

You and Whose Economy?: Group-Based Retrospection in Economic Voting[†]

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Abstract

When managing the economy, governments make decisions that influence not only overall growth but also its distribution. How do voters judge incumbents for this? I revisit the idea of *group-based retrospective voting* and argue that voters assess the economic performance of their social in-groups relative to the national economy. By sanctioning the incumbent for in-group performance, voters can incentivize policy-making that better aligns with their interests. I test the theory, first, by estimating the relationship between in-group performance and incumbent support in panel data. This relationship is comparable in magnitude to sociotropic voting. I further conduct three experiments in Denmark and the United States, randomizing information about the performance of groups defined by geography, age, education, ethnicity and class. The findings suggest there are limits to sociotropic voting, as voters want their groups to follow or beat the national trend. This has important implications for electoral accountability and party competition.

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Introduction

The economy plays a major role in elections. It is consistently ranked as one the most important issues for voters and is often decisive for incumbents' reelection chances. By rewarding or punishing incumbents for economic conditions, voters can get rid of incompetent leaders and incentivize good governance. The resulting link between economic sentiment and incumbent support is one of the most robust findings in political science (Lewis-Beck and Stegmaier 2019).

At the heart of the economic voting literature lies the question of whose economy voters care about: the national economy or their own pocketbooks? Decades of research suggest that the former, sociotropic motivations dominate the economic voting calculus (Becher and Donnelly 2013; Kiewiet and Lewis-Beck 2011; Lewis-Beck and Stegmaier 2019; Linn, Nagler and Morales 2010). National growth is seen as a reliable signal of the incumbent's competence and the country's future prosperity under their leadership. In contrast, fluctuations in people's personal finances are mostly a function of idiosyncratic experiences and provide a noisy signal of incumbent performance (Ansolabehere, Meredith and Snowberg 2014; Kiewiet and Lewis-Beck 2011; Kinder and Kiewiet 1981; Kramer 1983).

Yet, the dominance of sociotropic voting presents a puzzle. Citizens have diverse, often conflicting interests, and political leaders tend to align with some groups in society over others. Ignoring these conflicting interests seems at odds with much of what political science tells us about voter behavior. Since Converse (Converse 1964), public opinion research has consistently found social group memberships to influence how voters think about politics (Bornschier, Häusermann, Zollinger and Colombo 2021; Campbell, Converse, Miller and Stokes 1960; Claassen, Djupe, Lewis and Neiheisel 2021; Donnelly 2021; Elder and O'Brian 2022; Kinder and Kam 2010; Miller, Wlezien and Hildreth 1991). Voters care about groups both as proxies for self-interest and as symbolic reference points tied to their social identities (Kalin and Sambanis 2018; Sears, Lau, Tyler and Allen 1980). It would therefore be surprising if voters ignored how national economic growth is distributed among groups in society.

In this paper, I address this puzzle and argue that voters sanction incumbents for the perceived economic conditions of their own social in-groups. This idea traces back to Conover (1985), who argued that the economic performance of social in-groups – defined by factors such as class, geography and age – offers a useful “middle ground” between the pocketbook and the national economy (p.140). Given conflicting interests in society, common economic trends among group members provide a reliable signal of how the incumbent’s economic management aligns with their interests. The key contribution of this study lies in theoretically clarifying and empirically distinguishing this behavior, what I refer to as *group-based retrospective voting*.

Despite its theoretical merits, direct evidence on such behavior remains limited and inconclusive. The most relevant empirical work comes from the related literature on sub-national or local economic voting, which focuses on geographic groups (e.g. Ansolabehere, Meredith and Snowberg 2014; Healy and Lenz 2017; Ragusa and Tarpey 2016; Simonovits, Kates and Szeidl 2019; Tucker 2006). While these studies have made important contributions, they have focused on estimating the observational relationship between local economic conditions and incumbent support. When it comes to understanding individual-level mechanisms, this approach has two significant limitations. First, there is the common challenge of drawing causal inferences from observational correlations. Economic conditions across various geographic groups are not randomly distributed and incumbents may strategically favor pre-existing supporters (Dixit and Londregan 1996; Golden and Picci 2008). Second, even if the relationship were causal, group-based retrospective voting would not be the sole explanation. One alternative is that group members are responding to their own pocketbooks. If, e.g., group conditions improve, individual group members will on average be doing better as well, making the association observationally equivalent with pocketbook voting. Another possibility is that voters interpret the economic conditions of their group as a signal of broader national trends (Bisgaard, Sønderskov and Dinesen 2016; Books and Prysby 1999; Larsen, Hjorth, Dinesen and Sønderskov 2019). In that case, voters may reward the incumbent for local growth for sociotropic reasons, and not because they care about the distribution of growth. Despite existing research

on sub-national economic voting, we therefore have limited knowledge as to whether in-group economic performance matters to voters, separate from sociotropic or pocketbook concerns.

This paper takes on these challenges to establish whether group-based retrospective voting exists and what it looks like. I approach this task with two empirical designs: one observational and one experimental. For the observational design, I use a large British panel survey to track the economic performance of various geographic and class groups over a decade. I find that changing in-group performance predict changes in incumbent support as well as changes in perceived incumbent alignment with in-group interests. This within-subject relationship is comparable in magnitude to sociotropic voting.

To broaden the scope and strengthen internal validity, I further conduct a series of experiments. Across three pre-registered experiments conducted in Denmark and the United States, I randomize true information about the economic performance of a total of 34 distinct social groups based on class, geography, education, ethnicity, and age. By varying which group the information describes, the design allows me to get directly at a counterfactual that observational studies cannot: how the subject's response to group information changes when they belong to the group in question. I find a consistent effect of in-group economic performance on satisfaction with the national economy and incumbent approval, especially when the group over- or under-performs the national economy. In sum, voters care about in-group economic performance, especially as it compares with the national trend, in a way that cannot be explained by sociotropic or pocketbook considerations.

This finding carries significant implications for our understanding of political behavior and party politics. First and foremost, it suggests that voters are less sociotropic than commonly assumed. While voters appreciate national growth, they may dislike it if their group falls behind. Conversely, they may forgive a worsening national economy if people like them are outperforming it. This conditionality of sociotropic voting is easily hidden in conventional analyses that do not account for group performance.

Following this, group-based retrospective voting crucially shapes the governing incentives of

incumbents. As voters put more weight on group performance and less on the national economy, incumbents can expect greater electoral rewards by favoring electorally pivotal groups. On the flip side, this might allow them to get away with less competent management of the national economy. This dynamic echoes Ferejohn (1986)'s concern about pocketbook voting, namely that it enables incumbents to 'divide and rule' the electorate, weakening democratic control.

Group-based retrospective voting also helps explain notable deviations from traditional economic voting observed in recent studies. Some research has rejected economic explanations for phenomena like the rise of populism based on analyses of egotropic and sociotropic variables (Kates and Tucker 2019; Mutz 2018) with overall evidence for such explanations described as "mixed at best" (Berman 2021). However, my findings suggest that voters can act on collective economic grievances even when they are faring well individually and national economic conditions are favorable. When voters act on the economic performance of their in-groups, this is not easily captured by standard economic variables. In turn, the economy may play a larger role in electoral phenomena than is often recognized.

Why and How In-Group Economic Performance Matters

Scholars have found strong and remarkably consistent evidence for sociotropic voting (Becher and Donnelly 2013; Kiewiet and Lewis-Beck 2011; Lewis-Beck and Stegmaier 2019; Linn, Nagler and Morales 2010), and there are compelling reasons for it. National economic indicators are a signal of the incumbent's competence and voters' future prosperity under their continued rule (Alesina, Londregan and Rosenthal 1993; Fearon 1999). Moreover, sociotropic voting incentivizes reelection-seeking incumbents, once in office, to do their best to serve their interests (Woon 2012). This makes sociotropic voting a powerful mechanism for accountability.

Yet, the sociotropic model is in tension with two key facts. One is that citizens have diverse, often conflicting interests, and political leaders inevitably align with some groups in society more than others. For voters, these conflicting interests seem like a relevant consideration. Second, a long tradition in political behavior research finds voters to be profoundly influenced by their group

identities (Bornschieer et al. 2021; Campbell et al. 1960; Claassen et al. 2021; Donnelly 2021; Kinder and Kam 2010; Miller, Wlezien and Hildreth 1991). As such, it would be natural for voters to pay attention to the economic conditions of groups they identify with in addition to the nation as a whole.

This is the gist of an idea put forward by Conover (1985), who argued that voters assess the economic conditions of their own social in-groups. Echoing other work on the psychology of group-centrism, Conover argued that in-group interests often take on a symbolic value for people who socially identify with their group (Tajfel 1974). Additionally, group interests can serve as a heuristic for what is in group members' (long-term) personal self-interest (Feldman 1982; Fiorina 2018; Sears et al. 1980). Voters thus care about in-group interests for self-interested and symbolic reasons, although this distinction is mostly conceptual and rarely lends itself to direct empirical testing (Kalin and Sambanis 2018). Regardless of the underlying motivation, the key point is that voters have reasons to care about in-group interests, and they can further them by punishing and rewarding incumbents for group performance. I refer to this behavior as group-based retrospective voting.

The literature also suggests an alternative, simpler way for voters to account for conflicting interests, namely pocketbook voting, wherein individuals assess incumbents based on their personal economic situation (Fiorina 1981). While pocketbook voting offers a seemingly straightforward solution, individual financial changes are an unreliable indicator of incumbent policy-making as they mostly result from idiosyncratic life events with little basis in policy (Alesina, Roubini and Cohen 1997; Conover 1985; Kramer 1983; Lewis-Beck, Stuber and Nadeau 2013). For example, an elderly voter experiencing financial hardship may not have a direct reason to blame the incumbent. But if they observe a broader decline among other elderly people, this more likely reflects the incumbent's management of the economy. As such, aggregating economic outcomes across group members shaves off idiosyncratic pocketbook variation, making group-level trends a better gauge of how the current management of the national economy serves group members' interests. Thus, even purely

self-interested voters may be better served in the long term by holding the incumbent accountable for in-group performance than for their own pocketbooks.

To be sure, the logic of group-based retrospection need not be restricted to in-groups. Out-groups can serve as significant political “reference points” (Campbell et al. 1960) which voters care about due to ideology, sympathy/antipathy, or intergroup competition (Bechtel and Mannino 2022; Elder and O’Brian 2022; Nelson and Kinder 1996; Schneider and Ingram 1993). For instance, voters learning about the declining conditions of the elderly may punish the incumbent out of sympathy with the group. In this paper, however, the focus is limited to in-groups, which I consider central to the mechanism. Future work should explore the distinct role of out-groups for group-based retrospection.

While Conover introduced the notion of group-based retrospective voting, certain aspects remain under-theorized. In the following section, I extend Conover’s framework in two main ways. First, I develop a clearer theoretical distinction between group-based retrospection and other forms of economic voting. Importantly, I argue that group-based evaluations are primarily about relative, not absolute, economic performance, and theorize the nature of this national benchmarking. This benchmarking implies that group-based retrospective voting can counteract sociotropic voting. Second, I outline the conditions under which group-based retrospective voting occurs, emphasizing the role of group relevance and information availability. These theoretical refinements are key for deriving the empirical implications that I test.

Group-Based Retrospection and the Limits of Sociotropic Voting

How does group-based retrospection factor into the economic voting calculus? I argue that in-group performance provides unique information about the economy and whether the incumbent is managing it in line with the group’s interests. In-group performance therefore matters over and above voters’ views of their pocketbook or the national economy.

For example, suppose a region’s economy declines while the broader national economy thrives. All else equal, residents of that region would have reason to view this decline unfavorably, as it

signals that the incumbent's economic management is not serving their interests. Even someone personally benefiting from the national boom may interpret their group's struggles as evidence that the economy is not working for people like them. Crucially, for someone in this position, in-group decline does not just matter as an indicator of declining personal pocketbook prospects, it signals, more broadly, that the incumbent is not prioritizing group members' interests. In this way, in-group conditions serve as a distinct economic indicator, carrying intrinsic political significance beyond pocketbook or sociotropic evaluations.

Taking the logic of group-based retrospection one step further, I argue voters should be especially attuned to their group's performance when it diverges from the national trend. This heightened sensitivity arises for two reasons. First, relative group performance provides a clearer signal of the incumbent's alignment with group interests. This mirrors the logic of sociotropic benchmarking across countries, which helps isolate the effects of government policy from broader global trends (Hansen, Olsen and Bech 2015; Hart and Matthews 2022, 2023; Kayser and Peress 2012). Likewise, national benchmarking helps contextualize group performance by providing a measure of the average effects of policy on 'everyone else'. If a region's economic decline mirrors the national trend, it suggests failures in overall economic management rather than region-specific policies. However, when a region lags behind a thriving national economy, it signals a failure to address the group's particular interests.

Second, a decline in relative rather than absolute group performance can undermine a group's status. This follows the principles of intergroup competition as described in social identity theory, where material resources represent one competitive dimension (Turner and Tajfel 1986). Since social standing is defined in relative terms, a group that grows more slowly than others may feel diminished – even if its material conditions are stable or improving (Engler and Weisstanner 2021; Gidron and Hall 2017). On this latter account, the national benchmark functions less as an abstract measure for the performance of 'everyone else', and more as a proxy for the relative status of salient, competing out-groups. In sum, relative group performance matters both for what it reveals about

the incumbent and what it implies about the group's changing status.

This does not mean that underperforming groups always punish the incumbent or that overperforming groups always reward them, as sociotropic concerns may still outweigh these group-based ones. However, group-based retrospective voting introduces countervailing effects of a growing or shrinking national economy if certain groups of voters exceed or fall behind the national trajectory. Exactly how these effects net out depends on the weight voters put on overall incumbent competence versus alignment with group interests. Ultimately, group-based retrospective voting offers an important correction to the sociotropic model, suggesting that, while voters like national growth, they may dislike it if their groups fall behind the trend and may be more forgiving of national decline if people like them are thriving.

An important question is whether relative performance has asymmetric effects. In principle, voters should care equally about group underperformance and overperformance, as both are equally informative. Yet, according to a long-standing finding in political behavior, voters tend to react more strongly to economic losses than to gains (Bloom and Price 1975; Larsen 2021; Soroka 2006). This suggests voters may be more concerned about falling behind than getting ahead, echoing the literature on 'fraternal' or group-based relative deprivation (Engler and Weisstanner 2021; McKay 2019; Runciman 1966). I test this asymmetry in the experimental study.

Key Conditions for Group-Based Retrospection

There are countless ways to divide the electorate into social groups experiencing different economic outcomes. When does the performance of a given group matter to its members? I focus here on two key conditions that must be met: group relevance and group information.

The first condition follows the extensive literature on group-centric behavior in stating that the most influential groups are those that are both personally and politically relevant. Personal relevance stems from shared traits, which are key for group identity and diminish with size as larger groups tend to be more heterogeneous (Grigoryan 2020; Shayo 2009). At the same time, groups must be large enough to be politically relevant, as niche groups with idiosyncratic interests are harder to

connect to incumbent policy. This creates a trade-off: the most relevant groups are “meso-groups” (Donnelly 2021) that are small enough to have distinct interests but large enough to matter nationally. As a result, classical cleavage groups (e.g., age, region, class) are more relevant than micro-groups (e.g., niche occupations or neighborhoods), while broad categories like gender or majority ethnic groups matter most when intersected with other identities (Gershon, Montoya, Bejarano and Brown 2019; Grigoryan 2020; Perez Brower 2022).

The second condition for group-based retrospection is that voters have access to information about their group’s performance. As with other economic voting, a key source of such information is everyday experience (Bisgaard, Sønderskov and Dinesen 2016; Kayser and Peress 2024; Larsen et al. 2019). Due to social homophily, most people disproportionately interact with others from their social groups (Alt, Jensen, Larreguy, Lassen and Marshall 2022; Golub and Jackson 2012). Perceptions of the group’s over- or under-performance arise when experienced group conditions deviate from perceived conditions of the country as a whole, as conveyed by, e.g., the media or elites. An important implication of this is that group-based retrospection is conditioned by social homophily within the group because it determines access to information about group performance. This is one reason to expect in-group performance to matter more than the performance of (salient) out-groups, but also a reason why some groups, e.g., geographical groups, might be more influential than other groups due to greater intra-group interaction.

Besides personal experience, ‘group-centric’ media reporting and elite communication may also inform perceptions of relative group performance (Nelson and Kinder 1996). It is not uncommon for the media to cover the economy in terms of the performance of specific groups or localities and diverging trends (Fortunato, Swift and Williams 2018; Peters, Jetten, Tanjitpiyanond, Wang, Mols and Verkuyten 2022). This source is likely most important for groups of high political salience and groups experiencing strongly diverging trends. Nonetheless, such information is typically sporadic compared to the steady flow of everyday experiences.

In summary, for group-based retrospective voting to arise, groups must be both personally and

politically relevant and members must have access to information about group performance. With a clearer grasp of how group-based retrospective voting works, the next section discusses methodological limitations in existing research.

Empirical Challenges to Inference in Existing Research

Group-based retrospection has received less attention in the economic voting literature than its egotropic and sociotropic counterparts. The most relevant empirical work comes from the related literature on sub-national or local economic voting, which examines geographic in-groups (e.g. Ansolabehere, Meredith and Snowberg 2014; Healy and Lenz 2017; Ragusa and Tarpey 2016; Rogers 2014; Simonovits, Kates and Szeidl 2019; Tucker 2006). This body of work focuses on estimating the often cross-sectional relationship between sub-national economic conditions and incumbent support, using a combination of economic and survey data.

Although limited to geographic groups, efforts to test this observational relationship are important. Existing findings are mixed, suggesting that there is yet more work to be done.¹ Yet, these studies cannot tell us with much confidence whether voters are engaging in (geographical) group-based retrospective voting or not. This owes to two key challenges, one related to causal inference and one to mechanistic inference. Both can be illustrated with the example from before.

Suppose we observe a city that is now outpacing national growth. Survey data might indicate that residents of this city are strong incumbent supporters, a pattern consistent with group-based retrospective voting. However, this relationship may be spurious because group-level economic outcomes are not randomly distributed. In this case, urban prosperity might happen to coincide with an incumbent who generally draws strong support from urban voters, or the incumbent may even have deliberately targeted their pre-existing supporters with resources (Dixit and Londregan 1996; Golden and Picci 2008). In sum, group-level economic performance may not be driving the

¹While results in, e.g., (Healy and Lenz 2017), (Newman 2015), (Tucker 2006), and (Ansolabehere, Meredith and Snowberg 2014) are positive, the evidence in (Rogers 2014) and (Simonovits, Kates and Szeidl 2019) is more mixed and estimates in (Mutz and Mondak 1997), (Ragusa and Tarpey 2016) and (Stiers and Hooghe 2023) are null.

observed relationship.

The issue relating to mechanistic inference is more subtle. Even if the city's prosperity resulted from a perfectly exogenous shock, group-based retrospective voting would not be the sole explanation for the electoral response of city residents. For one, residents may simply be responding to improvements in their personal economic circumstances, making the effect an instance of pocketbook voting. Alternatively, residents could be using local conditions as a cue about the broader national economy (Books and Prysby 1999; Galesic, Olsson and Rieskamp 2012; Larsen et al. 2019). As their perceptions of the national economy improve, increased incumbent support could be driven by sociotropic rather than group-based retrospective voting. Several studies on local economic voting acknowledge these alternative explanations (e.g. Ansolabehere, Meredith and Snowberg 2014; Healy and Lenz 2017; Reeves and Gimpel 2012; Stiers and Hooghe 2023). Even if changes in group economic conditions were to causally affect incumbent support, it is thus not clear that voters are specifically motivated by concern for the economic conditions of their geographic group.

These two inferential challenges, causal and mechanistic, make it difficult to assess group-based retrospective voting through observational data alone. Despite existing research on geographic groups and economic voting, the individual-level mechanism thus remains unsettled. In the next section, I propose two approaches – one observational and one experimental – that overcome these challenges and isolate the mechanism.

Empirical Strategy

To test group-based retrospective voting, two conditions must be met. Firstly, variation in perceptions of in-group economic performance must be plausibly exogenous for estimates to be causal. Secondly, pocketbook and sociotropic evaluations must be held fixed to exclude alternative mechanisms. I achieve this in two distinct designs, one observational and one experimental.

The observational design uses panel survey data with items that allow for measuring economic changes in respondents' in-groups. Leveraging the panel structure, I estimate two-way fixed effects

models of the relationship between in-group economic performance and incumbent support for a range of geographic and class groups. This improves on existing observational analyses of group-based retrospective voting in a few important ways. For one, it uses only within-individual variation, making the causal claim more credible. For instance, pre-existing supporters of the incumbent being targeted with benefits would not bias results. In addition, I adjust for time-varying egotropic and sociotropic evaluations. This plausibly excludes the alternative pocketbook and sociotropic explanations for the relationship. Finally, by directly measuring perceptions of in-group performance, this approach gets closer to the psychological mechanism.

To be sure, this approach does not fully causally identify the effect as group performance trajectories are not random. Yet, it offers what is arguably the most direct observational test of group-based retrospective voting to date. Being observational, it has the advantage of emulating the measures and modelling of most economic voting research. This makes results more comparable to existing estimates in the literature. Additionally, it provides evidence that voters' hold perceptions of in-group performance that are meaningful and predictive.

To fully overcome the causal and mechanistic inference problems and strengthen internal validity, I conduct a series of experiments. The experimental design uses information treatments to generate exogenous variation in perceptions of the economic performance of a range of social in- and out-groups. By altering only perceptions of group performance, pocketbook evaluations are held constant, which I verify by testing for effects on prospective pocketbook performance. Additionally, by comparing only subjects exposed to in-group vs out-group information, sociotropic perceptions are held fixed. As such, this design offers both causal identification and a direct test of whether voters are concerned with in-group performance itself, independent of its implications for the national economy or their near-term personal well-being.

Observational Evidence of Group-Based Retrospective Voting

To examine group-based retrospective voting observationally, I use The British Election Study Internet Panel (BESIP) (Fieldhouse, Green, Evans, Mellon, Prosser, de Geus, Bailey, Schmitt and

van der Eijk 2024). The panel consists of 25 waves spaced out by intervals of 1-12 months, each with a representative sample of 30,000 respondents. BESIP is one of very few datasets to include repeated measures of voters' perceptions of the economic performance of salient social groups. It also includes a rare item measuring perceptions of how well the incumbent party aligns with the interests of some of these same groups. I use this item to further test the mechanism.

Measuring in-group performance involves two steps: measuring the economic performance of various social groups and sorting respondents into them. With regard to the first, I use an item tapping respondents' perceptions of group performance with the question: "Giving your best guess, how do you think the financial situation of [group] compares with what it was 12 months ago?" This individual-level measure exists in four waves for classes, regions, and the respondent's own 'local community'. Since subjective perceptions of group performance can be endogenous to other attitudes at the individual level, including party choice itself, I also construct a group-level measure by aggregating pocketbook evaluations of self-identifying group members. By averaging across group members' personal economic experience, this measure gets closer to the actual performance of the group, although it is based on members' subjective summary judgments rather than objective indicators. There is evidence that such subjective evaluations closely follow actual income changes, however (Healy, Persson and Snowberg 2017).

To sort respondents into their respective groups, I rely on self-categorization measures. For class, this is: "Do you ever think of yourself as belonging to any particular class?" and for region, it is simply their reported region of residence. For 'local community', this sorting is not possible. This is not a problem for the individual-level measure since it already asks about their in-group (their own 'local community'). However, it means that it is not possible to calculate the group-level measure for these smaller geographic groups. See Table 1 for an overview of the resulting variables.

[Table 1 about here.]

The main outcome is the respondent's reported likelihood of voting for the incumbent party, i.e. the

Conservative Party which was in government during all survey waves.² I control for standard measures of egotropic and sociotropic retrospective evaluations.³ While theoretically important, one issue with controlling for sociotropic evaluations is that they may act as a collider variable insofar as they are affected by in-group performance (Elwert and Winship 2014). If anything, collider bias is likely to deflate estimates. For any unobserved parent variable(s) to bias estimates upward, they would have to be time-varying and causally affect both sociotropic evaluations and incumbent support but in *opposite* directions. Any variables that affect sociotropic evaluations and incumbent support in the same direction, e.g. partisanship, would instead result in conservative estimates. I therefore choose to keep them in the main model.

I also use the following item as an additional outcome variable: “Some people say that all political parties look after certain groups and are not so concerned about others. How closely do you think the Conservative Party looks after the interests of [group]?”. As theorized, voters care about in-group performance partly because it tells them how well the incumbent aligns with group interests. This measure of group ‘concern’ allows me to test this directly. Due to limited wave coverage, as shown in Table 1, I can only estimate this relationship for class performance.

Observational Results

What is the relationship between changing group-level economic conditions and incumbent party support? I estimate two-way fixed effects models of government support on measures of in-group economic performance, controlling for sociotropic and egotropic evaluations. The inclusion of wave fixed effects is important because it makes the coefficient on group performance reflect changes in performance relative to the population-level trend. It thereby helps capture relative in-group performance as theorized. However, since absolute and relative changes are correlated, the model cannot directly adjudicate which of them are driving the observed behavior. I test this directly with

²“How likely is it that you would ever vote for each of the following parties? [Conservatives]” (10-point scale).

³These items ask: “How does the financial situation of your household now compare with what it was 12 months ago?” and “How do you think the general economic situation in this country has changed over the last 12 months?”, respectively.

the experiments.

As each voter belongs to several groups that I measure, I first run separate regressions of vote intention on the in-group performance measures for each group type (class, region, local area) and the control variables.⁴ All independent variables are standardized to facilitate comparison. I then use a meta-regression model with equal weighting that effectively averages the coefficients across these models to obtain the pooled estimates shown in column 1 and 2 of Table 2.⁵ The unique prediction of group-based retrospective voting is a positive coefficient on in-group economic performance across groups holding sociotropic and egotropic evaluations fixed.

[Table 2 about here.]

Columns 1 and 2 in Table 2 show this relationship for in-group performance as it is perceived by members ('individual-level') and derived from the average of members' pocketbook evaluations ('group-level'). Across models, there is a consistent positive relationship between relative in-group performance and vote intention for the incumbent party. The coefficients on the two measures of economic performance are similar, suggesting that voters hold meaningful and predictive perceptions of the economic conditions of their class and geographic groups.⁶ As group performance, measured as aggregated pocketbook evaluations, improves by one standard deviation compared to the national trend, group members report being 1.8 percentage points more likely to vote for the incumbent party on average. This pooled coefficient is a little more than half the magnitude of that on sociotropic evaluations (and larger than that on egotropic evaluations). In the underlying models shown in Appendix A (p. 1), the standardized coefficients on in-group performance and sociotropic evaluations are equal in magnitude in four out of five of the models. This suggests that, while it varies by group, group-based retrospective voting is of a similar order of magnitude to sociotropic

⁴To account for correlated perceptions of in-group performance across group types, I additionally control for perceptions of other in-groups in Appendix B (p. 3).

⁵I use the meta-regression function `rma` from the `metafor` package in R to pool estimates. See Appendix A (p. 1) for full results.

⁶Note that the coefficient on perceived class performance is weakened once perceived regional performance is accounted for in Appendix B (p. 3), suggesting that regional perceptions may be partially driving this relationship.

voting and substantially significant. The same can be seen in Model 2, where the coefficients on sociotropic evaluations and perceptions of in-group performance are equal.

These estimates are robust to controlling for left-right ideology and attitudes towards austerity policy (see Appendix B, p. 2). Although post-treatment control variables makes for an imperfect test, it is consistent with voters sanctioning the incumbent for in-group performance rather than a broader ideological shift away from the governing Conservative Party. An auxiliary analysis in Appendix B (p. 4) further shows the relationship to hold when the survey measures are replaced by a key objective economic indicator, namely group-level unemployment. Linking BESIP to monthly regional unemployment rates (Office For National Statistics 2025), the analysis shows that incumbent support in a region follows deviations in regional unemployment from the national average, controlling for sociotropic and egotropic evaluations. Thus, the relationship is not specific to subjective economic perceptions. In sum, in-group economic performance appears to have independent explanatory power for vote choice that is comparable in magnitude to sociotropic voting.

To make it more likely that these results are driven by the theorized relationship, and not other variables correlated with in-group performance, I run a similar set of models for an outcome that is even more specific to the theorized mechanism: perceptions of the incumbent's alignment with the in-group's interests. In line with the theory, I expect in-group performance to predict perceived incumbent concern for that in-group, which in turn predicts incumbent vote intention. The results for these two links are shown in columns 3 and 4 of Table 2 for class groups.⁷

As expected, Table 2 shows a strong positive relationship between changes in class performance and class members' perception that the incumbent party looks after their class interests. The coefficient is very substantial: as aggregated class conditions improve by a standard deviation relative to the

⁷I am implicitly testing a claim about mediation here but avoid specifying a full mediation model as it requires strong assumptions that are unlikely to hold in this case (Acharya, Blackwell and Sen 2016; Elwert and Winship 2014). Although I cannot quantify the exact mediating effect, a positive estimate in both models suggests some positive mediating relationship.

national average, perceived incumbent concern with the class among its members increases by 38 percentage points on average. In contrast, egotropic and sociotropic evaluations are only marginally related to perceived incumbent alignment with the group. Column 4 shows that higher perceived concern with in-group interests is, in turn, associated with a substantially stronger incumbent vote intention. To be sure, this latter relationship between two incumbent attitudes is likely endogenous to partisanship. Still, these additional findings provide further evidence that is consistent with voters making inferences about the incumbent when in-group conditions change.

In sum, the panel data analysis shows a within-subject relationship between in-group performance and incumbent support that cannot be easily explained by egotropic or sociotropic evaluations. This holds for both class and geographic groups. Given that previous studies have mostly relied on cross-sectional comparisons without controlling for e.g. sociotropic evaluations, this represents some of the most compelling observational evidence to date that voters are concerned with the economic performance of their social in-groups.

That said, the observational analysis still faces some limitations. The findings are limited to geographic and class groups. More importantly, group performance trends are not random and regression adjustments for other economic evaluations may not fully isolate the mechanism because of measurement error and issues with post-treatment bias (Elwert and Winship 2014). While the within-subject approach mitigates some concerns, further evidence is needed to fully rule out alternative explanations. To broaden the scope and overcome these issues, I develop an experimental design described in the next section.

Experimental Evidence of Group-Based Retrospective Voting

In recent years, the economic voting literature has increasingly turned to experiments (Bechtel and Liesch 2020; Bisgaard 2019; Hart and Matthews 2023; Simonovits 2015). While actual economic conditions cannot be randomized, economic information can, and information treatments thus offer a valuable method for distinguishing psychological mechanisms. In this study, I take this approach to induce exogenous variation in perceptions of in-group performance, while also including

information on the national economy. By including or omitting the national-level information, I can also directly test whether voters are most concerned with relative group performance, as theorized. The design is implemented across three surveys, two of which are pre-registered, with minor variations.⁸ The next section describes common features of the design.

Experimental Design

The core feature of the experiment is that it provides exogenous variation in perceptions of in-group economic performance. To obtain the right counterfactual, however, the experiment must also manipulate perceptions of out-group performance. Only by comparing subjects receiving in-group vs. out-group information – at random – is it possible to isolate the mechanism. If treated subjects were simply compared to a control group receiving, e.g., national economic information or no information at all, other differences between conditions could explain the effect, violating the assumption of information equivalence (Dafoe, Zhang and Caughey 2018). For instance, subjects might react to perceived inequality or simply like positive economic news and dislike bad, regardless of group identity. The downside of this strategy is that the control condition becomes ambiguous, reflecting the average response to information about the included out-groups which is likely positive in some cases and negative in others, as discussed earlier. While out-group information serves as a good benchmark for internal validity, it thus complicates the interpretation of the resulting effect sizes.

To implement this approach, I include two main treatment conditions: an in-group condition and an out-group condition, differing only in whether the same economic stimulus pertains to the subject's in-group or a random out-group. This is operationalized in the steps shown in Figure 1. In step a), subjects are asked to choose their in-group within a given group category.⁹ In the figure, this is shown for a group category containing three groups. Within each group, the subject's treatment status is then randomized in step b) to receive an information stimulus about a random group from

⁸See Appendix C (pp. 5-6) for details on the pre-analysis plans and an overview of omitted analyses.

⁹See Appendix F (pp. 9-10) for details on how these groups were chosen and defined in each survey.

the category in step c). For the main version of treatment, ‘relative group decline’, this involves a text vignette containing two pieces of information: negative information about the recent trajectory of the group (the full arrow with a circle) and positive information about the recent trajectory of the national economy acting as a benchmark (the dotted arrow). In other words, an unequal growth scenario where a given group is under-performing the national economy. The key comparison is thus between those receiving a stimulus about their in-group and those receiving a ‘control’ stimulus about a random out-group (in the same category).¹⁰

[Figure 1 about here.]

I additionally implement two alternative versions of treatment. The first, ‘absolute group decline’, omits the national-level information and presents the negative group-level information alone. The main treatment includes the country benchmark to capture the group-to-country comparison that is hypothesized to matter for group-based retrospection. However, by comparing the effects of the absolute and relative decline treatments, I can test this nuance of the mechanism more cleanly than the observational data could afford.

Second, I implement a ‘relative group improvement’ version of treatment that reverses the economic trends in the main treatment, i.e. by describing the national economy as sluggish and the group as performing better. Following my theory, voters should react to in-group performance both when it over- and under-performs the national trajectory.

Varying Experimental Features

I implement the design in three experiments conducted online in two very different country settings: Denmark and the United States. Table 3 gives a brief overview of their key characteristics. Besides varying the national context, the three experiments vary the groups and the treatment information for robustness. The experiments jointly cover a total of 34 different groups across six group categories: age, geography, class, education and ethnicity.

¹⁰In Experiment 1, I also include a ‘pure’ control scenario with no economic information at all. Results are similar when using this as the control group (see Appendix H (p. 15)).

Experiment 1 and 2 were both pre-registered and fielded in Denmark under different governments. Both use the ‘relative group decline’ version of treatment shown in Figure 1. Experiment 1 also includes the ‘absolute group decline’ version of treatment that omits the national benchmark. To further probe the generality of the mechanism, Experiment 3 was fielded in the United States.¹¹ Denmark and the United States have markedly different conditions for group-based retrospective voting to emerge. The motivation for group-based retrospective voting is likely stronger in the United States than in Denmark, due to higher economic inequality and lower state generosity. This suggests a higher sensitivity to incumbent concern for group interests in the electorate. In Denmark, by contrast, effects of unequal growth are cushioned by the comparatively generous welfare state. At the same time, higher partisan polarization in the United States may make it harder to change voters’ evaluations of the economy and the incumbent with new information (Bisgaard 2019). These economic and political differences provide a unique opportunity to test whether the mechanism spans rather different national contexts.

[Table 3 about here.]

In addition to varying the country, Experiment 3 differs in two further ways to allow for a more expansive test of the mechanism. As theorized, larger group categories are often more personally relevant when they are intersected (Gershon et al. 2019; Perez Brower 2022). In Experiment 3, I therefore use ‘ethnicity-by-education’ groups, i.e. groups that combine ethnicity and education level as “[ethnicity] with[out] a college degree” (see Appendix F (p. 10) for an overview of these groups). Moreover, Experiment 3 implements the ‘relative group improvement’ version of treatment shown in Figure 1.

Stimulus material

The experiment manipulates subjects’ perceptions of the national economy and the economic conditions of their groups. The design of stimulus material therefore involves two key choices: the

¹¹It was kindly included in Verasight’s omnibus survey, which came with some strict space constraints. It therefore includes fewer additional survey items like manipulation checks and covariates.

choice of economic information and the choice of groups.

Economic information. The stimuli include economic information on both the recent trajectory of the country and the recent trajectory of a social group. I balance two key concerns in the choice and presentation of this information.

First and foremost, deception should be avoided whenever possible. Deceptive treatments can be unethical even when the deception does not harm subjects, because it may make them more skeptical of information provided in surveys and ‘poison the well’ for other researchers (Rousu, Colson, Corrigan, Grebitus and Loureiro 2015). Deceptive treatments can also undermine ecological validity (Dickson 2011) and may lack credibility for subjects. That is especially likely in this case where economic performance naturally varies by group.

At the same time, treatments should be strong enough to move subjects’ beliefs. Both the United States and Denmark were marked by economic pessimism during data collection, with Denmark’s consumer confidence reaching historical lows (Burns 2023; Mortensen 2022; Statistics Denmark 2023). Meanwhile, the treatments aim to convince subjects that either the whole or parts of the national economy are in fact doing *well*. To move subjects’ perceptions in the desired direction, there must therefore be sufficient contrast in stimuli between the performance of the group and the national economy, without compromising ecological validity.

To balance these considerations, I design non-deceptive stimuli using true information from the Danish and American National Election Studies. To obtain information about group relative decline or improvement that is relatively strong and consistent across groups, I exploit the fact that there are several economic items in each survey that are similar but have rather different distributions of responses due to variations in wording and emphasis. By calculating the economic statistics for the groups from different variables than the statistics for the national economy, it is possible to get stimuli that indicate a substantial and consistent gap in economic performance trends between each group and the country as a whole.

This approach produces stimuli that are both moderately strong and relatively homogeneous across

groups (see manipulation checks in Appendix D, p. 7). While the stimuli vary substantially in Experiment 1, they are far more homogeneous in Experiments 2 and 3 (see Appendix I (pp. 18-21) for details and Appendix E (p. 8) for an overview of stimuli.). Still, I design the stimuli to reduce the impact of this variation. The treatments downplay numerical information and give a consistent and strong framing to facilitate a common interpretation. Moreover, each experiment uses different economic information and varies vignette wordings, ensuring that results do not hinge on any of these particulars. Finally, statistically adjusting for heterogeneity in numerical information across stimuli is both simple and effective (Fong and Grimmer 2023) and I follow my pre-analysis plans in doing so (although results are unchanged). Jointly, these measures allow me to avoid deceptive stimuli without compromising experimental validity. An example stimulus of ‘relative group decline’ from Experiment 1 is shown below:

Experiment 1 (working class). The economy does not develop the same way for everyone. For example, in the latest survey from the Danish Election Project, the proportion of working class people who felt financially insecure increased significantly (73%) compared to the previous survey. By contrast, a large majority (82%) of respondents felt that their economic situation had remained stable or improved.

This example combines information from two DNES survey items, one on current financial security (the working class figure) and one on retrospective economic evaluations (the national figure), the former of which had a more negative distribution than the latter, enabling the contrast in the stimulus. See Appendix I (pp. 18-20) for more details on these items.

Social groups. With respect to group selection, I take a somewhat conservative approach. Rather than sampling a small set of groups based on a most-likely case logic, I include a broad range of potentially relevant groups. Following the logic of stimulus sampling, casting a wide net ensures that results do not depend on any group-specific sentiments or beliefs, bolstering both internal and external validity (Clifford, Leeper and Rainey 2023; Fong and Grimmer 2023; Wells and Windschitl 1999). The inclusion of less relevant groups is expected to bias my estimates downward for a

conservative but harder test of the theory. In Denmark (Experiment 1 and 2), the chosen group types are class, education level, age and geography. In the United States (Experiment 3), these are ethnicity-by-education level. Subjects are asked to choose an in-group in the beginning of the survey, except for Experiment 3 which sorts subjects directly into ethnic and education groups on the basis of background characteristics registered by the survey provider. The surveys carrying Experiment 1 and 2 included some empirical measures of group identification to validate the relevance of chosen groups (for details, see Appendix F, p. 10).

Outcome Measures

After treatment, respondents are asked several outcome questions. Group-based retrospective voting posits that in-group economic performance influences members' satisfaction with the economy and thereby their approval of the government's economic management. The most proximate outcome is therefore satisfaction with the current state of the economy, which is measured in all three experiments with the wording: "How satisfied or dissatisfied are you with the way the [Danish/American] economy currently develops?". In addition, Experiment 1 includes an incumbent-centered outcome, asking subjects: "To what extent do you agree or disagree with the way the current government manages the Danish economy?" Unfortunately, this incumbent-centered measure could only be included in Experiment 1. The Danish government had only been in office for four months as Experiment 2 was fielded, so it could not possibly be held responsible for current group performance. In Experiment 3, in the United States, a presidential approval measure was omitted for practical reasons, as this survey allowed only a single outcome question.¹² In addition, both Experiment 1 and 2 include prospective egotropic evaluations as alternative outcomes for verifying the mechanism.

Following the registered pre-analysis plans, I also control for a set of baseline covariates that closely resemble outcome variables to increase the precision of estimates (Clifford, Sheagley and Piston 2021). See Appendix G (p. 11) for an overview.

¹²The experiment was kindly included in Verasight's omnibus survey, which came with strict space constraints.

Experimental Results

To test the group-based retrospective voting hypothesis, Table 4 shows the average effects of in-group performance across all groups in each of the three experiments.¹³ The coefficient on relative in-group decline/improvement is the average difference between getting the in-group stimulus and the out-group stimulus across all groups. All models include in-group fixed effects, stimulus-controls¹⁴ and baseline covariates as specified in the pre-analysis plans.

[Table 4 about here.]

There is support for the group-based retrospective voting hypothesis across all three experiments in the form of statistically significant coefficients in the expected directions. Across the 22 groups in Experiment 1, those informed of in-group decline become on average 2.2 percentage points less happy with the state of the economy than those informed of out-group decline, with a similar effect on approval of the government's economic management. This estimate is strikingly similar for the replication in Experiment 2. In Experiment 3, fielded in the United States, the positive effect of belonging to the economically improving group is if anything larger, with subjects in the in-group condition becoming around 4 percentage points more satisfied with the state of the economy on average. This contrasts with earlier studies finding voters to respond more strongly to negative economic information (Bloom and Price 1975; Soroka 2006). Clearly, voters are not agnostic to who gets what in a growing or declining economy. When their in-group over-performs the national trend, they like it more, and when it under-performs they like it less, and this shapes their approval of the incumbent's economic management.

To be sure, these estimates are somewhat modest in magnitude. This is not too surprising given the varying relevance of groups, the heterogeneity in out-group stimuli, as well as the difficulty of manipulating economic perceptions during a period of exceptional economic pessimism. Indeed,

¹³See Appendix H (pp. 12-17) for full results and alternative model specifications.

¹⁴Stimulus-controls adjust for numerical heterogeneity in the exact percentage figure mentioned in each group-specific stimulus. Including them makes no substantive difference to results (see Appendix H, p. 14).

manipulation checks for Experiment 1 and Experiment 2 show statistically significant but somewhat modest effects of stimuli on perceptions (see Appendix D, p. 7). The effects should therefore be understood as the result of moving subjects' perceptions of group performance slightly in the direction of the treatment information.

National Comparisons Drive the Effects

The main version of treatment includes a contrasting national benchmark such that group performance deviates from the national trajectory. However, Table 4 cannot tell us directly whether the benchmark plays this theorized role. To further probe the mechanism, I compare the effects from Experiment 1 to parallel versions of treatment omitting the national benchmark (i.e. 'absolute group decline' in Figure 1). The expectation is that effects are larger for the relative group decline version than the absolute group decline version of treatment.¹⁵

The results are shown in Appendix H (p. 17). While the point estimates are negative when the benchmark is omitted, they are small and statistically insignificant.¹⁶ Additionally, the confidence intervals of these non-benchmark treatment effects are wider despite treatment groups being of the same size. This suggests that treatments omitting the benchmark are more ambiguous, likely because it is unclear how the bad group performance compares to the rest of the country. This is consistent with group-based retrospective voting, as it suggests that relative group performance is a stronger signal of the incumbent's alignment with the group's interests. In sum, the experimental effects seem to be driven by the comparison of group performance to the national trend.

Effects Are Not Driven by Pocketbook Expectations

The experiments show that voters respond differently to information about their in-group's economic performance than to comparable out-group information. I have argued that this occurs because voters care about in-group interests. However, an alternative explanation is that voters use this

¹⁵Note that this expectation is not part of the pre-registration for Experiment 1 (see Appendix C, pp. 5-6).

¹⁶Only the effect on satisfaction with the economy is statistically significantly smaller without the benchmark ($p < .05$).

information to update their expectations about their own financial prospects. For instance, learning that people similar to themselves are struggling might make them more pessimistic about their own future well-being. On this account, the observed effects would stem from changes in prospective pocketbook evaluations rather than perceptions of in-group interests.

Importantly, this alternative pocketbook account contrasts with even the self-interested version of group-based retrospective voting. In the latter, voters use group outcomes as a heuristic for their own interests, presuming that a beneficial incumbent for their group will also generally serve their personal interests. In contrast, the pocketbook interpretation I consider here, is more narrow: it posits that voters only use information about similar others to adjust their personal financial expectations. On that account, group performance would be relevant only insofar as it influences pocketbook evaluations, rather than serving as a significant political signal in its own right.

If this pocketbook mechanism were driving the results, we would, at a minimum, expect treatment to affect prospective pocketbook evaluations. To test this, Experiment 1 includes a post-treatment measure of personal financial expectations, which I regress on treatment using the same model specifications as in Table 4. Table 5 reports the results (full results in Appendix J, p. 22). As shown, respondents who received in-group versus out-group treatment information did not differ in their personal financial expectations, regardless of the national benchmark. This suggests that treatment did not alter beliefs about future income prospects. Importantly, this finding does not contradict the idea that group-based retrospective voting may ultimately reflect self-interest. However, it does provide evidence against the concern that the experimental results merely capture thinly veiled pocketbook voting.

[Table 5 about here.]

Conclusion and Discussion

Economic voting research has long established that voters are predominantly sociotropic and focus on the national economy. This paper introduces an important qualification to this view: Voters are

concerned not only with overall economic growth but also with how it benefits their own social groups. Incumbents should be competent economic managers but also be aligned with in-group interests. As a result, voters adjust their support based on their groups' performance relative to the national economy.

Across analyses of observational and experimental data from the United Kingdom, Denmark, and the United States, this paper finds consistent evidence of group-based retrospective voting. The observational analysis shows that, holding other economic evaluations constant, changes in in-group performance predicts changes in incumbent support and perceptions of the incumbent's alignment with group interests. Moreover, it shows that voters hold meaningful and predictive perceptions of the performance of their class and geographic groups. To strengthen internal validity, I further conduct a series of experiments that manipulate perceptions of different social groups' economic performance, ruling out alternative explanations that linger in observational analyses. The experiments firmly establish that voters care about in-group performance itself, independent of its implications for the national economy or personal financial outcomes. Moreover, they show that effects are driven by perceptions of how the in-group performs relative to the national trend. The effect of relative group performance is symmetric, indicating that voters do not dislike unequal growth as such, as they support it when it advantages their own group.

While this paper provides substantial evidence for group-based retrospective voting, several questions remain. The study does not directly examine how effects vary with the personal and political relevance of groups, as theorized. The question of relevant groups may also interact with ideology and deservingness perceptions (Bechtel and Mannino 2022; Guinaudeau, Theres, Deiss-Helbig, Guinaudeau and Bächtiger 2023; Schneider and Ingram 1993) as, e.g., privileged groups may being more forgiving when their conditions worsen if they support redistribution. Similarly, voters may care equally about the performance certain salient out-groups in line with reference group theory (Campbell et al. 1960; Elder and O'Brian 2022). Future research should explore how much group-based retrospective voting varies based on such group traits and systematically examine

the role of out-groups. Another important open question is where exactly perceptions of in-group performance come from, and to what extent they are shaped by personal observation as opposed to, e.g., media reporting and elite narratives (Alt et al. 2022; Kayser and Peress 2024). In addition, this study does not firmly establish whether group-based retrospective voting is motivated by group interests taking on a symbolic value or by voters using group interests as a proxy for their own. This question looms in much research on group-based political behavior (Kalin and Sambanis 2018) and is an important area of future research.

The findings have significant implications for research on political behavior and party politics. Empirically, group-based retrospective voting offers a new explanation for well-known patterns in the literature. Some studies have rejected economic explanations for, e.g., the rise of populism on the basis of analyses of egotropic and sociotropic variables (Kates and Tucker 2019; Mutz 2018) and overall evidence for such explanations has been deemed “mixed at best” (Berman 2021). However, my findings suggest that voters may be responding to collective economic grievances even when they are faring well individually and national economic conditions are favorable. When voters act on the (perceived) economic performance of their in-groups, this is not directly captured by standard economic variables. Existing studies may therefore have been too quick to dismiss economic explanations for these phenomena.

These findings also have policy implications for addressing electoral discontent, such as that which fueled the rise of populism or the backlash against the green transition (Colantone, Lonardo, Margalit and Percoco 2023; Kurer 2020; Stokes 2016). Such discontent is often attributed to individual pocketbook grievances, leading to policies like monetary compensation for those affected by trade shocks or green transition measures (Bolet, Green and Gonzalez-Eguino 2023). However, this may be less effective if voters are more concerned with group-level economic decline. In such cases, targeted investments in affected communities or group-level compensation might be more effective, consistent with findings in recent studies (Bolet, Green and Gonzalez-Eguino 2023; Gaikwad, Genovese and Tingley 2022).

Further, my findings suggest that economic changes can shape group-party linkages (Brady and Sniderman 1985; Stubager and Slothuus 2013; Thau 2021). Governing parties might risk losing coalition groups to challenger parties if they fail to deliver for them once in office, potentially disrupting long-standing party-group ties. Group-level economic performance may be a more credible indicator of a party's alignment with group interests than e.g. rhetorical group appeals (Thau 2021) which risk being seen as “cheap talk” (Foster 2021). Thus, it may account for shifts in party coalitions over time that are not fully explained by, e.g., policy pledges or rhetorical group appeals (Guinaudeau et al. 2023; Stuckelberger and Tresch 2024; Thau 2021).

Lastly, the notion that voters are only conditionally sociotropic has important implications for electoral accountability. On the one hand, it could promote inclusive growth by punishing incumbents who neglect disadvantaged groups. On the other, it risks making governments overly responsive to the interests of small but electorally significant groups (Healy and Lenz 2017). This dynamic echoes Ferejohn (Ferejohn 1986)'s argument with respect to pocketbook voting, where weaker sociotropic voting enables incumbents to 'divide and rule', undermining democratic control. Additionally, the fluctuating salience of social identities make them a shaky foundation for accountability (Klar 2013; Shayo 2009). Governments may strategically prime certain group identities to frame their economic management favorably and numb accountability pressures. Future research should examine the conditions under which a group's economic conditions become salient, and the role of elites' “social identity entrepreneurship” (Shayegh, Storey, Turner and Barry 2022) in shaping these perceptions. Understanding these dynamics is crucial for determining whether group-based retrospective voting primarily promotes inclusive growth or weakens democratic control.

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Overview of Experimental Treatment Design

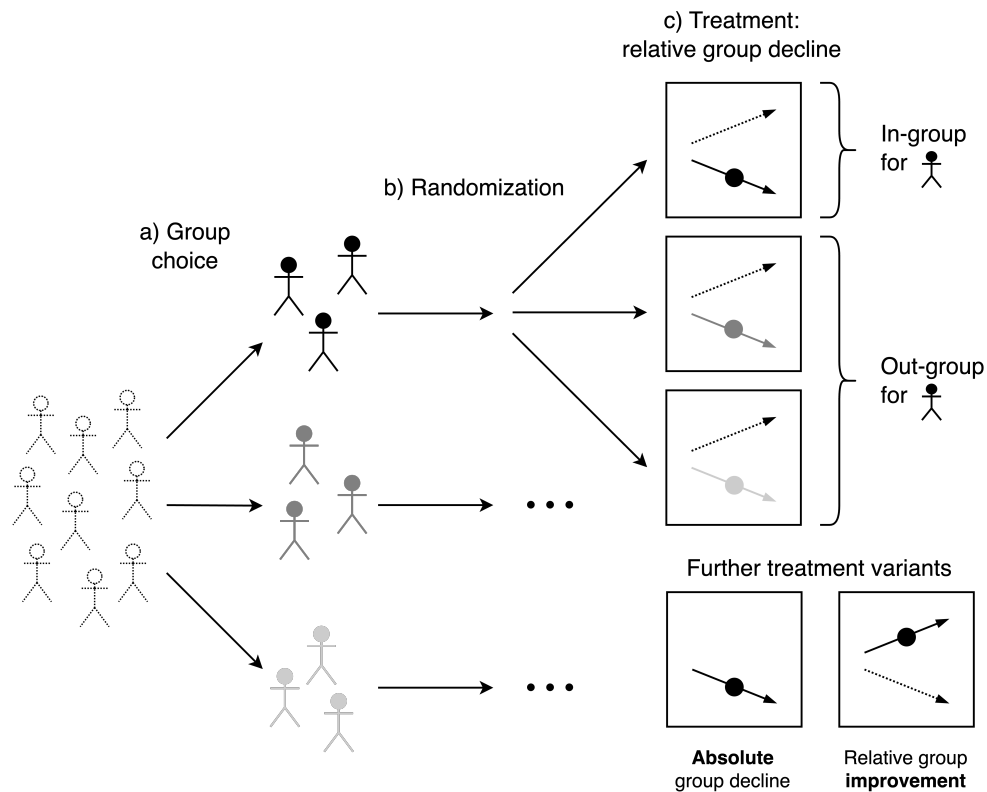


Figure 1: A diagram of the progression of the experiment for one group category with three groups (black, dark gray, and light gray). First, subjects choose their group in step a). They are then randomly allocated in step b) to receive one of two treatments in step c): a text-based information treatment about their chosen in-group or an out-group. The main treatment is ‘relative group decline’. Two alternative versions of treatment are ‘relative group improvement’ and ‘absolute group decline’ (which omits the national-level information).

Table 1: Overview of Variables in the British Election Study Internet Panel

	Measurement level	Groups measured	Waves observed
In-group performance (group-level)	Group-by-wave	Class, region	18
In-group performance (individual-level)	Individual-by-wave	Class, region, local community	4
Likelihood of incumbent vote	Individual-by-wave		18
Incumbent looks after group	Individual-by-wave	Class	6

Note: 'Waves observed' refers to the number of waves where the variable overlaps with the other variables of interest.

Table 2: Relationship Between Group Performance, Perceived Group Concern and Incumbent Vote Intention.

	Group-based retrospective voting (pooled estimates)		Test of the mechanism	
	Vote intention		Class concern	Vote intention
	(1)	(2)	(3)	(4)
Group performance (group-level)	0.18** (0.00)			
Group performance (individual-level)		0.12** (0.01)		
Class performance (group-level)			3.81** (0.17)	
Class concern				0.48** (0.03)
Egotropic evaluations	0.08** (0.00)	0.11** (0.02)	0.06** (0.02)	0.04* (0.02)
Sociotropic evaluations	0.32** (0.01)	0.13** (0.03)	0.09** (0.03)	0.09** (0.02)
TWFE	Yes	Yes	Yes	Yes
Clustered SEs	Yes	Yes	Yes	Yes
Wave N	18	4	6	6
Individual FEs	91125	20406	37493	37493
Total N	354304	22352	53058	53058

Note: Estimates from two-way fixed effects models of self-reported likelihood of voting for the incumbent party. All independent variables are standardized. Coefficients in columns 1 and 2 are pooled estimates from several underlying models, one per group type, using simple meta-regression models with equal weights (see Appendix A (p. 1) for unpooled models). For these meta-regressions in columns 1 and 2, the total N and individual FE statistics show the minimum numbers, as they vary slightly between underlying models. † p<.10; * p<.05; ** p<.01.

Table 3: Overview of the Experiments

	Experiment 1	Experiment 2	Experiment 3
Collection period	April 2022	April 2023	September 2023
Country	Denmark	Denmark	United States
Survey provider	YouGov	Moos-Bjerre/Norstat	Verasight
N	4,020	3,262	2,000
Government	Social Democratic	Centrist coalition	Democratic president
Social groups	Age, geography, class, education	Age, geography	Ethnicity-by-education
Treatment versions			
Relative decline	Yes	Yes	No
Relative improvement	No	No	Yes
Absolute decline	Yes	No	No

Note: The table shows key features of the three survey experiments. All surveys target the voting-age population. Ethnicity-by-education groups are intersectional groups that combine ethnicity and education.

Table 4: Effects of Relative In-Group Decline and Improvement

	Experiment 1		Experiment 2	Experiment 3
	Economic satisfaction	Government approval	Economic satisfaction	Economic satisfaction
Relative in-group decline	−0.12** (0.03)	−0.09* (0.04)	−0.10* (0.04)	
Relative in-group improvement				0.19* (0.08)
Controls	Yes	Yes	Yes	Yes
Clustered SEs	Yes	Yes	No	No
In-group FEs	Yes	Yes	Yes	Yes
No. of groups	22	22	6	6
N	1388	1379	1881	2000

Note: Estimates from linear regression models of satisfaction with the current state of the economy and approval of the incumbent's handling of the economy (5-point scales) on treatment (in-group performance vs out-group performance information (ref.), with national benchmark) with in-group fixed effects and design controls. Standard errors clustered at the in-group level in Experiment 1. † p<.10; * p<.05; ** p<.01.

Table 5: Effects of In-Group Decline on Prospective Pocketbook Evaluations

	Without national benchmark	With national benchmark
In-group decline	0.02 (0.04)	−0.04 (0.03)
Clustered SEs	Yes	Yes
In-group FEs	Yes	Yes
No. of groups	22	22
N	1486	1508

Note: Regression of prospective pocketbook evaluations on treatment (in-group decline vs out-group decline information [ref.], with and without national benchmark). Model specifications are identical to those in Table 4. Standard errors clustered at the in-group level. † $p < .10$; * $p < .05$; ** $p < .01$.