who expect 1-3 percent inflation should want to keep the interest rate at the status quo;¹⁰ raise the rate if expected inflation is higher than 3 percent and lower the rate if expected inflation is less than 1 percent. Finally, in model 5 the dependent variable is whether the respondent agrees with the statement that raising the interest rate leads to lower inflation.

¹⁰Response options in the survey does not allow for a tighter band around the 2 percent target.)

Table 3: OLS estimates of the parameters of (4), with accuracy of perceptions as the dependent variables. Respondents with higher income have more accurate perceptions and better understanding of dynamics.

	<i>Accuracy:</i>			<i>Dynamics:</i>	
	Correct inflation perception	Same forecast as bank	Correct interest rate perception	Same forecast + correct preference	Understands interest-inflation relationship
	(1)	(2)	(3)	(4)	(5)
Place in income distribution (0-1)	0.036*** (0.004)	0.059*** (0.004)	0.209*** (0.005)	0.029*** (0.003)	0.061*** (0.009)
Survey wave FE	Yes	Yes	Yes	Yes	Yes
Observations	103,916	103,916	103,916	103,916	39,281
R ²	0.148	0.041	0.167	0.020	0.007
Adjusted R ²	0.148	0.040	0.166	0.020	0.006

Note: *p<0.05; **p<0.01; ***p<0.001. Dependent variables: (1) Having a correct estimate of the current level of inflation. (2) Having the same expectation of inflation in the next year as the Bank of England. (3) Having a correct estimate of how interest rates have developed the last year (compared with the Bank Rate). (4) Having the same forecast as the bank, combined with having the “correct” preference for the interest rate in relation to inflation expectations. Respondent should want to lower the interest rate if he or she expects inflation to be lower than 1 percent, should want to keep the interest rate at the status quo if inflation expectation is 1-3 percent, and raise the interest rate if expected inflation is higher than 3 percent. (5) Agreeing with the statement “A rise in interest rates would make prices in the high street rise more slowly in the medium term - say a year or two.” Number of observations is lower in model 5 as the survey question is asked with less frequency. Independent variable is respondent’s place in the income distribution, with 0.5 = median income.

In all five models individuals at the higher ends of the income distribution have more accurate perceptions and better understanding of dynamics, which implies support for H2 and the informational asymmetry model. Some of the associations between income and having correct perceptions are however quite weak, which casts doubt on these perceptions as drivers of the income-congruence relationship. The income coefficient for having the correct perception of inflation is 0.036 (Model 1), meaning that the predicted difference between respondents at the very bottom and top of the income distribution is 3.6 percentage points. Top earners are 5.9 percentage points more likely to make the same forecast of inflation as the Bank (Model 2), but a full 20.9 percentage points more likely to have the correct perception of how the interest rate has developed in the past year (Model 3). Models 4 and 5 show that higher income respondents are better at understanding relationships between inflation and the interest rate, but only slightly.

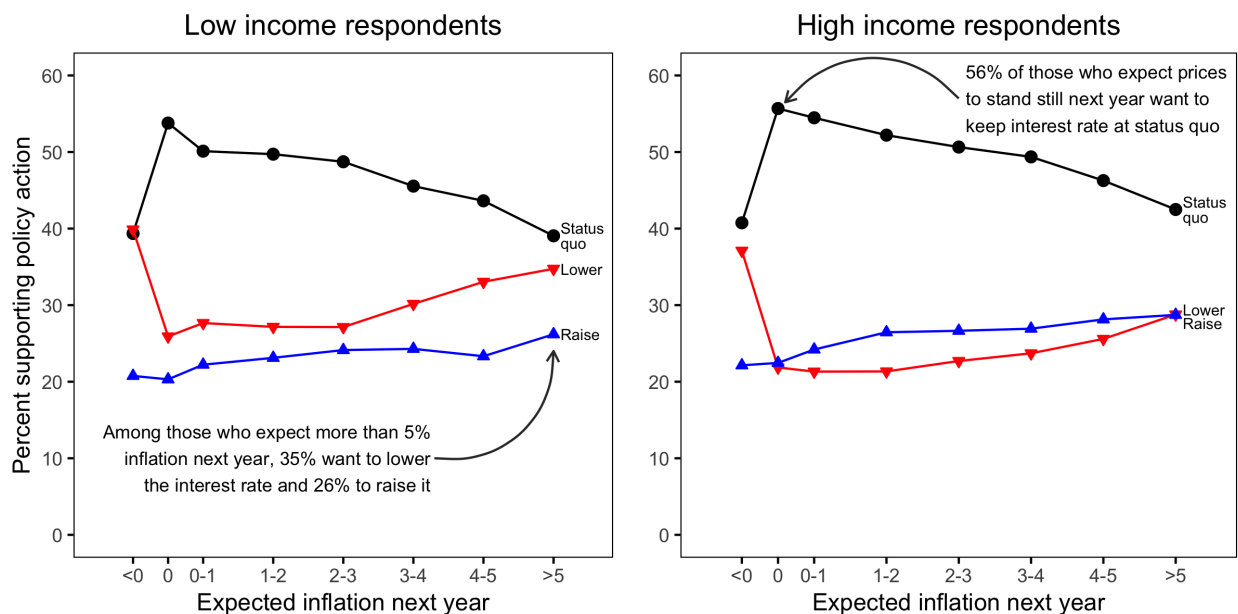
The income coefficient for congruence was 0.068 (Model 2 in [Table 2](#)). The generally weak relationships between income and accuracy of perceptions means that perceptions are unlikely to account for the entire association between income and congruence, possibly apart from having the correct perception of the interest rate. However, several information effects taken together could possibly account for a substantial portion of the income advantage.

But before we proceed to investigating the relationship between information and congruence, we illustrate the relationship between inflation expectations and preferences for the interest rate graphically. According to standard monetary policy, expectations of high future inflation should be paired with a preference for increasing the interest rate. That is only partly the picture that emerges in [Figure 5](#). There is a slight positive association between inflation expectations and the share of respondents who want to raise the interest rate. But respondents with higher inflation expectations are in contrast to conventional economic wisdom also more likely to say that interest rates should be lowered, with the exception of respondents who expect deflation next year. Those respondents are the most likely to want to cut interest rates, but only constitute 3 percent of respondents.

The most interesting lines in the graphs are however those that show the share of respondents who want to keep the interest rate at the status quo, as they could indicate which level of inflation respondents prefer. These lines reach their highest point when the expectation of future inflation are zero, in marked contrast to the two percent inflation target that the Bank of England adheres to. This pattern is the same for respondents both below and above median income. Hence, respondents and policy-makers seem to operate according to different decision rules. Having the same inflation expectations as the bank will then not help in arriving at the same policy conclusion.

To summarize the test of H2, respondents with higher incomes are slightly more accurate in their assessments of interest rates and inflation, but all respondents seem to express a preference for zero inflation. This reduces the chance that respondents will arrive at the

Figure 5: Interest rate preferences conditional on inflation expectations, for low and high income respondents. Respondents express the greatest satisfaction with the status quo when they expect future inflation to be zero.



Note: The graph shows the average percent of respondents who support each of the three policy actions, conditional on their level of expected inflation. The fact that satisfaction with the status quo is highest when inflation is expected to be zero suggests that respondents are more inflation-averse than the Bank of England, which targets two percent inflation. n=134,623

same conclusion as the Bank of England, which does not seek to eliminate inflation entirely.¹¹

Testing *H3*: Can income differences in congruence be explained by differing accuracy of perceptions?

In the next step we investigate whether differences in accuracy of perceptions can account for the better congruence of high-income earners. We do so by including perception variables as mediators in the analysis where individual-level congruence is the dependent variable. If the inclusion of these variables make the estimated slope coefficient for income statistically indistinguishable from zero, the interpretation is that the better congruence of higher-income earners is due to them having more accurate perceptions. The four main variables are the

¹¹A question in the survey (Q4) ask respondents outright if they think the target is too high, too low, or about right. 14.8% think it is too low, 26.5% that it is too high and 58.7% that it is about right (n=189,855).

ones investigated in the previous analysis: the correct inflation perceptions, having the same inflation expectation as the bank, having a correct perception of what the bank rate is, the variable indicating that the respondent had the same inflation expectation as the bank and has the “correct” preference in relation to that expectation, and finally, whether the respondent understands the interest rate-inflation dynamic. Inclusion of the final variable limits the sample size considerably and it is therefore presented in a separate model.

Table 4: OLS estimates of the parameters of (3), where the dependent variable is individual-level responsiveness. The better responsiveness to high-income individuals is only partly explained by better perceptions.

	<i>Dependent variable: Policy follows respondent preference</i>			
	(1)	(2)	(3)	(4)
Place in income distribution (0-1)	0.068*** (0.006)	0.053*** (0.006)	0.046*** (0.005)	0.044*** (0.009)
Correct inflation perception		0.007 (0.004)	-0.020*** (0.004)	-0.014*** (0.006)
Same forecast as bank		0.017*** (0.004)		
Correct rate perception		0.067*** (0.003)	0.061*** (0.003)	0.050*** (0.005)
Same forecast + correct preference			0.334*** (0.005)	0.329*** (0.008)
Understands interest-inflation relationship				-0.008 (0.005)
Survey wave FE	Yes	Yes	Yes	Yes
Observations	102,334	102,334	102,334	39,281
R ²	0.062	0.066	0.103	0.099
Adjusted R ²	0.061	0.065	0.102	0.098

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

For ease of comparison Model 1 repeats the analysis with only the income position variable (together with survey wave fixed effects). In Model 2 we include the three variables related to accuracy of perceptions. All three have positive signs, with the strongest coefficient being

found for having the correct perception of how the rate has developed during the last year. Individuals who answer correctly on this question see their preferred policies realized 6.7 percentage points more often. Combined with the fact that high-income individuals were more likely to have this information, inclusion of this variable in particular accounts for some of the high-income advantage in congruence: the income coefficient is reduced from 0.068 to 0.053.

Model 3 includes the variable for making the same forecast as the bank and drawing the “correct” inferences from it. As it is a modification of the indicator for having the same forecast, the original variable is excluded from the model. The modified variable has a very strong positive association with individual-level congruence: 0.334. Individuals who for instance agree with the bank that inflation next year will be more than 3 percent and think that the interest rate should be raised are very likely to see their preference realized. Adding this variable further reduces the income coefficient, to 0.046. Somewhat surprisingly, the variable for understanding the interest-inflation relationship has no significant association with congruence (Model 5).

Multiplying the coefficients from Model 3 of [Table 3](#) and Model 3 of [Table 4](#) we see that having the correct perception of the interest rate accounts for $0.209 * 0.061 = 0.013$ of the income advantage, and having the correct forecast and drawing the right inferences from it for $0.029 * 0.334 = 0.010$ (Model 4 of [Table 3](#) and Model 4 of [Table 4](#), which together constitute about a third of the original income advantage.

Hypothesis 3 is thus partly confirmed. High-income respondents are slightly more likely to see their preferred policy realized due them having better information (especially about the development of the interest rate) and adopting preferences that can be thought to match with those of the policy-making institution. It should also be noted that there is a level of granularity to the survey questions that limit inference. For instance, the question on inflation expectations does not allow us to distinguish between respondents that expect 1.1 or 1.9 percent of inflation, which could be important for opinion about the interest rate.

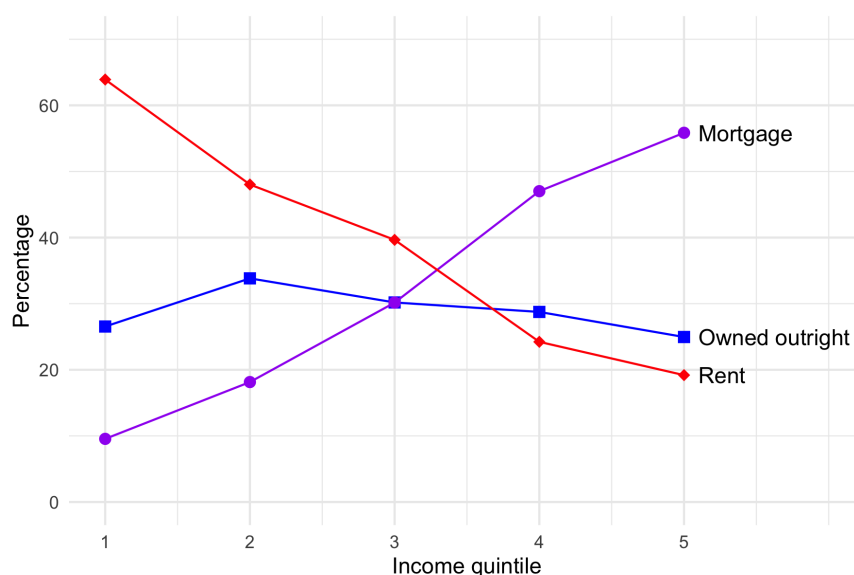
Nevertheless, the majority of the income advantage remains unaccounted for.

Home ownership as an explanation for unequal congruence

The core aim of this paper is to evaluate the informational asymmetry model relative to the economic elite domination model. However, the inability of either theory to fully explain the better congruence to individuals with higher income calls for an exploration into other possible mechanisms.

One important factor could be housing. Mortgage payments constitute an important expense for many households, are directly impacted by interest rates, and have a strong association with income. Figure 6 shows the average housing status of respondents in the survey (pooled across all years), calculated for each income quintile, from lowest to highest. In the lowest quintile, 64 percent rent their home and 10 percent have a mortgage. In the highest quintile, 56 percent have a mortgage and 19 percent rent. Outright ownership is not correlated with income, largely because it is considerably more common among older respondents that also tend to have lower incomes.

Figure 6: Housing status of respondents in the survey. High-income individuals are more likely to own their home with a mortgage.



How does income and home ownership relate to preferences for the interest rate? For mortgage-takers, it would appear logical to oppose interest raises and prefer reductions. This is however not what we find. Instead, respondents with mortgages are distinguished by a greater preference for the status quo (see Appendix Figure A.6 and Table A.5). This might seem counter-intuitive, but is actually in line with survey findings from Germany (Dräger, Lamla, and Pfajfar, 2021). Two factors are also worth keeping in mind. First, interest rates were extremely low for the long period between 2009 and 2022, which could temper mortgage-takers desire to lower them more. Second, respondents that currently rent might want to lower interest rates in order for them to be able to take on a mortgage. Mortgage-takers are in contrast already insiders on the housing market and might therefore not be as positive to reductions, even if they stand to gain from it personally.

Table 5: Housing status accounts for a large portion of income inequality in responsiveness

	<i>Dependent variable: Policy follows respondent preference</i>			
	(1)	(2)	(3)	(4)
Place in income distribution (0-1)	0.068*** (0.006)	0.045*** (0.005)	0.025*** (0.006)	0.013* (0.006)
Correct inflation perception		-0.020*** (0.004)		-0.021*** (0.004)
Correct rate perception		0.062*** (0.003)		0.056*** (0.003)
Same forecast + correct preference		0.333*** (0.005)		0.332*** (0.005)
Mortgage (ref: rent)			0.069*** (0.004)	0.054*** (0.004)
Own outright (ref: rent)			0.038*** (0.004)	0.025*** (0.004)
Survey wave FE:	Yes	Yes	Yes	Yes
Observations	101,506	101,506	101,506	101,506
R ²	0.062	0.103	0.065	0.105
Adjusted R ²	0.061	0.102	0.064	0.104

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

Housing status also has a strong effect on individual-level congruence, as can be seen in [Table 5](#). Model 3 shows that both being a mortgage-taker and owning outright have positive effects on congruence, through the association between housing status and preferences. Mortgage-takers are more supportive of the status quo, and status quo is the most common policy outcome. Inclusion of these variables reduces the income coefficient substantially, from 0.068 to 0.025. In Model 4 we finally include the information variables and the housing variables together, which reduces the income coefficient to 0.013. 81 percent of the original income effect is thereby accounted for. The coefficients for the housing variables are somewhat diminished as well, primarily due to the inclusion of the correct rate perception variable. Having a mortgage naturally has a strong association with knowing how the interest rate has developed.

Conclusion

Previous research on the relationship between public opinion and policy has shown that more affluent citizens are more likely to see their preferred policy realized. The question is why. The most common explanation is that this group exercises disproportionate influence over policy, which has been termed *the economic-elite domination model*. An alternative explanation is that what is observed is an effect of information, not influence: Affluent citizens are better informed and therefore form their preferences in the same way as decision-makers, meaning that they more often see their preferences realized. This has been termed *the informational asymmetry model*.

In this paper we evaluated the informational asymmetry model using the case of monetary policy, where true popular influence is unlikely. In line with the predictions of the informational asymmetry model, we find that the interest rate is more likely to develop the way higher-income respondents want it to, despite lack of political incentives for reelection.

In line with what the informational asymmetry argument predicts, we further find that

high-income earners tend to be better informed, albeit in several cases to a small degree, similar to what Elkjær and Iversen show for fiscal policy (Elkjær, 2020; Elkjær and Iversen, 2020). This better economic sophistication accounts for about a third of the original income inequality in congruence. In the final exploratory part of our paper we instead find that housing status is a more important explanation for unequal congruence. High-income individuals are more likely to be mortgage-takers, and mortgage-takers have greater preferences for the status quo. As status quo is the most common policy outcome, they often see their preferred outcome realized.

The findings of our paper have several theoretical implications. We first support an important point made by Elkjær and Iversen: The fact that policy seemingly follows the preferences of the affluent does not necessarily imply a direct causal influence of high-income individuals. But while Elkjær and Iversen downplay the democratic problems of unequal congruence/responsiveness, our results cannot give unequivocal support for that position. Better information on behalf of high-income individuals only account for a part of unequal congruence.

Previous research on opinion-policy responsiveness commonly find status quo bias: policy change is less common than non-change (Bartels, 2016; Gilens, 2012; Persson and Sundell, 2023). People who prefer the status quo are therefore more likely to get what they want from policy. Previous research has found that high-income respondents are more supportive of the status quo (Persson and Sundell, 2023), presumably because they are doing well already. In this paper, we find the same, specifically because of greater rates of home ownership among high income respondents.

The Bank of England is not, in contrast to elected politicians, guided by reelection incentives. But that does not mean that the policy it runs is apolitical. The Bank's independence and objective are now institutionalized, but both are outcomes of political decisions in the past, and can benefit some groups more than others (Stiglitz, 2001). The Bank of England's main objective for monetary policy is price stability, but that does not have to be the case.

The Federal Reserve in the United States has a dual mandate to promote both price stability and maximum employment.

If the focus on price stability enjoys more support among the affluent, it is still a case of unequal representation, even though it is not the affluent of today that caused the policy to be adapted. We therefore end this paper by calling for more research into the mechanisms underlying opinion-policy congruence and responsiveness, using research designs such as this one that allows for separating the mechanisms of opinion formation and policy adoption. Understanding the specific nature of unequal congruence and responsiveness is crucial for assessing its implications for the quality of democracy.

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Appendix for “Is unequal responsiveness caused by high-income earners having more informed opinions? An empirical test.”

November 25, 2024

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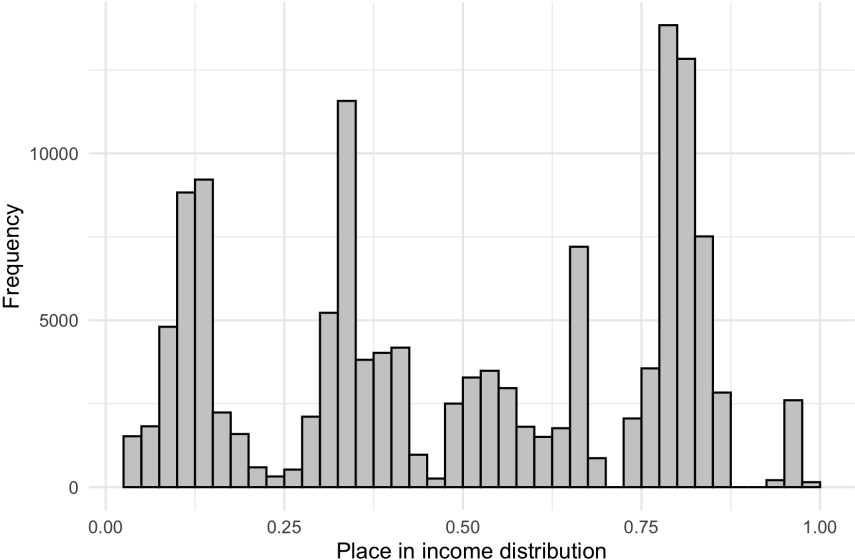
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Appendix

1 Income distribution in the data

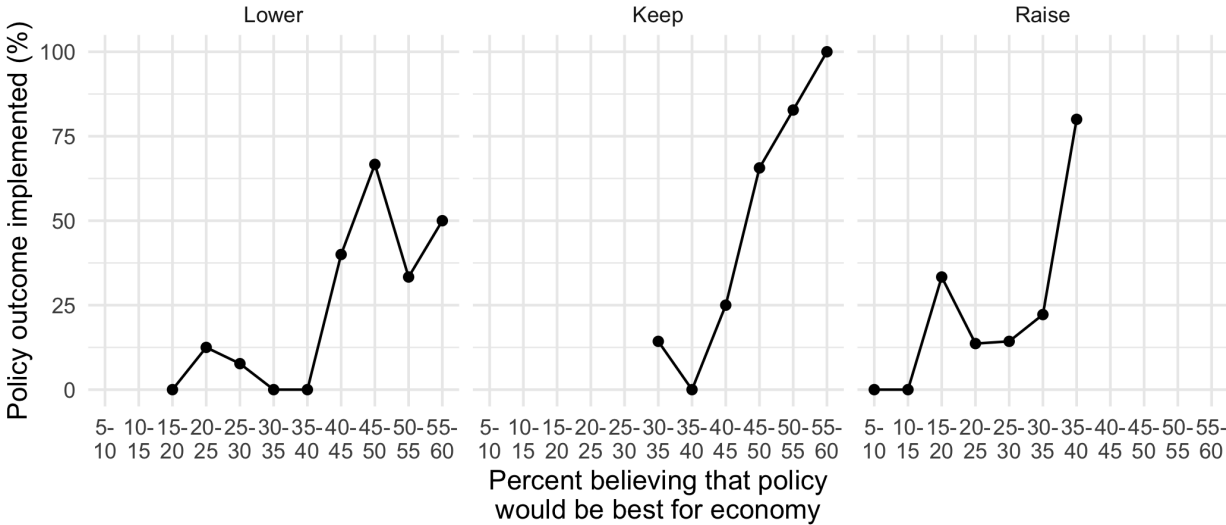
A histogram of the scores is shown in [Figure A.1](#), which reveals four larger groups and a smaller fifth one at the very top of the distribution. This pattern is due to there being four response options 2001-2016 and five 2016-2023.

Figure A.1: Histogram of calculated income positions for respondents in the survey data.



2 Support and outcomes, divided by type of outcome

Figure A.2: Correspondence between beliefs about what would be best for the British economy and interest rate outcomes, divided by type of outcome.



3 Policy preference based on what would be best for the respondent personally

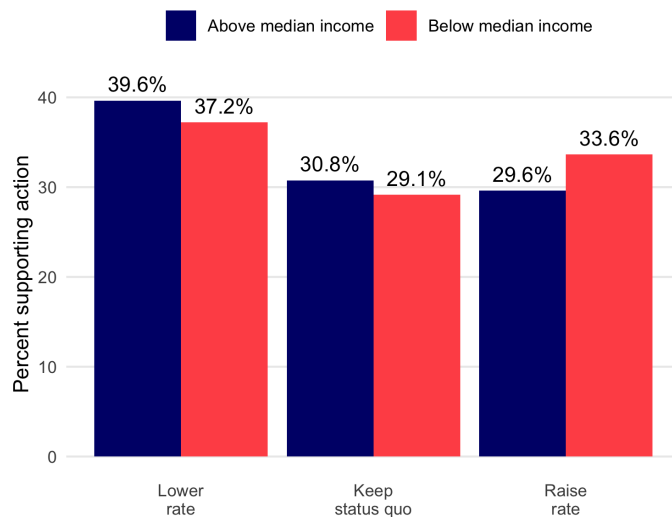
Our main analysis uses answers to the survey question of what would be best for the British economy to gauge policy preferences. In this section we repeat the main analyses using the survey question of what would be best for the respondent personally instead. Answers to the two questions are correlated, with 60 percent of respondents choosing the same answer to both questions, as can be seen in [Table A.1](#). There are however some discrepancies. When it comes to the British economy a plurality of respondents (47.0 percent) think it is best to keep the interest rates as is, but when it comes to them personally, the most common answer (38.5 percent) is that it would be best to lower it.

Table A.1: Percentage of respondents who think that it is better for them personally and for the national economy to increase or decrease the interest rate (%).

		Best for the British economy			
		<i>Decrease</i>	<i>Keep</i>	<i>Increase</i>	<i>Total</i>
Best for you personally	<i>Decrease</i>	20.7	12.9	4.9	38.5
	<i>Keep</i>	3.0	22.8	4.1	29.9
	<i>Increase</i>	4.1	11.3	16.3	31.7
<i>Total</i>		27.8	47.0	25.3	100.1

Does the choice of measure of policy preferences matter for the conclusions drawn from the main analysis? We first plot the net preference for interest rate changes using the alternative survey question, in [Figure A.3](#). There is a clear difference relative to [Figure 2](#) in the main text. High-income earners were on average more positive to higher interest rates when it came to what would be best for the British economy, but in this graph we see that high-income earners are more positive than low-income earners to lower interest rates. High-income earners are however also more positive than low-income earners to the status quo.

Figure A.3: Preference for changes to the interest rate among respondents above and below median income, based on what the respondent thinks would be best for themselves personally.



The discrepancy boils down to the fact that high-income earners to a much higher extent have mortgages, and respondents with mortgages are much more likely to say that lower interest rates would benefit them personally. More of this in a later section of the appendix.

We next look at whether the interest rate follows preferences. Using the question of what would be best for the British economy, Figure 4 in the main text showed that this is the case. However, when we replicate the analysis with the alternative measure in Figure A.4, the pattern is much less pronounced. Opinion-policy congruence is thus less obvious when we use this measure, and in this aggregated fashion.

When we instead divide the graph according to the type of outcome, associations between support for an outcome and the probability of that outcome being implemented are all positive. All outcomes are more likely to happen when many people support the outcome, but at different levels of the support distribution. When it came to the British economy, many respondents believed that it would be best to keep it at the same level, but for them personally, they are more likely to answer that it is best for them to lower or raise it.

What does this mean for the analysis of unequal (placebo) responsiveness? In Table A.2

Figure A.4: Changes to the interest rate does not follow preferences as clearly when preferences are measured using survey question of what would be best for R personally.

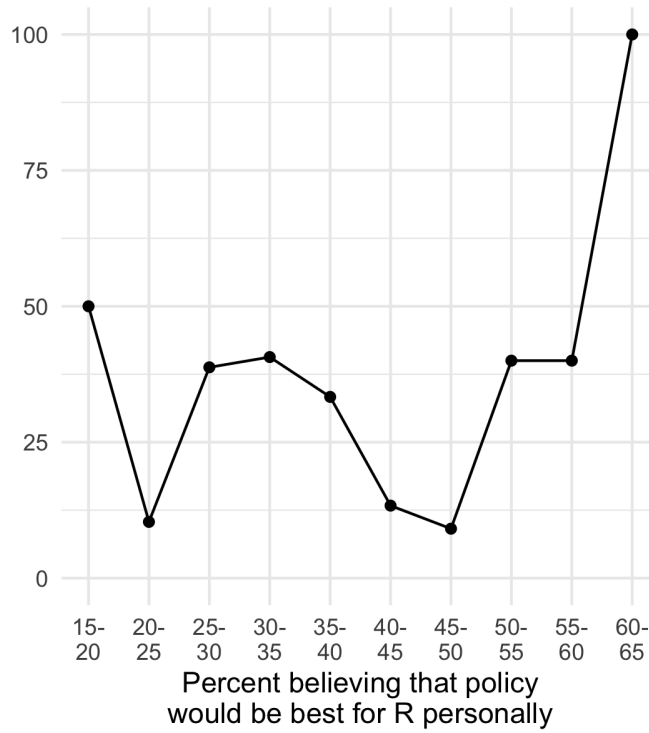
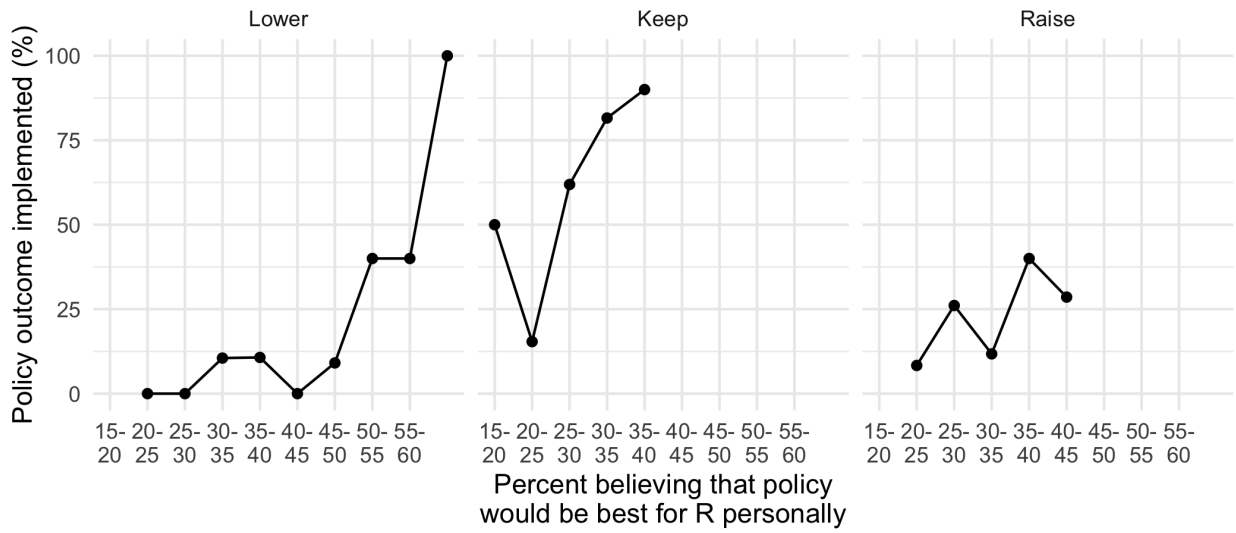


Figure A.5: Correspondence between beliefs about what would be best for R personally and interest rate outcomes, divided by type of outcome.



we repeat the stacked analysis where interest rate outcomes are regressed on the level of support for them, but now using the question of what would be best for the respondent personally. In Model 1 the coefficient for support among low-income respondents is negative, meaning that outcomes are less likely the more low-income respondents support it. The bivariate coefficient for support among high-income respondents in Model 2 is positive, but neither is statistically significant. When both are included together both become statistically significant, with opposite signs. Even though the relationship between these preferences and outcomes is weaker overall, we still see unequal “responsiveness”. When preferences of high- and low-income earners diverge, policy is more likely to follow the preferences of high-income earners.

Table A.2: Regression analysis: Dependent variable is policy outcome implemented, policy support measured with question about what would be best for R personally.

	(1)	(2)	(3)
Support among low-income respondents	-0.492 (0.512)		-2.652*** (0.794)
Support among high-income respondents		0.437 (0.340)	1.908** (0.585)
Constant	0.493** (0.171)	0.184 (0.113)	0.577*** (0.163)
Survey waves	86	86	86
Observations	258	258	258
R ²	0.005	0.009	0.068
Adjusted R ²	0.002	0.005	0.060

Note: *p<0.05; **p<0.01; ***p<0.001. Standard errors clustered on each survey wave.

The same inequality can also be observed on the individual level, when we calculate opinion-policy congruence as the match between policy and the respondent’s answer to what would be best for them personally. Results are presented in [Table A.3](#). Income difference in this type of opinion-policy congruence are weaker, but in the same direction: Respondents at

the top of the income distribution are 3.1 percentage points more likely to see their preferred policy outcome realized. The corresponding figure in the main analysis was 6.8 percentage points (Model 2, Table 2 in the main text).

Table A.3: Alternative OLS estimates of the parameters of Equation 3 in the main text. The dependent variable measures whether the interest rate outcome $\{Increase, Status\ quo, Reduce\}$ is congruent with respondent perceptions about what is best for them personally. Respondents with higher income have higher opinion-policy congruence.

	<i>Dependent variable:</i>	
	Policy congruent with best for R personally	
	(1)	(2)
Place in income distribution (0-1)	0.031*** (0.006)	0.031*** (0.006)
Constant	0.327*** (0.003)	
Survey wave FE	No	Yes
Observations	99,928	99,928
R ²	0.0003	0.026
Adjusted R ²	0.0003	0.025
<i>Note:</i>	*p<0.05; **p<0.01; ***p<0.001	

Despite the fact that high-income respondents more often than low-income respondents think that higher interest rates are better for the British economy, and more often think that lower interest rates are better for them personally, they are more likely to get what they want regardless of which measure of preferences we use.

We next repeat the analysis of congruence where we also control for accuracy of perceptions, with results presented in [Table A.4](#). Overall, results are similar to those presented in the main analysis (Table 4 in the main text). Inclusion of the variables for accuracy of perception in model 2 reduces the income coefficient, but there remains a positive and statistically significant relationship. Here, however, the reduction in coefficient size between

models 1 and 2 are larger as a share of the original relationship, with the coefficient being reduced from 0.031 to 0.020. All of the three accuracy variables have positive and statistically significant associations with congruence: Respondents who have accurate perceptions of the level of inflation and the interest rate and make the same inflation forecast as the bank are more likely to see the interest rate develop the way they think is best for themselves personally.

Table A.4: Regression analysis, dependent variable is what would be best for the respondent personally.

<i>Dependent variable: Policy follows respondent preference for best for R personally.</i>				
	(1)	(2)	(3)	(4)
Place in income distribution (0-1)	0.031*** (0.006)	0.020*** (0.006)	0.016** (0.006)	0.007 (0.010)
Correct inflation perception		0.025*** (0.004)	0.013*** (0.004)	0.013 (0.007)
Same forecast as bank		0.010*** (0.004)		
Correct rate perception		0.047*** (0.003)	0.048*** (0.004)	0.035*** (0.006)
Same forecast + correct preference			0.129*** (0.006)	0.122*** (0.009)
Understands interest-inflation relationship				0.005 (0.005)
Survey wave FE	Yes	Yes	Yes	Yes
Observations	99,928	99,928	86,184	33,441
R ²	0.026	0.028	0.035	0.027
Adjusted R ²	0.025	0.027	0.034	0.027

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

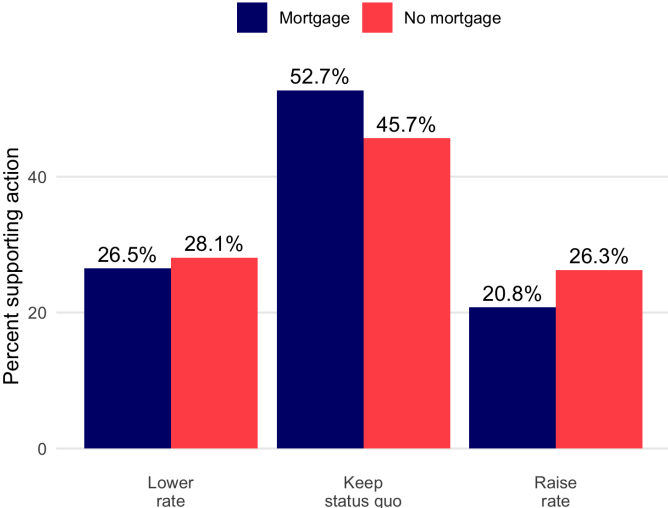
In model 3 where we include the composite variable for making the same inflation forecast as the bank and drawing the “correct” policy conclusions from it, the income coefficient is reduced further to 0.016. Information variables thus account for about half of the original association. In model 4 the coefficient is reduced even further, rendering it statistically

insignificant. This should however not be interpreted as the income effect being explained by the inclusion of the variables related to understanding of the interest-inflation relationship. Instead, it is a result of the changed sample (the understanding question is only asked in one out of every four survey waves). The understanding variable itself does not have a significant association with congruence.

4 Mortgages and preferences

In this section we show descriptive graphs and analyses that illuminate the relationship between having a mortgage and policy preferences. The first graph shows how policy preferences (regarding what would be best for the British economy) differ between respondents with and without mortgages. [Figure A.6](#) shows that respondents with mortgages are more likely to favor the status quo, and less likely to prefer either raises or cuts to the interest rate.

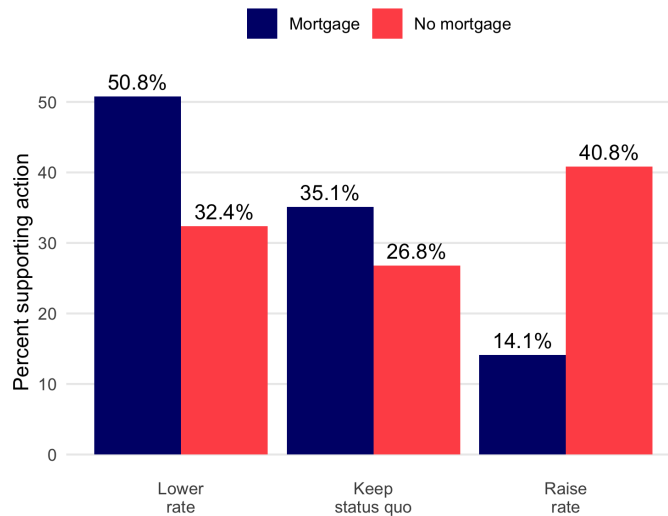
Figure A.6: Preference for changes to the interest rate among respondents with and without mortgages, based on what the respondent thinks would be best for the *British economy*.



When it comes to what the respondent think would be best for them personally, mortgage

takers are much more likely to say that it would be better for them if the rate were to go down, slightly more likely to think that status quo would be better, and much less likely to prefer raised rates. This is shown in [Figure A.7](#).

Figure A.7: Preference for changes to the interest rate among respondents with and without mortgages, based on what the respondent thinks would be best for *themselves personally*.



However, as income and mortgage-taking are highly correlated, it is necessary to conduct a regression analysis to separate the effects.

[Table A.5](#) shows the result of six regression models. The first three shows how income relate to preferences for the interest rate, similar to the graphical display in ???. Respondents with higher income are less likely to prefer lower interest rates, and more likely to prefer the status quo or raises (models 1-3). In models 4-6 we include variables for owning a home outright or with a mortgage, with renters as the reference category. Here we see that mortgage-takers are distinguished by a greater preference for the status quo, whereas those who own their home outright are in favor of higher interest rates.

Table A.5: Mortgage takers have a greater preference for the status quo. When controlling for housing status, higher income individuals do not prefer the status quo more than other respondents.

<i>Dependent variable:</i>			
<i>Preference for interest rate</i>			
<i>(what would be best for national economy)</i>			
	Lower	Status quo	Raise
<i>Panel A:</i>			
<i>Without control for housing status</i>			
	(1)	(2)	(3)
Place in income distribution (0-1)	-0.122*** (0.005)	0.064*** (0.006)	0.058*** (0.005)
<i>Panel B:</i>			
<i>With control for housing status</i>			
	(4)	(5)	(6)
Place in income distribution (0-1)	-0.079*** (0.005)	0.007 (0.006)	0.072*** (0.005)
Mortgage (ref: rent)	-0.079*** (0.003)	0.091*** (0.004)	-0.012*** (0.003)
Own outright (ref: rent)	-0.148*** (0.003)	0.034*** (0.004)	0.114*** (0.003)
Survey wave FE:	Yes	Yes	Yes
Observations	103,088	103,088	103,088
R ²	0.079	0.025	0.047
Adjusted R ²	0.078	0.025	0.046

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

These findings help explain the mortgage effect on congruence. As mortgage-takers are more likely to prefer the status quo, and status quo is the most common policy outcome, mortgage-takers are more likely to see their preferred policy (status quo) realized. As high-income respondents are more likely to have a mortgage, this contributes to their greater opinion-policy congruence.