Who (Else) Benefits?: Group-Based Responses to Distributive Policies[†]

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Working paper

This version: October 20, 2025

Word count: 8,765 (excl. references)

A central question in public opinion is how voters respond to distributive policies that benefit them. The common expectation is that voters reward incumbents for personal benefit, following a pocketbook voting logic. Yet, the pocketbook explanation has received little direct empirical scrutiny. In this paper, I challenge the pocketbook account and argue that existing studies conflate personal benefits with perceived benefits to voters' in-groups. I theorize a group-based mechanism in which voters respond to distributive policies based on how they believe those policies affect certain salient in-groups. I test the argument in two empirical studies. First, using survey data on COVID-era stimulus checks in Denmark and the United States, I show that check recipients became more likely to believe their racial or geographical in-groups also benefited. These findings reveal that distributive perceptions are endogenous to personal benefit, casting doubt on the common attribution of policy effects to pocketbook voting. Second, to isolate the causal role of group-based perceptions, I field three pre-registered experiments in the two countries, randomly varying features of hypothetical cash transfer policies. Across experiments, I find that voters' political support depends at least as much on perceived in-group benefit as on personal gain. Importantly, these effects are highly group-dependent, emerging only for groups with strong political identities. Together, the findings show that group-based responses, not just pocketbook concerns, shape how voters react to policies that benefit them, helping explain the wide variation in policy effects across contexts.

[†]I thank Frederik Hjorth, Peter Thisted Dinesen, Martin Vinæs Larsen, Asmus Leth Olsen, Søren Damsbo-Svendsen, Lasse Laustsen, Martin Bisgaard, Rune Stubager, Troels Bøggild, Rune Slothuus, Rasmus Skytte, Ibrahim Öker, participants at the 2023 Annual Meeting of the American Political Science Association and participants at the 2023 Annual Meeting of the Danish Political Science Association for helpful comments and suggestions on earlier work for this paper. I also thank Ken Winneg and the Annenberg Public Policy Center for generously sharing their survey data with me.

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How voters respond to distributive policies is a fundamental question for democratic politics. When governments allocate targeted benefits – cash transfers, tax credits, subsidies – they create winners and losers among the electorate. A large empirical literature documents that voters generally reward incumbents for receiving such benefits, though effects vary considerably (Blattman, Emeriau and Fiala 2018; Filipovich et al. 2018; Jares and Malhotra 2024; Manacorda, Miguel and Vigorito 2011; Zucco Jr. 2013). Understanding what drives these responses matters for democratic accountability: If voters respond predictably to personal benefits, incumbents have incentives to redistribute resources rather than focus on national growth (Ferejohn 1986). Moreover, it becomes harder for incumbents to get away with 'cheap talk' and empty promises when voters effectively validate such claims against the policy effects they experience (Fiorina 1981; Key 1961). When voters reward personal benefits, this creates strong incentives for strategic redistributive policy-making that could even become all incumbents need to stay in office.

This empirical literature has produced numerous credible causal estimates of distributive policy effects, but has devoted less attention to understanding what drives citizens' responses. The standard explanation is pocketbook voting, i.e. that voters reward or punish incumbents for changes in their personal finances (Fiorina 1981; Healy, Persson and Snowberg 2017; Key 1961). Applied to distributive policies, the logic is straightforward: recipients support the incumbent because they experience having more money in their pockets. Indeed, the electoral effects of distributive policies are often cited as prime examples of pocketbook voting because of the clarity of the link between government action and personal gain (Healy, Persson and Snowberg 2017; Tilley, Neundorf and Hobolt 2018). Although this may seem obvious, the pocketbook explanation has received little direct empirical scrutiny. Moreover, the heterogeneous pattern of empirical findings sits somewhat uneasily with the predictions of pocketbook voting, with studies finding effects that range from strongly positive to null or even negative, even for policies that are clearly attributed to incumbents (Blattman, Emeriau and Fiala 2018; Filipovich et al. 2018; Jares and Malhotra 2024). Thus, there may be more to distributive policy effects than the prevailing pocketbook account suggests.

In this paper, I argue that the pocketbook account represents an overly narrow understanding

of how voters process distributive benefits. Rather than simply calculating personal gains, voters simultaneously evaluate whether policies benefit their social in-groups, and this group-based assessment significantly shapes their response. This argument draws on a long tradition in political behavior research finding social group memberships to profoundly influence how voters think about politics, often emphasizing symbolic group identity attachments (Bornschier et al. 2021; Campbell et al. 1960; Claassen et al. 2021; Donnelly 2021*a*; Elder and O'brian 2022; Kinder and Kam 2010; Miller, Wlezien and Hildreth 1991). I argue that for individual voters, the impact of a policy on their in-group often provides a clearer signal of the incumbent's alignment with their interests than their own policy benefit alone. Whether for symbolic or instrumental reasons, voters therefore have reason to look beyond their pocketbooks when evaluating distributive spending.

This group-based mechanism has likely been overlooked because it is often observationally equivalent to pocketbook voting: in most cases, both predict recipients will support incumbents more than non-recipients. This is because personal benefit and 'distributive perceptions' of in-group benefit are intrinsically correlated. Spending policies do not benefit individuals at random but necessarily target shared characteristics that map unto salient group boundaries like young people, the elderly, rural residents, single mothers or low-skilled workers. Thus, benefit recipients are both mechanically more likely to belong to beneficiary groups and psychologically prone to inferring that "people like them" benefit. This creates a bundled treatment where personal and group benefits are conflated. When voters identify strongly with beneficiary groups, they may reward incumbents for perceived group benefits regardless of personal gains. By neglecting voters' perceptions of who else benefits, existing research has thus missed a crucial dimension of how distributive policies translate into political support.

Understanding group-based responding to distributive policy matters for both empirical and theoretical reasons. Empirically, it helps explain the puzzle of heterogeneous policy effects. More so than pocketbook voting, the group-based mechanism predicts considerable heterogeneity in electoral responses to distributive policy depending on which group is targeted. That is because the salience of group identities varies and this conditions responses. When policies benefit groups with

strong identities, incumbent support may increase substantially; when they target less cohesive or politically relevant groups, effects may be minimal or even negative. The political return to a given policy thus depends less on its objective size than on *who else* is perceived to benefit.

The group-based mechanism also reshapes incumbent incentives. When voters interpret distributive spending as signaling alignment with their group rather than just personal gain, the informational value of redistribution increases. As (Drazen and Eslava 2006) argue, when spending is perceived as benefiting similar others, it becomes more rational for forward-looking voters to respond even when they recognize tactical motivations (Drazen and Eslava 2006). At the same time, group-based responding simultaneously constrains electoral strategies: incumbents cannot simply target whichever voters seem most pivotal but must consider which group identities will actually mobilize support. The mechanism thus makes distributive spending both a more powerful and a more inflexible electoral tool.

To test this argument, I combine observational and experimental evidence from two very different country contexts, the United States and Denmark. First, I use survey data collected during the COVID-19 pandemic to examine whether individuals who received stimulus checks were more likely to perceive that their racial or geographical in-groups also benefited. Using individual fixed effects and controls for policy eligibility, I find consistent evidence that voters infer group-level targeting from personal receipt. This makes it plausible that distributive policy effects are driven by perceived in-group benefit rather than personal gain alone. Second, I test whether perceptions of group-benefit independently affect political support through three pre-registered survey experiments. Following recent experimental designs on pocketbook voting, I randomly assign features of hypothetical cash transfer policies (Bechtel and Liesch 2020; Beiser-McGrath and Bernauer 2023). By independently varying subjects' personal receipt of benefits and how policies benefit various geographical and age groups, I can separate the bundled treatment inherent to observational data. Across experiments, I find that voters respond as much or more to perceived in-group benefit as to personal material gain. Consistent with pre-registered expectations, these effects are strongly heterogeneous, existing primarily for specific groups with high identity salience.

Together, these findings demonstrate that group-based responses constitute an important mechanism behind electoral returns to distributive policies, and one that has often been conflated with pocketbook voting. This in turn helps explain the heterogeneous effects of such policies on political support, as they depend on which group identities are perceived to benefit.

Distributive Spending and Pocketbook Voting

The electoral effects of distributive spending have long been central to models of clientelistic and pork-barrel politics (Cox and McCubbins 1986; Dixit and Londregan 1996; Drazen and Eslava 2006). A cornerstone assumption of these models is that "cash transfers sway votes" (Manacorda, Miguel and Vigorito 2011, p. 2), enabling politicians to use distributive spending tactically to win over pivotal voters. I define *distributive spending* as policies that deliver *excludable* material benefits, i.e. benefits with certain eligibility criteria that only *some* citizens qualify for.[1] Examples include non-universal cash benefits, tax credits, subsidies, or targeted vouchers or coupons. For any such policy, we can distinguish 'recipients' and 'non-recipients' as two exhaustive and mutually exclusive groups that do (not) or can (not) expect to qualify for benefits.[2] At the individual level, the 'distributive policy effect' is then the counterfactual difference in government support of an individual being a recipient vs a non-recipient.

The standard explanation for positive distributive policy effects invokes pocketbook voting: voters reward or punish the government for changes in their personal finances (Fiorina 1978; Healy, Persson and Snowberg 2017; Key 1966). On this view, the distributive policy effect is simply voters' reaction to having 'more money in their pockets'. Whether this can be explained by an intention to reward or by changes in affect (Huber, Hill and Lenz 2012), the pocketbook view of policy benefits as "income replacement" predicts monotonic positive effects (Greene 2022, p. 2).

Yet, there is surprisingly little direct empirical support for the pocketbook mechanism. While scholars have largely solved the methodological challenge of identifying causal effects given the

[1] This is closely related to the concepts of "particularistic" or "selective" benefits in the literature (Van Lancker, Ghysels and Cantillon 2015).

[2] While there may be psychological differences between benefiting versus expecting to benefit from a policy, these distinctions are not central to this paper's argument.

issue of selection into recipient status (Corrêa and Cheibub 2016; Cox and McCubbins 1986; Dixit and Londregan 1996; Drazen and Eslava 2006), they have devoted less attention to testing the underlying causal mechanism. More problematically, their empirical results do not obviously support pocketbook predictions. Some studies find effects that far outlive temporary benefits, which is "inconsistent" with straightforward pocketbook responses (Kogan 2021; Manacorda, Miguel and Vigorito 2011). Others find null or even negative effects (Blattman, Emeriau and Fiala 2018; Levitt and Snyder Jr 1997), even when benefits are substantial in magnitude (Filipovich et al. 2018; Green 2006; Guardado and Wantchékon 2018; Imai, King and Velasco Rivera 2020; Jares and Malhotra 2024). A key insight from the literatures on economic voting and policy feedback is that some of this variation can be explained by variation in incumbent responsibility and its visibility as not all policies are equally discretionary or "traceable" (Hamel 2024; Imai, King and Velasco Rivera 2020; Mettler 2011; Powell Jr and Whitten 1993). Still, this does not explain the occasional negative effects nor some prominent null findings for distributive benefits that were highly discretionary, politically salient and clearly attributed to the government by recipients (Blattman, Emeriau and Fiala 2018; Filipovich et al. 2018; Jares and Malhotra 2024). These patterns suggest that pocketbook voting provides an incomplete account of distributive policy effects.

Several studies have hinted at alternative mechanisms. Manacorda, Miguel and Vigorito (2011) theorize that voters use distributive spending to infer incumbents' "redistributive preferences towards 'people like them'," while Drazen and Eslava (2006) suggest voters assess whether incumbents are "favoring some groups over others" (p. 30). Some recent work finds evidence consistent with voters responding to community-level policy effects (Fetzer 2019; Gaikwad, Genovese and Tingley 2022). In a different strand, the literature on policy feedback has examined how public support for targeted policies depend on perceptions of which groups they target and the extent to which they are broadly perceived as e.g. deserving (Bechtel and Liesch 2020; Guinaudeau et al. 2023; Schneider and Ingram 1993; van Oorschot 2006).

However, these literatures have not explicitly theorized how voters form and respond to perceptions of in-group benefit alongside their personal benefit, nor directly tested such group-based

behavior against pocketbook voting. In the following I take up this line of argument and theorize how voters not only care about their own material gain from a policy but also about who (else) benefits, and how this can explain distributive policy effects.

Group-Based Responses to Distributive Spending

Distributive policies inherently operate at the level of groups rather than individuals. As Kramer (1983) notes, "public policies by definition always affect aggregates of individuals" (p.106). Governments design policies around shared characteristics – such as age, income, or geography – that correlate with meaningful social groups. As a result, distributive policies constitute 'bundled treatments', delivering benefits simultaneously to individuals and to the broader groups they belong to. My central claim is that voters largely respond to these group-level effects rather than personal benefits alone.

Since Converse (2006), public opinion research has found political behavior to be deeply rooted in social group attachments based on, e.g., class, residence, age, ethnicity, and gender (Achen and Bartels 2016; Claassen et al. 2021; Jackson and Carsey 2002; Kalin and Sambanis 2018; Thau 2019). Voters may care about in-group interests out of a concern for fellow group members or because group interests take on a symbolic value (Becker 2021; Bernhard, Fischbacher and Fehr 2006; Kalin and Sambanis 2018; Rueda 2018; Sears and Funk 1991). More instrumentally, group outcomes serve as proxies for what is in individuals' long-term interests (Donnelly 2021*a*; Kalin and Sambanis 2018; Sears and Funk 1991). By benefiting their group, incumbents signal their underlying alignment with "people like them" (Drazen and Eslava 2006; Manacorda, Miguel and Vigorito 2011). Even for non-recipients, their group's benefit makes them a more likely recipient from the incumbent's policies in the future. Voters therefore have reason to care about policies benefiting their in-groups regardless of whether they happen to personally benefit or not.

This group-based mechanism is rooted in *distributive perceptions*: voters' beliefs about which groups benefit from policy. Unlike personal benefits, which are evident from personal experience, distributive perceptions require voters making inferences about who else benefits from secondary

sources. These perceptions are shaped by elite communication and policy design, with policies being more or less visible in their targeting. But distributive perceptions also arise endogenously from personal receipt itself, especially when a policy's targeting is not made too explicit in the political discourse. Specifically, recipients may treat their own receipt as a cue that the policy benefits "people like them". This is not an unreasonable inference given that personal receipt implies that the policy benefits people sharing at least some of their characteristics. Such extrapolation from personal experience is well-documented in political behavior, with voters inferring national economic changes from their neighborhoods (Baybeck and McClurg 2005; Bisgaard, Sønderskov and Dinesen 2016; Galesic, Olsson and Rieskamp 2012; Larsen et al. 2019). This implies that recipients will generally be more likely to perceive their in-groups to benefit, even for policies that are only weakly distributive. Which specific group(s) they infer as benefiting likely depends on various personal and contextual factors like the incumbent's pre-existing group linkages, the stated goals of the policy, as well as their own salient group identities. The key point is that distributive perceptions are likely to arise whether a policy is strongly distributive or not.

Critically, however, it matters which groups benefit, or are perceived to benefit. Not all groups matter equally to their members and political appeals to group identities tend to be more effective for some groups than others (Haffert, Palmtag and Schraff 2023; Hersh and Schaffner 2013). One key factor is the salience or strength of a group's political identity, referring to the degree to which voters self-categorize as group members and perceive common political interests (Donnelly 2021*b*). Targeting groups like 'the upper middle-class' or 'suburban residents' may have little effect if voters do not identify politically with these categories. Indeed, explicit appeals to weak-identity groups can backfire as members may view such targeting as inappropriate or socially divisive, especially if their group is high-status (Haffert, Palmtag and Schraff 2023; Robison et al. 2021).[3] Other group characteristics may also condition distributive policy effects, includ-

[3]Although this mechanism is defined with respect to voters' *in*-groups, voters also care about the plight of certain *out*-groups for ideological or symbolic reasons (Miller, Wlezien and Hildreth 1991; Sears et al. 1980). Many studies have, e.g., found voters to like parties that are perceived to fight for broadly liked or 'deserving' groups like 'the poor' and 'the elderly' (Bechtel and Liesch 2020; Guinaudeau et al. 2023; Schneider and Ingram 1993; van Oorschot 2006). Such out-group mechanisms are beyond the scope of this paper.

ing perceived deservingness (Bechtel and Liesch 2020; Dassonneville, Stubager and Thau 2025; Schneider and Ingram 1993; van Oorschot 2006), social dominance (Haffert, Palmtag and Schraff 2023), and consistency with prior beliefs about incumbent-group linkages (Miller, Wlezien and Hildreth 1991; Thau 2019). I focus on identity strength as the primary moderator, but future work should examine these additional dimensions.[4]

The group-based mechanism thus predicts that distributive policy effects should be strongest for groups with high identity strength and minimal or even negative for groups with weak political identities. This, in turn, can help explain why effects of distributive policies vary as much as they do. The next section addresses the empirical challenge of separating group-based behavior from pocketbook voting.

Disentangling Group-Based and Pocketbook Mechanisms Empirically

Research on distributive policy effects typically attributes them to pocketbook voting. However, existing evidence is equally consistent with the group-based mechanism I have theorized. This is because distributive policies constitute bundled treatments: they simultaneously benefit individuals and the groups they belong to. Recipients of a policy benefit are therefore more likely to perceive that their in-groups also benefit. Without accounting for these correlated distributive perceptions, existing work on distributive policy effects has captured the composite effect of this bundled treatment.

This association between recipient status and perceived in-group benefit arises through two channels. First, there is often genuine overlap: when policies target groups, recipients frequently belong to the targeted group. Recipients are therefore more likely to believe their in-group is benefiting for the simple reason that it is true. Second, as discussed in the previous section, recipients may infer group benefit from their personal receipt, treating it as a cue for the policy helping "people like them." This psychological mechanism means that group-based responses can emerge even for policies with limited actual group-targeting.

[4]Given the limited number of groups I study, I cannot definitively isolate identity strength from correlated group traits. I return to this issue in the methods section and discussion.

The bundled nature of distributive policies creates a fundamental identification challenge. Ideally, one would measure both recipient status and distributive perceptions for relevant groups, allowing simultaneous estimation of pocketbook and group-based effects. However, most studies of distributive policies do not measure such perceptions. Moreover, while scholars have developed credible strategies for obtaining exogenous variation in recipient status, achieving such variation in distributive perceptions is considerably more difficult in observational settings where they are likely endogenous to various political attitudes.

To overcome these challenges, I conduct two studies. First, I use observational data from COVID-19 stimulus programs in Denmark and the United States to demonstrate that recipients of cash benefits indeed become more likely to believe their geographical or racial in-group benefits. These findings show that distributive perceptions are endogenous to personal policy benefit, casting doubt on the common attribution of distributive policy effects to pocketbook voting. Second, I employ survey experiments in both countries using hypothetical policy proposals. Closely emulating cash transfer policies in both countries at the time, the experiments independently manipulate personal and in-group policy benefits, allowing me to isolate the group-based mechanism from pocketbook voting. As expected, in-group benefit has a substantial effect on political support, but only for strong identity groups. Together, these studies both provide causal evidence for the group-based mechanism and illustrate its observational equivalence with pocketbook voting.

Study I: Group-Based Inferences from COVID-Era Stimulus Checks

To study whether voters use personal policy gains to make inferences about in-group benefit, I leverage survey data from The United States and Denmark. Table 1 provides an overview of key features of the two datasets. Both surveys include relevant measures pertaining to COVID-era stimulus checks: the CARES Act stimulus check in the US and the so-called Heat Check in Denmark. In addition, both surveys measure distributive perceptions relating to the stimulus checks for racial and geographical groups, respectively. Importantly, both stimulus policies either did not target, or were not widely understood to target, the groups studied. The ambiguity of their

distribution offers an ideal context to test whether personal benefit receipt leads voters to infer that their in-group was also targeted.

	US Survey	**Danish Survey**
Dataset	Annenberg Election Study	Original survey[5]
Survey type	2 panel waves	Cross-section
Collection period	May & June 2020	April 2023
Population	Citizens of Florida, Michigan Pennsylvania, and Wisconsin	Danish citizens
N	20,437 (11,691 unique)	3,262
Incumbent party	Republican President	Centrist coalition[6]
Distributive policy	CARES Act stimulus check	the Heat Check
Social groups	Blacks/Whites	Rural/Urban

Table 1: Key features of the surveys.

CARES Act Stimulus Checks and Racial Group Perceptions

The first case examines the CARES Act stimulus checks using data from the Annenberg Election Study Panel, which sampled the voting-age population in four battleground states throughout 2020 and 2021 (Center 2024). I focus on the first two waves fielded during the Spring 2020 rollout of the CARES Act (H.R. 748), the largest economic stimulus package in U.S. history (Wire 2020). Signed into law on March 27, the CARES Act included $300 billion in one-time cash payments to individuals of $1200 with additional amounts for children, conditional on income. While the legislation included a range of further measures – expanded unemployment benefits, forgivable loans for small businesses, and students grants – the stimulus checks represented a highly visible direct transfer to individuals.

The policy's broad-based design makes it particularly suitable for testing group-based inferences. Rather than explicitly targeting racial groups, the CARES Act used income thresholds and emphasized helping those hardest hit by the pandemic (Sloan 2020). While this massive federal

spending benefited Americans broadly, it disproportionately benefited those with lower incomes and lower job security (Peterson Foundation 2024). This creates potential for recipients to make group-based inferences to racial groups without clear distributive signals from policymakers.

My identification strategy exploits the staggered rollout of stimulus payments. While the law passed in March 2020, payments began mid-April and continued for several months (Peterson Foundation 2024). With two waves of the Annenberg survey fielded in May and June of 2020, I capture substantial variation in receipt over a short time span with the share of stimulus check recipients increasing from 78.6% in the May wave to 92.1% in the June wave. The mid-rollout timing of the survey allows me to use individual fixed effects to isolate the causal impact of personal receipt on group-based perceptions, eliminating bias from stable individual characteristics that might predict both receipt and perceptions.

I measure pesonal recipient status with a survey item asking whether respondents received "a coronavirus relief payment, also called a stimulus payment from the federal government" on behalf of themselves or family members in their household. The key outcome measures distributive perceptions: respondents rated whether White Americans and Black Americans, "got what they deserved" from the federal government's COVID-related economic plans.[7]

This measurement strategy has two important features. First, while the outcome captures perceptions of all COVID economic measures (not just stimulus checks), the stimulus checks were the perhaps most visible and widely distributed component, making personal receipt a meaningful predictor of broader distributive perceptions. Second, combined with measures of respondents' racial identity, this allows me to test whether personal receipt increases perceptions that one's own racial in-group benefited from federal COVID policies.

[6]Fielded by the private consultancy, Moos-Bjerre, which uses Norstat's survey panel. For information about data quality, see: https://norstat.co/solutions/sample-only/.

[6]A three-party coalition consisting of the center-left Social Democrats and the center-right Moderates and Liberals. The prime minister was from the Social Democrats.

[7]See Appendix B for item wordings. The survey also includes other distributive perceptions for, e.g., "large corporations", "small businesses" and "working families". I exclude these from the analysis as they do not capture social groups and/or do not allow for cleanly measuring in-group membership.

Danish Heat Check and Geographic Group Perceptions

The Danish case provides complementary evidence using a different policy context and group dimension. In August of 2022, the Danish government distributed the "Heat Check" (Varmecheck), a one-off payment of 6,000 DKK ($900) without application to all households that satisfied two criteria: i) a gross household income below 706,000 DKK ($107,000) in 2021 and ii) use of either natural gas or electricity as the primary heat source (or district heating in a few designated areas with large natural gas components).

This policy creates a favorable setting for isolating the mechanism for several reasons. First, eligibility was determined by objective and easily measurable criteria, allowing me to control directly for the factors determining selection into recipient status. Second, while the policy had a strong geographic skew, favoring rural areas where gas and electric heating are more common, this targeting was not obvious from the eligibility criteria or government communication which instead emphasized helping "households squeezed by large price increases" (The Danish Ministry of Climate, Energy and Utilities 2022). Around 16% of Danish households received the check but almost none of them were in the four largest cities.[8] A systematic media search shows that in the period from when the Heat Check bill was first proposed until the check was paid out, only 2.2 percent of all media articles mentioning the Heat Check also mentioned words like "large cities", "small cities", "rural" or "countryside" (see Appendix A. The result was a policy that implicitly benefited rural residents (23% of self-identified rural respondents received it versus 7% of urban respondents; see Appendix A) while maintaining ambiguous distributive signals. Survey data confirm limited awareness of its targeting among the public with respondents evenly split when asked which geographic groups benefited most (see Appendix A). The fact that the Heat Check's targeting was essentially unknown makes it an ideal case for testing how voters infer in-group benefit from their personal policy experience.

[8]In particular, the four largest cities in Denmark enjoy near-universal coverage of district heating, thereby excluding nearly all their residents from the benefit. The four largest cities are Copenhagen, Aarhus, Odense and Aalborg which all have more than 100.000 inhabitants and jointly make up a third of the population. The next-largest cities are all significantly smaller with around 50.000-60.000 inhabitants.

I fielded a cross-sectional survey of 3,262 citizens in April 2023, roughly eight months after the Heat Check was distributed.[9] Personal receipt is measured directly by asking whether the respondent's household received the Heat Check, while distributive perceptions are captured by asking respondents to rate their beliefs regarding the policy's distribution between rural and urban populations (on a scale ranging from benefiting only rural residents to benefiting only urban residents.)

The key methodological advantage is that I observe the exact variables determining eligibility: gross household income and primary household heating source. This allows me to control for the policy's assignment mechanism. Since these variables jointly and completely determine eligibility, controlling for them provides near-conditionally independent variation in receipt status. In principle, any remaining bias must come not from unobserved confounders but from either misspecification of the functional form, which is to some extent unavoidable, or measurement error in the eligibility variables or reported benefit receipt. This approach allows for isolating the causal effect with minimal bias.

Results

Are voters more likely to think that their in-group benefits from a policy when they benefit personally? I test this directly by regressing perceptions of how geographical (Denmark) or racial (US) groups benefited from the stimulus policies on personal recipient status. The distributive perception variables are coded to match each respondent's own reported in-group membership. The Danish models include controls for household income and heat source to account for selection into Heat Check eligibility, while the US models include individual fixed effects to estimate the effects of changes in recipient status within individuals. Given the one-month span between panel waves, most unobserved confounding should be time-invariant and thus captured by the fixed effects. See Appendix C for detailed model specifications.

Table 2 shows that receiving a benefit increases perceptions of in-group benefit by 3-4 percent-

[9]This survey also included Experiment 2 in Study II. The experiment was administered between the Heat Check receipt item and the distributive perception item.

Table 2: Effects of recipient status on distributive perceptions

	Denmark	United States
	Benefits geographical in-group	Benefits racial in-group
Received check	0.04**	0.03***
N	1568	16908
Std.Errors	iid	panel id
Individual FE		✓
Eligibility controls	✓	

Note. Results from regression models of perceived in-group benefit on personal receipt of stimulus checks. Outcomes are on 0-1 scales. The model on the Danish sample controls for Heat Check eligibility criteria (household income and heat source) and geographical group membership. The model excludes "people from mid-sized cities" since the outcome only measures distributive perceptions for the two other groups, "rural people" and "people from large cities". The model on the US sample includes individual fixed effects and cluster errors by respondent. The outcome in this model is recoded such that it measures the distributive perception of the respondent's own racial in-group ("white Americans" for white respondents and "black Americans" for black respondents). + p<.10, * p<.05, ** p<.01, *** p<.001.

age points on average across groups. To be sure, this effect is modest in size, and most variation in distributive perceptions stems from other sources. Still, it suggests that voters form perceptions of in-group benefit from their own personal policy gain, even when these groups are not explicitly targeted by the policies in question.

The consistency of effects across both contexts and the groups involved is notable. Given the short time span between panel waves, the US estimate approximates the immediate process of drawing group-based inferences from personal benefit receipt. The Danish estimate, based on a survey fielded eight months after benefit distribution, indicates that these updated perceptions are rather durable. Together, these patterns suggest that personal benefit receipt leads to genuine updating of distributive perceptions, not merely temporary priming.

These findings are important because they indicate that distributive perceptions are endogenous to personal policy benefit. This casts doubt on the common attribution of distributive policy effects to pocketbook voting in the literature. If receiving a policy benefit affects both one's material

situation and one's perceptions of in-group benefit, then what appears to be pocketbook voting may actually reflect group-based considerations – even for broadly framed and diffuse policies.

However, demonstrating that personal benefits shape group perceptions does not yet prove that group-based mechanisms drive policy attitudes. For the group-based account to challenge pocketbook explanations, distributive perceptions must have an independent causal effect on attitudes, beyond any direct material effects. To test whether group-based perceptions actually explain distributive policy effects, I turn to experimental evidence that can isolate these mechanisms.

Study II: Experimental Evidence from Hypothetical Cash Transfers

Research on economic voting has increasingly turned to survey experiments (Hart and Matthews 2023; Simonovits 2015). In two recent studies, Beiser-McGrath and Bernauer (2023) and Bechtel and Mannino (2022) randomly assign information about the effects of hypothetical economic policies to estimate the strength of pocketbook voting. Here, I follow a similar logic, using hypothetical policy proposals to examine the relative influence of pocketbook and group-based mechanisms.

I field three versions of the experiment, two in Denmark and one in the United States, implementing a pre-registered design with small variations as shown in Figure 1.[10] Pre-registered model specifications are shown in Appendix E. All experiments begin with a set of baseline questions on e.g. partisanship and general support for stimulus checks, used as controls to increase the precision of estimates (Clifford, Sheagley and Piston 2021) as pre-registered. Next, subjects select their primary in-group from a list of three either geographical (Exp. 1 and 2) or age-based (Exp. 2 and 3) categories. They then receive a treatment vignette describing a hypothetical "inflation check", followed by measures of support for the proposed policy.

The treatment design consists of a 2×2 factorial that presents a hypothetical 'inflation check' proposal by the government. Closely resembling actual cash transfer policies in Denmark and the United States at the time, it describes a one-off cash benefit paid to selected households[11] on the

[10]Experiment 1: https://osf.io/bq68x. Experiment 2: https://osf.io/tywmx. Experiment 3: https://osf.io/k82av.

[11]In Experiment 1, the treatment refers to the subject's household, whereas it refers to the subject personally in Experiments 2 and 3.

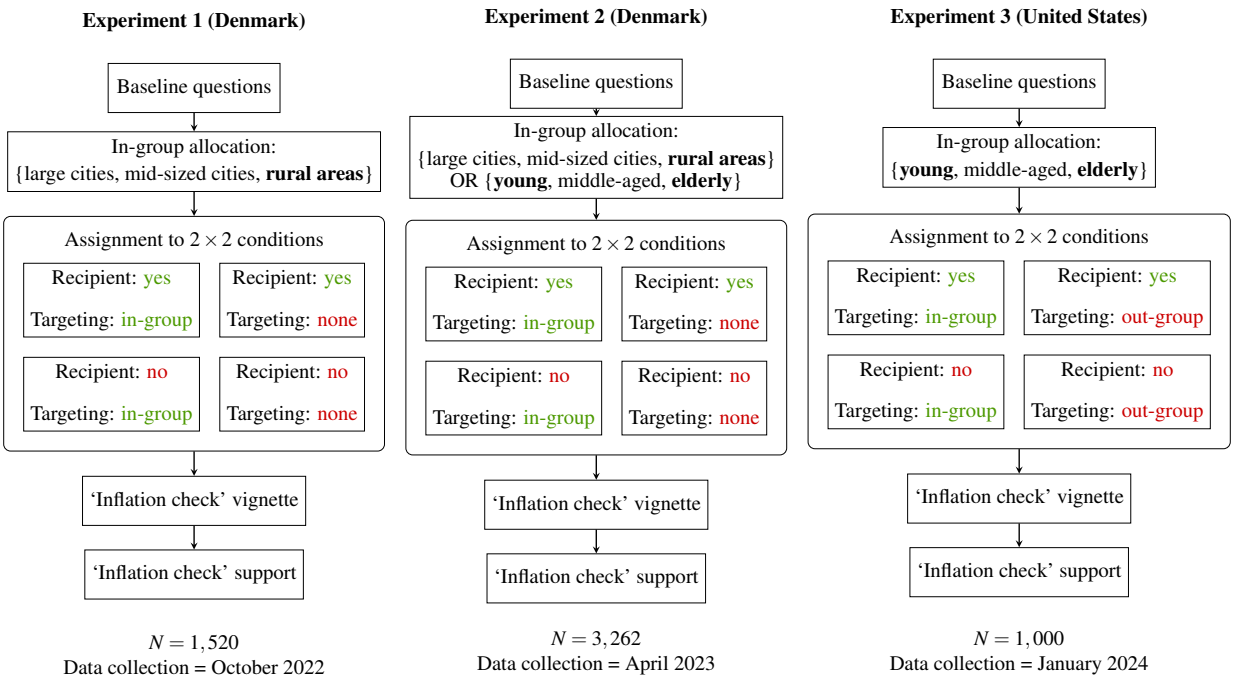

Figure 1: Survey experiment flow diagrams for three experiments conducted in Denmark and the United States. Strong identity groups marked in bold. The pocketbook effect is captured by the contrast between recipients and non-recipients. The group-based effect is captured by the contrast between those getting a policy that targets their in-group and those getting a policy that targets *no* group (Exp. 1 and 2) or targets *an out-group* (Exp. 3). Recipient status refers to the subject's household in Exp. 1 but the subject personally in Exp. 2 and 3.

basis of need. As shown in the treatment node in Figure 1, it independently varies two aspects of the policy: 1) whether the subject personally receives the benefit or not and 2) whether the policy disproportionately benefits the subject's chosen in-group or not.

This independent variation is crucial for causal identification. In observational settings, personal and group benefits typically correlate, making it impossible to separate their effects. By decoupling these factors experimentally, I can estimate the pure effect of group-based considerations, holding personal material gains constant, and vice versa.

Following my theoretical argument, and as pre-registered, I expect group-based effects to vary systematically across different group identities. Groups with stronger political salience (as indicated by bold formatting in Figure 1) should show larger responses to in-group targeting than groups with weaker identities. This heterogeneity test provides additional evidence for the group-based mechanism while helping explain why distributive policy effects vary across contexts.

To probe the generality of the group-based mechanism, I study it in two markedly different settings: Denmark and the United States. The United States features high economic inequality, social diversity, and a residual welfare state, which should all heighten voters' sensitivity to group-targeted benefits as voters seek signals of which groups the incumbent prioritizes. Denmark's universal welfare state and social homogeneity create a contrasting environment where group-based redistribution may be less salient, as comprehensive social insurance reduces group competition for resources. At the same time, Denmark's multiparty system and proportional representation may actually facilitate group-based responses by allowing clearer party-group linkages than the U.S. two-party system with its broad coalitions. Further, the stronger partisan polarization in the U.S. may dampen voters' responsiveness to new policy information by anchoring perceptions of the incumbent (Bisgaard 2019). These differences thus provide a valuable test of whether the group-based mechanism operates across markedly different institutional and partisan environments.

Treatment vignettes

The treatment vignettes combine a shared description of a hypothetical cash transfer policy with experimentally varying benefits for the subject personally and their chosen in-group. This results in the following vignette structure:

> **Experiment 1 and 2**. "Inflation is a growing problem in Denmark. Imagine that the current government proposes a large inflation check of 12,000 DKK to alleviate the problem. It is paid to people that need it the most (based on various criteria, e.g. income). Your household[12] [receives | does not receive] the benefit. As the graph shows, the check benefits [the whole population | people mostly in [in-group]]."
>
> **Experiment 3**. "In the wake of two years of inflation, many Americans are grappling with the high cost of living. Imagine that the federal government proposes a large Inflation Relief Check of $2,000 to alleviate this issue. It is paid to people that need it the most (based on various criteria, e.g. income). Your household [is | is not] eligible

[12]In Experiment 2, this says 'you' instead of 'your household'.

for this benefit. The check is designed such that it [mostly benefits [in-group] | mostly benefits [random out-group]]."

For Experiment 1 and 2, the text is accompanied by a visual stimulus showing the distribution of the benefit in a bar chart, in accordance with the text. A generic version of each visual stimulus is shown in Figure 2. In Experiment 3, the visual stimulus is omitted.

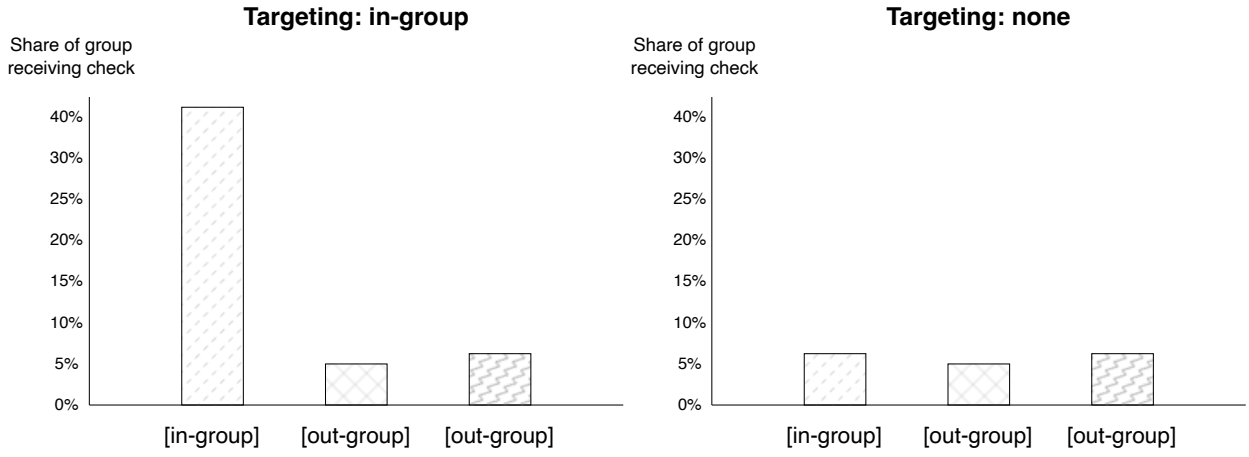

Figure 2: Generic versions of the visual stimuli accompanying the treatment vignettes in Experiments 1 and 2 (translated to English).

Manipulating Distributive Perceptions

In designing the experimental vignettes, a natural starting point would be randomizing information about the distributive impacts of the actual stimulus checks examined in Study 1, controlling for recipient status. However, deceiving voters with fictitious benefit distributions is ethically problematic. Moreover, such made-up distributions might not be credible to subjects.

In light of these drawbacks, I opt instead for a hypothetical stimulus check referred to as an "inflation check". Similar hypothetical experiments have recently been used to scrutinize the psychological mechanisms of economic voting in the literature (Bechtel and Liesch 2020; Beiser-McGrath and Bernauer 2023; Hart and Matthews 2023) and recent work has found such 'situational' hypotheticality to make no meaningful difference to results (Brutger et al. 2022). Further, I design the hypothetical treatments to be highly ecologically valid in their context. The two Danish ex-

periments were fielded at a time where the Danish government had enacted similar cash transfer schemes like the 'Heat Check' and the 'Elderly Check', and there were even negotiations on an "inflation check" at the time (The Danish Ministry of Finance 2023). The cash benefit of 12,000 DKK ($1,800) is double the amount of the Heat Check and roughly the amount of the Elderly Check (10,000 DKK ($1,530) paid in two installments (Ritzau 2023)). This makes it a large but not unrealistic payment. In addition, the degree of group benefit is within a realistic range. As it happens, both the Heat Check and the Elderly Check strongly targeted geographical and age groups, respectively.

In the US context, Experiment 3 was fielded at a time where many state-level inflation relief checks had been recently implemented, some of which targeted the elderly (Winters 2022). The Trump administration also implemented federal stimulus payments in 2020 and 2021, including the CARES Act stimulus checks. Besides matching the amount for the Danish experimental checks, the $2,000 amount is comparable to existing inflation relief policies, some of which paid up to $3,400 per household (Department 2024). In sum, the hypothetical stimulus checks are strong treatments with respect to both their cash amounts and their distributions but remain ecologically valid in their context.

In contrast to the observational study of COVID stimulus checks, the hypothetical cash transfers are designed to be relatively explicit about how they benefit social groups. This is necessary to induce sufficient variation in the relevant distributive perceptions. However, I implement this targeting indirectly: the group-based distribution is indicated only through the reported ex-post distribution of the policy benefit across groups, while the policy framing itself remains neutral and broad-based across all conditions. Echoing actual stimulus policies at the time, the policy is consistently described as helping people in need based on criteria like income, rather than as explicitly targeting specific social groups. While this indirect approach likely reduces the strength of treatments compared to scenarios with overtly group-specific eligibility criteria or government messaging, it offers several methodological advantages.

First, it strengthens ecological validity. Governments often preserve ambiguity in their com-

munication on distributive policies to avoid alienating voters (Hersh and Schaffner 2013). An explicitly group-targeted policy could be politically unrealistic, particularly for some included groups like "the middle-aged" that rarely receive overt policy attention. Second, the more subtle targeting approach prevents subjects from drawing systematically different inferences about government intent across treatment conditions, which would confound the comparison of interest (Dafoe, Zhang and Caughey 2018).[13] Including overtly targeted eligibility criteria (e.g. age for the age groups) or an explicit group-based rationale (e.g. "to help young people") would run the risk of conflating the effects of distributive benefits with the symbolic appeal made to the group in question (Robison et al. 2021). Finally, indirect targeting represents a more demanding test of the group-based mechanism but also generalizes to a broader set of cases. If subjects respond to in-group targeting even when it is this indirect, it suggests a more deep-rooted tendency to evaluate policies on the basis of in-group outcomes – one that extends beyond cases of explicit group appeals to the more common scenario of policies with ambiguous distributive signals.

For the control conditions, in which the in-group does not stand to benefit, I use both a neutral 'no targeting' scenario and an 'out-group benefit' scenario as shown in Figure 1.[14] The former scenario, used in Experiments 1 and 2, shows if it makes a difference whether a stimulus check is distributed equally or disproportionately benefits the in-group. However, voters might prefer equal to unequal distributions, which could bias this comparison. To avoid this, Experiment 3 uses a policy that has the same distribution in both conditions, varying only whether it is the in-group or a random out-group that is the main beneficiary. This ensures that it is only the membership of the benefiting group that differs across subjects.

[13]To be sure, the eligibility criteria could be even more specific but that would risk undermining the realism of treatment. If eligibility criteria were more explicitly group-based, subjects might independently deduce their personal benefit status and the policy's distributive pattern, undermining the credibility of the experimental manipulation.

[14]Experiment 1 also includes two further distributive scenarios: one where the in-group is 'de-targeted' and one where everyone gets the high benefit level. See Appendix F for an overview of all four scenarios. The alternative scenarios are used to test (and exclude) alternative explanations, e.g. that voters like the in-group benefit scenario because the total sum of benefits is higher, generally dislike unequal distributions, or the like. See Appendix F for some empirical results.

Chosen Social Groups

I focus on age-based and geographical groups for two main reasons. Firstly, all groups of a given type should be realistic beneficiaries of the policy. This excludes e.g. class groups, because cash transfers disproportionately benefiting upper-class groups would be highly unusual and not fit a common policy rationale. Secondly, there should preferably be some variation in identity strength across groups to test the expected effect heterogeneity. In addition to testing whether distributive policy effects exist, this allows me to test whether they also vary as expected.

On the basis of these considerations, I chose three geographical and three age-based groups, as shown in Figure 1. Each of these groups could plausibly be the main beneficiary of a distributive policy. Moreover, there is substantial variation in identity strength across them. In line with the literature, young people and elderly people tend to have stronger age identities than the middle-aged, whereas place-based identities tend to be stronger in rural areas than in large and mid-sized cities (Belanche, Casaló and Rubio 2021; Easterbrook, Kuppens and Manstead 2020; Haffert, Palmtag and Schraff 2023; Surridge 2007). Denmark is no exception to these general patterns with young, old, and rural identities being highly salient in contemporaneous Danish politics (Dausgaard and Stubager 2024) and recent research has documented high levels of 'rural consciousness' (Hansen and Stubager 2021; Nyholt, Hansen and Kjær 2024). For each of the three experiments, I pre-registered an expectation that the effect of in-group benefit would be stronger for these three strong-identity groups than for the others.[15] I measure these identities subjectively, asking respondents which of the three (geographical or age-based) groups they feel like they best fit into.

Outcome Measure

Finally, the key outcome measure is support for the policy on a Likert scale. Experiment 1 and 3 additionally include an outcome question about hypothetical support for the incumbent if the government were to implement the policy, and these results are also reported (and similar to those

[15]To be sure, I cannot exclude other group characteristics correlated with identity strength from driving any effect heterogeneity. I return to this point in the discussion.

for policy support; see Appendix G). Although the incumbent question gets more directly at the theoretical construct of interest – support for the incumbent enacting the policy – the hypothetical nature of the policy makes it a somewhat awkward and potentially inaccurate measure, which is why it was dropped. This is a cost of using non-deceptive hypothetical scenarios. Still, the policy support measure is better for eliciting subjects' preferences for group benefit in this case.

Results

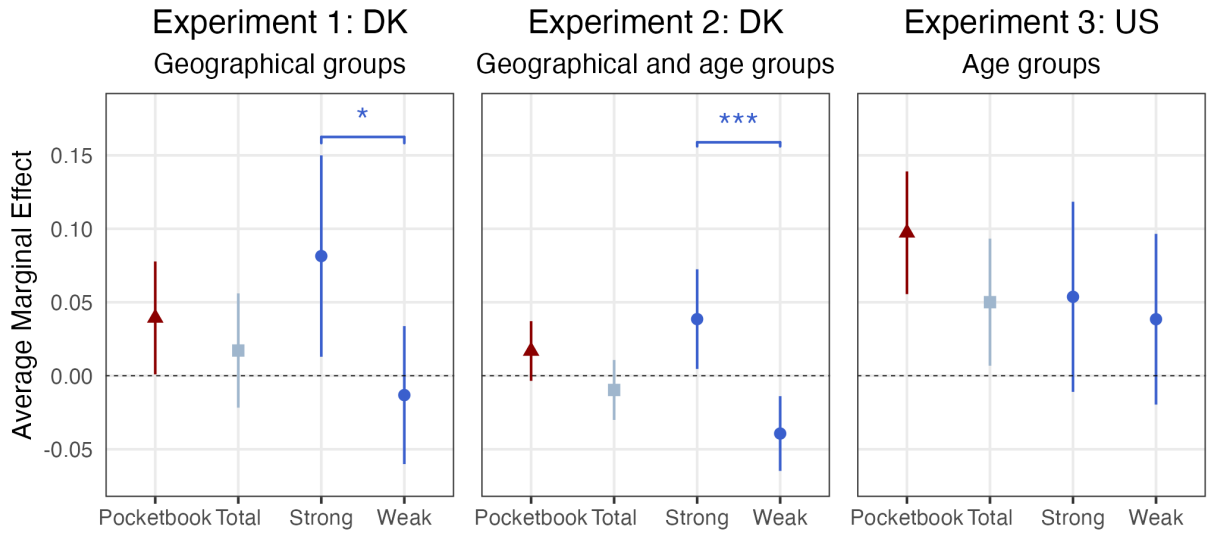

Figure 3: Average marginal effects of randomized personal check receipt ('pocketbook'), in-group benefit ('total') and in-group benefit split by group membership ('strong' and 'weak'). Models adjust for baseline covariates like incumbent support and general support for stimulus check policies. The outcome is support for the proposed stimulus check policy rescaled to a 0-1 scale. For geographical groups (Exp. 1 and 2), 'strong' identity groups are rural people and 'weak' identity groups are people from large and mid-sized cities. For age groups (Exp. 2 and 3) 'strong' identity groups are the young and the elderly, and 'weak' identity groups are the middle-aged. The baseline condition in Experiment 1 and 2 is a scenario where the benefit is equally shared and no group is targeted. The baseline condition in Experiment 3 is a scenario where a random out-group is targeted.

Figure 3 presents the effects of personal receipt and in-group benefit on support for the inflation check across the three experiments. Average effects are shown for the full sample and separately for the weak and strong identity groups. As shown, group benefit matters even when personal benefit receipt is accounted for. While the average effect of in-group benefit is only positive and

significant in Experiment 3, this masks considerable effect heterogeneity between strong and weak identity groups as theorized. For strong identity groups – the young, the elderly and rural people – support for the policy consistently increases when it benefits their in-group.[16] This positive effect is significant and substantial in all three experiments with estimates ranging between 4 and 8 percentage points. For weak identity groups – people from large and mid-sized cities, and the middle-aged – there are no, or even negative effects of in-group benefit, except for the age groups in the US experiment where the effects for strong and weak identity groups are similar. The results are robust to the changes to the experimental design introduced in Experiment 3, including omitting the visual distribution of the benefit as well as using out-group benefit as control condition instead of no group benefit. The effects are also similar in magnitude and statistically significant for incumbent support in Experiment 1 (see Appendix G).

On the other hand, once group benefit is accounted for, pure pocketbook effects are surprisingly small. In the experiments fielded in Denmark (1 and 2), the estimated effects of personally receiving the benefit, holding group benefit constant, is around 2-5 points and it is only statistically significant in Experiment 1. In the US experiment (3), the pocketbook effect is significant and more substantial at around 10 points. Still, in-group benefit appears as important as the pocketbook in explaining support for distributive policy for strong group identities. Given the prospect of negative distributive policy effects, the pocketbook effect might even be canceled out by group-based response for certain (weak) identity groups. This could help explain why distributive policy effects in observational studies are often null for large cash benefits, and sometimes even negative (Blattman, Emeriau and Fiala 2018; Levitt and Snyder Jr 1997).

Discussion and Conclusion

The extant literature on the electoral effects of distributive policies often makes a common assumption: that they can be explained by their material impact on voters' pocketbooks. Indeed, the electoral effect of distributive policies is typically seen as a prime example of pocketbook voting.

[16] As shown in additional results from Experiment 1 in Appendix F, voters prefer their group being targeted as opposed to just benefiting, but the difference is small and not statistically significant.

In this paper, I challenge this assumption and argue that existing research has conflated pocketbook voting with group-based motivations. Voters often care about in-group interests, for both symbolic and self-interested reasons, and those who benefit from a distributive policy are more likely to believe their in-group is benefiting from it. This belief is both rooted in reality, since recipients are mechanically more likely to belong to the benefiting group, but also caused by voters inferring from their personal benefit that their in-group benefits. The distributive policy effect may thus be driven by voters reacting to the perceived benefit to their group in addition to their personal gain, even for broadly framed and diffuse policies.

In analyses of stimulus checks in the United States and Denmark, this is exactly what I find. Using observational data on COVID-era stimulus checks in the United States and Denmark, I first demonstrate that personal benefit receipt increases perceptions that one's racial or geographical in-group benefited from the policy. I then isolate the causal impact of these perceptions using three pre-registered experiments in Denmark and the United States that independently manipulate personal and in-group benefits from hypothetical cash transfers. Perceptions of in-group benefit positively affect policy support and appear at least as important as direct personal benefits. Crucially, these effects vary systematically across groups: they are positive and significant for groups associated with strong political identities – like rural residents, young people, and Blacks – but null or even negative for weak identity groups – like the middle-aged or Whites. Those who benefit from a policy may therefore partly be rewarding the incumbent for helping their group rather than themselves.

These findings help resolve a puzzle in the distributive politics literature: why it is not always the case that "cash transfers sway votes" (Manacorda, Miguel and Vigorito 2011, p. 2). Existing studies show considerable heterogeneity in distributive policy effects with occasional negative and null effects even for benefits that are highly discretionary, politically salient and clearly attributed to the government by recipients (Blattman, Emeriau and Fiala 2018; Filipovich et al. 2018; Jares and Malhotra 2024). In ignoring voters' perceptions of who (else) benefits, existing literature has overlooked an important source of variation in distributive policy effects. The group-based mech-

anism I identify suggests that the electoral effects of distributive policies depend fundamentally on *who* is perceived to benefit, not just *how much* they benefit individually. Policies that disproportionately help groups with strong political identities should generate larger electoral returns than those benefiting groups with weak identities. When groups with little political relevance benefit distributive spending may even reduce rather than increase incumbent support among recipients.

Some limitations to my analysis remain. First, while I find systematic variation in group-based responses that correlates with predicted identity strength, I do not measure identity strength directly, instead relying on previous empirical work on the groups in question. Even if measured, identity strength may correlate with other group traits that could drive the observed heterogeneity such as the in-group's perceived deservingness or social subordination (Haffert, Palmtag and Schraff 2023; Robison et al. 2021) or its linkage to the party in power delivering the benefit (Thau 2019). With the limited number of groups included here, I cannot definitively parse out these alternative drivers of effect heterogeneity. Future studies should follow in the footsteps of, e.g., Haffert, Palmtag and Schraff (2023) and Hersh and Schaffner (2013)'s work on group appeals in more systematically theorizing and testing which group attributes make distributive policies effective for some groups but not for others. Nonetheless, the effect heterogeneity I uncover is important in its own right, as it suggests that distributive policy effects depend on who benefits even if group identity strength is not the full explanation.

Second, while I demonstrate that perceptions of in-group benefit matter for policy support, important questions remain about how these perceptions form. I find that even for policies with ambiguous distributive signals, voters hold beliefs about the extent to which their in-groups benefit. I show that these are partially explained by subjects' personal benefit from the policy. Still, the origin and accuracy of voters' distributive perceptions remains an important open question.

Third, it is an open question how this paper's findings generalize to other types of distributive policies and especially those that more explicitly target particular groups. On the one hand, my focus on policies with relatively broad-based rationales suggests that the group-based mechanism is widespread. On the other, distributive policies are sometimes accompanied by political rhetoric

that contextualizes who the policy benefits and why. By keeping this communicative aspect at a minimum in my experiments, my results leave open the question of how explicit targeting moderates the effects. I expect such communication to amplify effects but future work should further examine how political rhetoric and policy design interact to shape distributive perceptions.

These limitations notwithstanding, my results have several important implications. They first and foremost shed new light on existing findings in the literature. Rather than pocketbook voting, empirical estimates reflect a composite effect of the pocketbook and group-based mechanisms. This can help explain why they vary as much as they do.

These findings also invite a broader conception of self-interest than typically studied in political behavior. While the diminished role of the pocketbook mechanism might suggest that material self-interest is less politically relevant than often assumed, my results point in a different direction: voters may understand and act on self-interest in broader, group-based terms. As others have argued, self-interest can extend beyond immediate personal gains to include the welfare of salient in-groups, serving as proxies for members' own long-term interests (e.g., Feldman 1984; Kalin and Sambanis 2018). Far from irrational or purely "tribal" behavior (Achen and Bartels 2016, p. 325), group-based responses may reflect a more sophisticated form of self-interest – one that uses group cues to infer the alignment of parties with one's broader economic and social interests. In this view, how the incumbent treats one's group becomes a meaningful signal of how they are likely to govern going forward. The mixed results for pocketbook voting thus may not indicate that self-interest is irrelevant, but rather that voters reason about it in more nuanced and forward-looking ways.

Finally, my findings have implications for how incumbents can – and cannot – use distributive spending for electoral gain. Consistent with arguments by Drazen and Eslava (2006), voters appear to interpret distributive policies not merely as individual economic benefits but as signals of an incumbent's alignment with certain social groups. When voters perceive that "people like me" benefit, they infer more information about the incumbent's priorities and likely future behavior, making it rational to shift political support. This group-based behavior amplifies the electoral

payoff of distributive spending beyond its direct material effects.

At the same time, the group-based mechanism complicates the assumption that targeted spending always increases incumbent support among recipients. The electoral effects of distributive policies depend critically on which groups benefit and how this benefit is perceived. This introduces new strategic constraints on electoral targeting: not all groups respond equally to distributive benefits and some may even respond negatively. While group-based responses make distributive spending a potentially more powerful electoral tool than previously assumed, they also introduce new strategic constraints on its use.

References

Achen, Christopher H and Larry M Bartels. 2016. *Democracy for Realists*. Princeton University Press.

Baybeck, Brady and Scott D. McClurg. 2005. "What Do They Know and How Do They Know It? An Examination of Citizen Awareness of Context." *American Politics Research* 33(4):492–520.

Bechtel, Michael M. and Massimo Mannino. 2022. "Retrospection, Fairness, and Economic Shocks: How Do Voters Judge Policy Responses to Natural Disasters?" *Political Science Research and Methods* 10(2):260–278.

Bechtel, Michael M. and Roman Liesch. 2020. "Reforms and Redistribution: Disentangling the Egoistic and Sociotropic Origins of Voter Preferences." *Public Opinion Quarterly* 84(1):1–23.

Becker, Bastian. 2021. "Significant Others? Social Groups, Income Expectations, and Redistributive Preferences." *Social Science Research* 100:102612.

Beiser-McGrath, Liam F. and Thomas Bernauer. 2023. "How Do Pocketbook and Distributional Concerns Affect Citizens' Preferences for Carbon Taxation?" *The Journal of Politics* .

Belanche, Daniel, Luis V. Casaló and María Ángeles Rubio. 2021. "Local Place Identity: A Comparison between Residents of Rural and Urban Communities." *Journal of Rural Studies* 82:242–252.

Bernhard, Helen, Urs Fischbacher and Ernst Fehr. 2006. "Parochial Altruism in Humans." *Nature* 442(7105):912–915.

Bisgaard, Martin. 2019. "How Getting the Facts Right Can Fuel Partisan-Motivated Reasoning." *American Journal of Political Science* 63(4):824–839.

Bisgaard, Martin, Kim Mannemar Sønderskov and Peter Thisted Dinesen. 2016. "Reconsidering the Neighborhood Effect: Does Exposure to Residential Unemployment Influence Voters' Perceptions of the National Economy?" *The Journal of Politics* 78(3):719–732.

Blattman, Christopher, Mathilde Emeriau and Nathan Fiala. 2018. "Do anti-poverty programs sway voters? Experimental evidence from Uganda." *Review of Economics and Statistics* 100(5):891–905.

Bornschier, Simon, Silja Häusermann, Delia Zollinger and Céline Colombo. 2021. "How "Us" and "Them" Relates to Voting Behavior-Social Structure, Social Identities, and Electoral Choice." *Comparative political studies* 54(12):2087–2122.

Brutger, Ryan, Joshua D. Kertzer, Jonathan Renshon, Dustin Tingley and Chagai M. Weiss. 2022. "Abstraction and Detail in Experimental Design." *American Journal of Political Science* n/a(n/a).

Campbell, A., P. E. Converse, W. E. Miller and D. E. Stokes. 1960. *The American Voter*. The University of Chicago Press.

Center, Annenberg Public Policy. 2024. "Annenberg Institutions of Democracy Panel Study, 2019-2021, Version 1.0 [Computer File].".

Claassen, Ryan L., Paul A. Djupe, Andrew R. Lewis and Jacob R. Neiheisel. 2021. "Which Party Represents My Group? The Group Foundations of Partisan Choice and Polarization." *Political Behavior* 43(2):615–636.

Clifford, Scott, Geoffrey Sheagley and Spencer Piston. 2021. "Increasing Precision without Altering Treatment Effects: Repeated Measures Designs in Survey Experiments." *American Political Science Review* 115(3):1048–1065.

Converse, Philip E. 2006. "The Nature of Belief Systems in Mass Publics (1964)." *Critical Review* 18(1-3):1–74.

Corrêa, Diego Sanches and José Antonio Cheibub. 2016. "The Anti-Incumbent Effects of Conditional Cash Transfer Programs." *Latin American Politics and Society* 58(1):49–71.

Cox, Gary W. and Mathew D. McCubbins. 1986. "Electoral Politics as a Redistributive Game." *The Journal of Politics* 48(2):370–389.

Dafoe, Allan, Baobao Zhang and Devin Caughey. 2018. "Information Equivalence in Survey Experiments." *Political Analysis* 26(4):399–416.

Dassonneville, Ruth, Rune Stubager and Mads Thau. 2025. "How group appeals shape candidate support: The role of group membership, identity strength, and deservingness perceptions." *European Journal of Political Research* p. 1–20.

Dausgaard, Christoffer Hentzer and Rune Stubager. 2024. Vælgernes Sympatier Med Sociale Grupper: En Overset Faktor Bag Partivalg. In *Partiledernes Kamp Om Midten-Folketingsvalget 2022*. Djøf Forlag pp. 211–239.

Department, United States Treasury. 2024. "Economic Impact Payments." https://home.treasury.gov/policy-issues/coronavirus/assistance-for-american-families-and-workers/economic-impact-payments.

Dixit, Avinash and John Londregan. 1996. "The Determinants of Success of Special Interests in Redistributive Politics." *The Journal of Politics* 58(4):1132–1155.

Donnelly, Michael J. 2021*a*. Groups, Interests, and Heuristics. In *Group Interests, Individual Attitudes: How Group Memberships Shape Attitudes Towards the Welfare State*, ed. Michael J. Donnelly. Oxford University Press pp. 19–46.

Donnelly, Michael J. 2021*b*. "Material Interests, Identity and Linked Fate in Three Countries." *British Journal of Political Science* 51(3):1119–1137.

Drazen, Allan and Marcela Eslava. 2006. Pork Barrel Cycles. Technical Report w12190 National Bureau of Economic Research Cambridge, MA: .

Easterbrook, Matthew J., Toon Kuppens and Antony S. R. Manstead. 2020. "Socioeconomic Status and the Structure of the Self-Concept." *British Journal of Social Psychology* 59(1):66–86.

Elder, Elizabeth Mitchell and Neil A. O'brian. 2022. "Social Groups as the Source of Political Belief Systems: Fresh Evidence on an Old Theory." *American Political Science Review* 116(4):1407–1424.

Feldman, Stanley. 1984. "Economic Self-Interest and the Vote: Evidence and Meaning." *Political Behavior* 6(3):229–251.

Ferejohn, John. 1986. "Incumbent Performance and Electoral Control." *Public Choice* 50(1/3):5–25.

Fetzer, Thiemo. 2019. "Did Austerity Cause Brexit?" 109(11):3849–3886.
URL: *https://pubs.aeaweb.org/doi/10.1257/aer.20181164*

Filipovich, Dragan, Miguel Niño-Zarazúa, Alma Santillán Hernández and UNU-WIDER. 2018. *Campaign Externalities, Programmatic Spending, and Voting Preferences in Rural Mexico: The Case of Progresa-Oportunidades-Prospera Programme*. Vol. 2018 of *WIDER Working Paper* 27 ed. UNU-WIDER.

Fiorina, Morris P. 1978. "Economic Retrospective Voting in American National Elections: A Micro-Analysis." *American Journal of Political Science* 22(2):426–443.

Fiorina, Morris P. 1981. *Retrospective Voting in American National Elections*. Yale University Press.

Gaikwad, Nikhar, Federica Genovese and Dustin Tingley. 2022. "Creating Climate Coalitions: Mass Preferences for Compensating Vulnerability in the World's Two Largest Democracies." *American Political Science Review* 116(4):1165–1183.

Galesic, Mirta, Henrik Olsson and Jörg Rieskamp. 2012. "Social Sampling Explains Apparent Biases in Judgments of Social Environments." *Psychological Science* 23(12):1515–1523.

Green, Tina. 2006. "Do Social Transfer Programs Affect Voter Behavior? Evidence from PROGRESA, 1997–2000." *PhD diss., University of California, Berkeley* .

Greene, Kenneth F. 2022. "Money Can't Buy You Love: Partisan Responses to Vote-Buying Offers." *American Journal of Political Science* n/a(n/a).

Guardado, Jenny and Leonard Wantchékon. 2018. "Do Electoral Handouts Affect Voting Behavior?" *Electoral Studies* 53:139–149.

Guinaudeau, Isabelle, Matthiess Theres, Elisa Deiss-Helbig, Benjamin Guinaudeau and André Bächtiger. 2023. How Do Citizens Trade-off between Targeted Pledges When Choosing a Programme? A Conjoint Experiment on Deservingness, Group Membership and Ideology. In *ECPR Joint Sessions of Workshops, 'Social Groups and Electoral Politics'*. Toulouse: .

Haffert, Lukas, Tabea Palmtag and Dominik Schraff. 2023. "Asymmetric Effects of Group-Based Appeals: The Case of the Urban Rural Divide." *URPP Equality of Opportunity Discussion Paper Series* 26.

Hamel, Brian T. 2024. "Traceability and Mass Policy Feedback Effects." *American Political Science Review* pp. 1–16.

Hansen, Kasper Møller and Rune Stubager, eds. 2021. *Klimavalget*. Vol. 8 of *Studier i Dansk Politik* København: Djøf Forlag.

Harder, Thomas. 2022. "Snydt for 6000 kr: Nu er der tal — ekstrabladet.dk.". [Accessed 24-07-2025].
URL: *https://ekstrabladet.dk/nationen/snydt-for-6000-kr-nu-er-der-tal/9197682*

Hart, Austin Ray and J. Scott Matthews. 2023. *Quality Control: Experiments on the Microfoundations of Retrospective Voting*. Number Cambridge University Press Cambridge University Press.

Healy, Andrew J., Mikael Persson and Erik Snowberg. 2017. "Digging into the Pocketbook: Evidence on Economic Voting from Income Registry Data Matched to a Voter Survey." *American Political Science Review* 111(4):771–785.

Hersh, Eitan D. and Brian F. Schaffner. 2013. "Targeted Campaign Appeals and the Value of Ambiguity." *The Journal of Politics* 75(2):520–534.

Huber, Gregory A., Seth J. Hill and Gabriel S. Lenz. 2012. "Sources of Bias in Retrospective Decision Making: Experimental Evidence on Voters' Limitations in Controlling Incumbents." *American Political Science Review* 106(4):720–741.

Imai, Kosuke, Gary King and Carlos Velasco Rivera. 2020. "Do Nonpartisan Programmatic Policies Have Partisan Electoral Effects? Evidence from Two Large-Scale Experiments." *The Journal of Politics* 82(2):714–730.

Jackson, Robert A. and Thomas M. Carsey. 2002. "Group Effects on Party Identification and Party Coalitions across the United States." *American Politics Research* 30(1):66–92.

Jares, Jake Alton and Neil Malhotra. 2024. "Policy Impact and Voter Mobilization: Evidence from Farmers' Trade War Experiences." *American Political Science Review* pp. 1–23.

Kalin, Michael and Nicholas Sambanis. 2018. "How to Think about Social Identity." *Annual Review of Political Science* 21:239–257.

Key, V. O. 1966. *The Responsible Electorate: Rationality in Presidential Voting, 1936–1960*. Harvard University Press.

Key, Valdimer Orlando. 1961. *Public Opinion and American Democracy*. New York: Alfred A. Knopf, Inc.

Kinder, Donald R. and Cindy D. Kam. 2010. *Us Against Them: Ethnocentric Foundations of American Opinion*. Chicago Studies in American Politics Chicago, IL: University of Chicago Press.
URL: *https://press.uchicago.edu/ucp/books/book/chicago/U/bo8273958.html*

Kogan, Vladimir. 2021. "Do Welfare Benefits Pay Electoral Dividends? Evidence from the National Food Stamp Program Rollout." *The Journal of Politics* 83(1):58–70.

Kramer, Gerald H. 1983. "The Ecological Fallacy Revisited: Aggregate- versus Individual-level Findings on Economics and Elections, and Sociotropic Voting." *The American Political Science Review* 77(1):92–111.

Larsen, Martin Vinæs, Frederik Hjorth, Peter Thisted Dinesen and Kim Mannemar Sønderskov. 2019. "When Do Citizens Respond Politically to the Local Economy? Evidence from Registry Data on Local Housing Markets." *American Political Science Review* 113(2):499–516.

Levitt, Steven D and James M Snyder Jr. 1997. "The impact of federal spending on House election outcomes." *Journal of political Economy* 105(1):30–53.

Lin, Winston, Donald P. Green and Alexander Coppock. 2016. "Standard Operating Procedures for Don Green's Lab at Columbia.".
URL: *https://alexandercoppock.com/Green-Lab-SOP/Green$_L$ab$_S$OP.pdf*

Manacorda, Marco, Edward Miguel and Andrea Vigorito. 2011. "Government Transfers and Political Support." *American Economic Journal: Applied Economics* 3(3):1–28.

Mettler, Suzanne. 2011. *The submerged state: How invisible government policies undermine American democracy*. University of chicago Press.

Miller, Arthur H., Christopher Wlezien and Anne Hildreth. 1991. "A Reference Group Theory of Partisan Coalitions." *The Journal of Politics* 53(4):1134–1149.

Nyholt, Niels, Kasper Møller Hansen and Ulrik Kjær. 2024. Kampen om Land og By. In *Partiledernes Kamp Om Midten-Folketingsvalget 2022*. Djøf Forlag pp. 281–302.

Peterson Foundation. 2024. "Webpage Title.".
URL: *https://www.pgpf.org/article/how-did-americans-spend-the-stimulus-checks-they-got-from-the-cares-act/*

Powell Jr, G Bingham and Guy D Whitten. 1993. "A cross-national analysis of economic voting: Taking account of the political context." *American journal of political science* pp. 391–414.

Ritzau. 2023. "5000 kroner på vej til 290.000 danskere - TV 2." https://nyheder.tv2.dk/samfund/2023-05-08-5000-kroner-pa-vej-til-290000-danskere.

Robison, Joshua, Rune Stubager, Mads Thau and James Tilley. 2021. "Does Class-Based Campaigning Work? How Working Class Appeals Attract and Polarize Voters." *Comparative Political Studies* 54(5):723–752.

Rueda, David. 2018. "Food Comes First, Then Morals: Redistribution Preferences, Parochial Altruism, and Immigration in Western Europe." *The Journal of Politics* 80(1):225–239.

Schneider, Anne and Helen Ingram. 1993. "Social Construction of Target Populations: Implications for Politics and Policy." *American Political Science Review* 87(2):334–347.

Sears, David O. and Carolyn L. Funk. 1991. The Role of Self-Interest in Social and Political Attitudes. In *Advances in Experimental Social Psychology*, ed. Mark P. Zanna. Vol. 24 Academic Press pp. 1–91.

Sears, David O., Richard R. Lau, Tom R. Tyler and Harris M. Allen. 1980. "Self-Interest vs. Symbolic Politics in Policy Attitudes and Presidential Voting." *American Political Science Review* 74(3):670–684.

Simonovits, Gabor. 2015. "An Experimental Approach to Economic Voting." *Political Behavior* 37(4):977–994.

Sloan, Allan. 2020. "The cares act sent you a $1,200 check but gave millionaires and billionaires far more.".
URL: *https://www.propublica.org/article/the-cares-act-sent-you-a-1-200-check-but-gave-millionaires-and-billionaires-far-more*

Surridge, Paula. 2007. "Class Belonging: A Quantitative Exploration of Identity and Consciousness." *The British Journal of Sociology* 58(2):207–226.

Thau, Mads. 2019. "How Political Parties Use Group-Based Appeals: Evidence from Britain 1964–2015." *Political Studies* 67(1):63–82.

The Danish Ministry of Climate, Energy and Utilities. 2022. "Varmechecken er udbetalt: 2,4 milliarder hjælper danskernes varmeregninger.".

The Danish Ministry of Finance. 2023. "Regeringen indgår bred aftale om inflationshjælp.".

Tilley, James, Anja Neundorf and Sara B. Hobolt. 2018. "When the Pound in People's Pocket Matters: How Changes to Personal Financial Circumstances Affect Party Choice." *The Journal of Politics* 80(2):555–569.

Van Lancker, Wim, Joris Ghysels and Bea Cantillon. 2015. "The Impact of Child Benefits on Single Mother Poverty: Exploring the Role of Targeting in 15 European Countries." *International Journal of Social Welfare* 24(3):210–222.

van Oorschot, Wim. 2006. "Making the Difference in Social Europe: Deservingness Perceptions among Citizens of European Welfare States." *Journal of European Social Policy* 16(1):23–42.

Winters, Mike. 2022. "If You File Taxes in These 17 States, You Could Be Getting an Inflation-Relief Check from the Government—Here's Who Qualifies." https://www.cnbc.com/2022/09/21/inflation-relief-checks-residents-in-17-states-could-get-money-soon.html.

Wire, Sarah D. 2020. "Senate passes $2-trillion economic stimulus package.".
URL: *https://www.latimes.com/politics/story/2020-03-25/vote-senate-on-2-trillion-economic-stimulus-package-coronavirus*

Zucco Jr., Cesar. 2013. "When Payouts Pay Off: Conditional Cash Transfers and Voting Behavior in Brazil 2002–10." *American Journal of Political Science* 57(4):810–822.

Özler, Berk. 2012. "Beware of studies with a small number of clusters.".
URL: *https://blogs.worldbank.org/en/impactevaluations/beware-of-studies-with-a-small-number-of-clusters*

Appendix: For Online Publication

A The Distribution of the Heat Check

As seen in the left panel of Figure A1, the Heat Check went disproportionately to voters outside the large cities. However, when asked how the Heat Check was distributed geographically, respondents were clearly unsure, as shown in the right panel. 34% answered "don't know" and a further 36% chose the midpoint of the scale which was labeled "Urban and rural areas benefited equally". The remaining 30% of respondents fell somewhat equally on either side of the midpoint with a slight skew towards the truth: that rural people benefited most. The most accurate answer on this 11-point scale would arguably be the lowest or next-lowest value on the scale, and this was chosen by just around 5% of respondents.

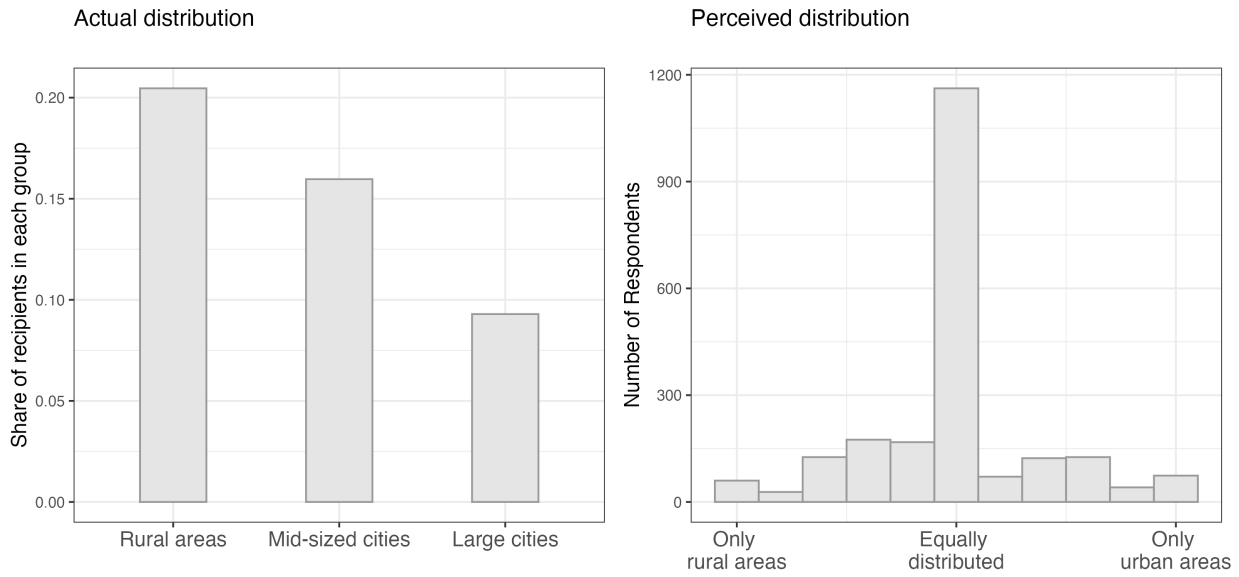

Figure A1: Actual and perceived distribution of Heat Check recipients. The left panel shows the share of self-identified Heat Check recipients by chosen geographical group. The right panel is a histogram of all respondents' perceptions of how the Heat Check was distributed among urban and rural areas.

I further conduct a basic media search on the Danish national media archive of *Infomedia* for articles mentioning the heat check between it was first proposed and mentioned in the media (January 27, 2022) until the date at which all heat check transfers were completed (August 10, 2022) (The Danish Ministry of Climate, Energy and Utilities 2022). As shown in Table A1 total of 2843 articles mention the heat check during this period. Of these, just 62 additionally mention any of the terms "large cities", "small[er] cities", "countryside" or a common term for rural Denmark ("udkantsdanmark"), anywhere in the article text. This is equivalent to 2.2 percent of all articles mentioning the heat check during the period.

Note that this likely represents a liberal estimate of articles that truly document the rural targeting of the heat check, as these keywords are relatively common for unrelated reasons. A manual inspection of the 62 articles confirm this picture as very few in fact mention these keywords in connection to the heat check's targeting. Among the few that do, some even wrongly imply that the check was designed to target the large cities, with, e.g., one article on a major news site citing

disgruntled rural inhabitants accusing the governing party of targeting "their voters [who] are in the cities [while] the rest of us are ignored, because we live in the countryside, where people don't vote for the left-wing to the same extent" (Harder 2022). This confirms the prevailing ambiguity and lack of information regarding the targeting of the heat check.

Table A1: Media Search Keys and Results (January 27 – August 10, 2022)

Search Keys	Results
`('varmecheck' OR 'varmechecken')`	2843
`('varmecheck' OR 'varmechecken') AND ('store byer' OR 'udkantsdanmark' OR 'på landet' OR 'små byer' OR 'mindre byer')`	62

B Question wordings

Observational: Denmark

- *Group membership (geographical)*
  - "There are many political dividing lines in society. One of them is between urban and rural areas. When you think of yourself, which of these groups do you best fit into?"
  - * People from large cities (e.g. Copenhagen, Aarhus, Odense); People from mid-sized cities (e.g. Viborg, Svendborg, Roskilde); People from rural areas
- *Heat Check eligibility (heat source)*
  - "What is the primary heat source in your home?"
  - * District heating; Heat from oil boiler; Heat from natural gas boiler; Heat from pellet or wood-fired boiler; Heat pump (incl. geothermal heating); Electric heating (e.g. electric radiator); Other; Don't know
- *Heat Check eligibility (household income)*
  - "What is your household's total annual income, gross - i.e. before tax?"
  - * 17 income brackets
- *Heat Check receipt*
  - "Did your household receive the 6,000 DKK "heat check" that was paid out in August? (Note: it was only paid to one member of each household)."
  - * Yes; No; Don't know
- *Perceived distribution of Heat Check (geographical)*
  - "Thinking about how the Heat Check was distributed geographically, to what extent do you think it benefited people in urban and rural areas?"
  - * 0 - it benefited only rural people; 10 - it benefited only urban people
- *Government support (outcome)*
  - "How satisfied or dissatisfied are you with the government's handling of the economy?"
  - * Very satisfied; Somewhat satisfied; Neither satisfied nor dissatisfied; Somewhat dissatisfied; Very dissatisfied; Don't know

Observational: United States (Annenberg Election Study)

- *CARES Act stimulus check receipt*
  - "Since the start of the coronavirus pandemic, have you or someone in your family who is currently living with you experienced any of the following? [Received a coronavirus relief payment, also called a stimulus payment from the federal government]"
  - * Yes; No
- *Perceived distribution of CARES Act benefits (racial)*
  - "Thinking about the federal government's plans to address the economic consequences of the coronavirus pandemic, how much do you think [White Americans/Black or African Americans] got what they deserved from these plans?"

    * Got much more than they deserve; Got somewhat more than they deserve; Got about what they deserve; Got somewhat less than they deserve; Got much less than they deserve

- *Trump vote (outcome)*
  - "Thinking about the general election for president in November, 2020, if that election were held today, and the candidates were (Joe Biden, the Democrat), and (Donald Trump, the Republican), for whom would you vote?"
  * Joe Biden, the Democrat; Donald Trump, the Republican; Someone else (SPECIFY); Would not vote for President

Experiment 1 (translated from Danish)

- *Group membership (geographical)*
  - "Which of the following societal groups best describes you?"
  * People from large cities (e.g. Copenhagen, Aarhus, Odense); People from mid-sized cities (e.g. Viborg, Svendborg, Roskilde); People from rural areas
- *Heat check support (pre-treatment)*
  - "In general, do you think that direct payments such as the "heat check" paid out in August are a good way to deal with the problem of inflation?"
  * Yes, very good; Yes, somewhat good; Neither good nor bad; No, somewhat bad; No, very bad; Don't know
- *Government support (pre-treatment)*
  - "How satisfied are you with the government's handling of Denmark's economic situation?"
  * Very satisfied; Somewhat satisfied; Neither satisfied nor dissatisfied; Somewhat dissatisfied; Very dissatisfied; Don't know
- *Outcome: check support*
  - "To what extent do you support the proposed 'inflation check'?"
  * To a high degree; To some degree; Neither or; To a low degree; Not at all; Don't know
- *Outcome: government support*
  - "How satisfied would you be with the government's management of the economy if it enacted this 'inflation check'?"
  * Very satisfied; Somewhat satisfied; Neither satisfied nor dissatisfied; Somewhat dissatisfied; Very dissatisfied; Don't know

Experiment 2 (translated from Danish)

- *Group membership (geographical)*
  - "There are many political divides in society. One of them is between urban and rural. When you think about yourself, which of these groups do you fit into best?"
  * People from large cities (e.g. Copenhagen, Aarhus, Odense); People from mid-sized cities (e.g. Viborg, Svendborg, Roskilde); People from rural areas

- *Group membership (age)*
  - "Another divide is between younger and older population groups. When you think about your own age, which of these groups do you fit into best?"
    * Young people; Middle-aged people; Elderly people
- *Generic stimulus check support (pre-treatment)*
  - "How much do you agree or disagree that the government should pay out cash grants to help Danes who are particularly affected by rising living costs?"
    * Strongly agree; Somewhat agree; Neither agree nor disagree; Somewhat disagree; Strongly disagree; Don't know
- *Government support (pre-treatment)*
  - "How satisfied or dissatisfied are you with the government's handling of the economy?"
    * Very satisfied; Somewhat satisfied; Neither satisfied nor dissatisfied; Somewhat dissatisfied; Very dissatisfied; Don't know
- *Outcome: check support*
  - "To what extent do you support the proposed 'inflation check'?"
    * 0 - not at all support; 10 - fully support

Experiment 3

- *Federal government trust (pre-treatment)*
  - "In general, how much do you trust the federal government in Washington D.C.?"
    * None; A little; A moderate amount; A lot; A great deal
- *Group membership (age)*
  - "If you were asked to choose, which of the following groups would you say that you belong to?"
    * Young people; Middle-aged people; Elderly people
- *Government support (pre-treatment)*
  - "To what extent do you approve or disapprove of the way the federal government is handling the economy?"
    * Strongly approve; Somewhat approve; Neither approve nor disapprove; Somewhat disapprove; Strongly disapprove; Don't know
- *Outcome: check support*
  - "To what extent do you support or oppose this proposed Inflation Relief Check?"
    * Strongly support; Somewhat support; Neither support nor oppose; Somewhat oppose; Strongly oppose; Don't know
- *Outcome: government support*
  - "Suppose the government implemented this Inflation Relief Check today. How would you rate your satisfaction with the government's overall handling of the economy?"
    * Very satisfied; Somewhat satisfied; Neither satisfied nor dissatisfied; Somewhat dissatisfied; Very dissatisfied; Don't know

C Model Specifications for Study 1

Danish data

The estimates from Denmark in **??** are from models of the form:

$$ingroup targeted_i = \alpha + \beta_1 recipient_i + \beta_2 rural\,urban_i + \beta_3 heat\,source_i + \beta_4 income_i + \varepsilon_i$$

where *ingroup targeted* is the perception that the respondent's in-group was targeted by the policy (on a scale from 'only benefited [out-group]' to 'only benefited [in-group]'; *recipient* indicates whether the subject received the heat check or not; *heat source* is an indicator for eligible heat sources for the heat check; *income* is income measured in 17 bands, included as a continuous variable; and *rural urban* indicates geographical in-group.

US data

For the analysis of US data in **??** the estimated models are of the form:

$$benefits\,ingroup_i = \alpha_i + \beta_1 received\,stimulus_{it} + \varepsilon_i t$$

where α_i are individual fixed effects; *benefits ingroup* is the perception that the respondent's in-group benefited from the stimulus measures; and *received stimulus* indicates whether the respondent personally received a stimulus check.

D Consistency with Pre-Registered Analysis Plans

I pre-registered the analyses and hypotheses for the three experiments.[17] My analyses follow these plans in that all analyses are carried out as pre-specified. There are only a few minor deviations from the described analyses as well as a few omitted analyses. I elaborate below.

Experiment 1

My analysis differs from the report in three distinct respects. First, I don't cluster errors at the level of treatment in the analysis because there are too few clusters: since I just focus on scenario A and C, I get a total of 12 treatment clusters (ingroup $\times$ recipient status $\times$ ingroup targeting = $3 \times 2 \times 2$) which is half of what I would have had with the full set of treatments. This is a problem because cluster-robust errors behave badly when there are too few clusters Özler (2012). Still, the results are robust to using cluster-robust errors as shown in Figure D1.

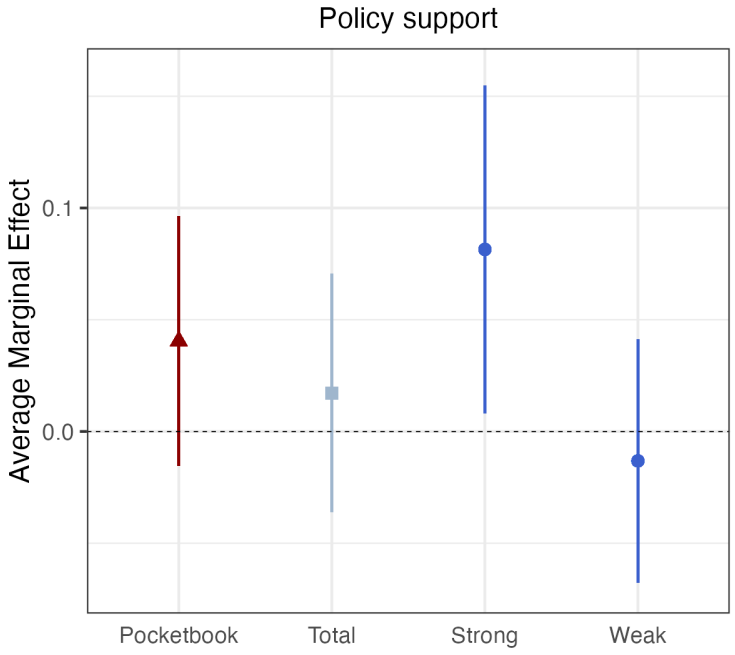

Figure D1: Results from Experiment 1 using robust errors clustered at the 12 treatment clusters.

Second, I omit analyses of an additional outcome variable: voters' perception that the government is proposing the 'inflation check' tactically to win votes, with the expectation that personal recipients are less likely to believe this. Although this hypothesis is in fact supported, the outcome was omitted for simplicity.

Third, I omit analyses of effect moderation by personal economic wellbeing and satisfaction with Danish democracy. These are not relevant to the focus of this paper.

[17] Experiment 1: https://osf.io/bq68x. Experiment 2: https://osf.io/tywmx. Experiment 3: https://osf.io/k82av.

Experiment 2

For experiment 2, the only omitted analysis is a model testing whether the effect of receiving the check is moderated by in-group targeting (as specified by interacting personal benefit and in-group benefit). This is not a direct implication of the theoretical argument in this paper and omitted for simplicity.

Experiment 3

All specified analyses are reported. The pre-registered models are regressions of the outcome on each of the treatment variables, controlling for baseline government approval, age group membership, and other baseline covariates that are predictive of the outcome. Note that as I mention in the pre-registration, my experiment was included on a collaborative survey, and I therefore include pre-treatment covariates that are predictive of the outcome. I therefore include party identification, living in an urban/rural area, and trust in government.

E Model Specifications for Experiments

The estimates are from models of the following general form:

$$outcome_i = \alpha + \beta_1 ingroup targeted_i + \beta_2 recipient_i + \beta_3 baseline controls_i + \varepsilon_i$$

$$\begin{aligned} outcome_i = \alpha &+ \beta_1 ingroup targeted_i + \beta_2 recipient_i + \beta_3 baseline controls_i \\ &+ \beta_4 grouptype_i + \beta_5 ingroup targeted_i \times grouptype_i + \varepsilon_i \end{aligned}$$

where *outcome* is approval of the proposed check and approval for the government, respectively; *ingroup targeted* is a dummy that is coded 1 when the in-group is targeted and 0 when the check is distributed equally; *recipient* is a dummy indicating whether the subject personally receives the benefit; *baseline controls* is a set of baseline measure of government support and general support for stimulus checks (and a few additional measures in Experiment 3; see Appendix D); and *grouptype* is an indicator of whether the in-group is a strong or weak identity group. In Experiment 2, I follow my pre-analysis plan in interacting treatments with all centered covariates, following advice from Lin, Green and Coppock (2016).

F Results Across All Distributive Treatments (Experiment 1)

Figure F1 shows the four visual stimuli used in Experiment 1 and the four variations of the text they are associated with in the vignettes. The main analysis in the paper focuses on conditions A and C. However, it might be that voters are responding no to the unique targeting of the group but just its total benefit level. In that case, there would be no higher policy support among those in condition C than in condition B. Following a similar logic, those in conditions A and D should show similar (low) support if voters just cared about absolute rather than relative levels.

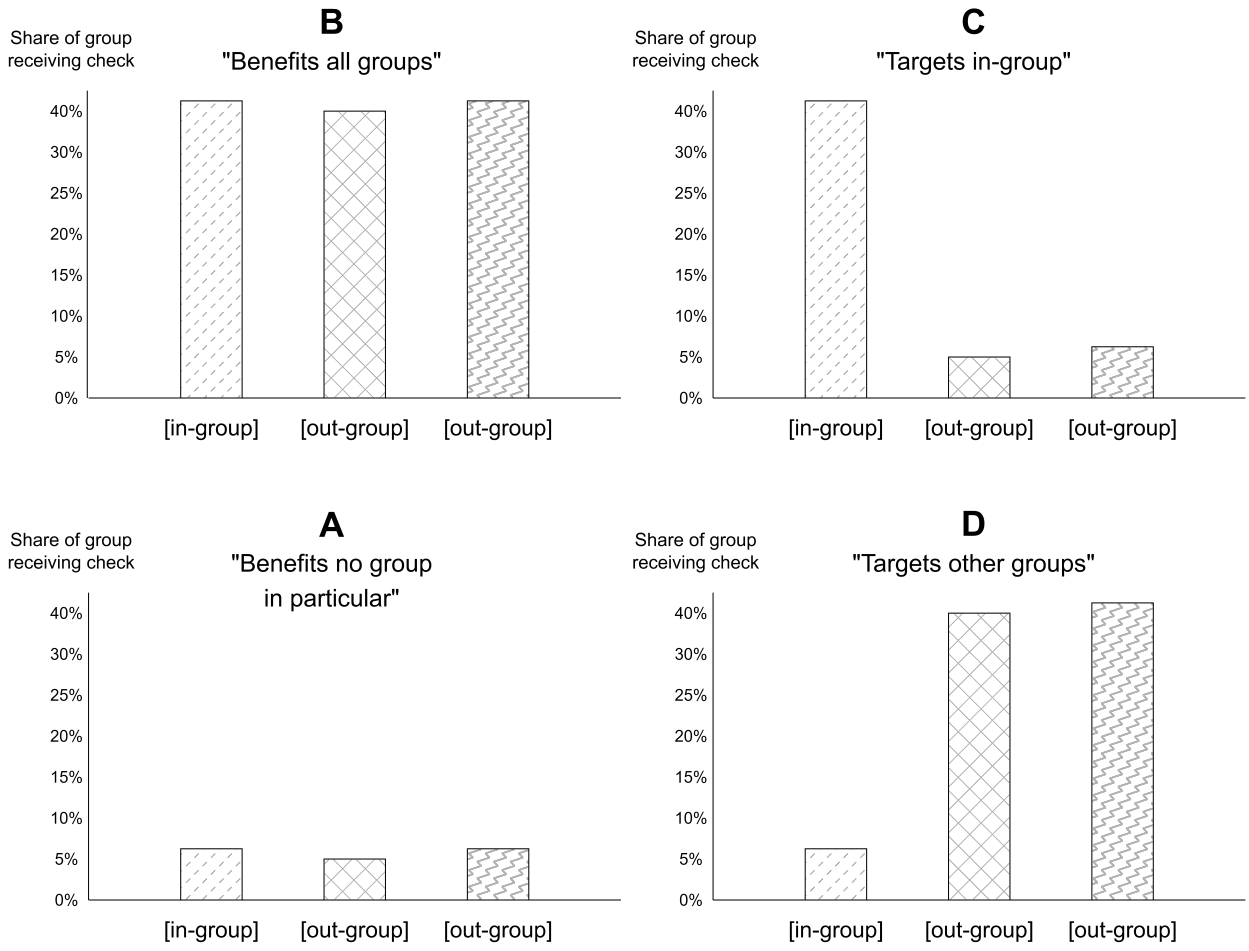

Figure F1: Generic versions of the four visual treatment stimuli in Experiment 1.

Figure F2 shows the estimated effects for strong identity groups across all four conditions. The contrast between A and C is the contrast reported in the main text. Group C, where the group is uniquely targeted, indeed has the highest level of support, but it is not statistically significantly higher than the level for group B. Meanwhile, voters appear to discriminate between conditions A and D, showing lower support when other groups get more than the in-group, and this difference is statistically significant. This suggests a mix of motivations: group members both care about the absolute level of in-group benefit but also its level relative to other groups. Note, however, that statistical power is relatively low for this full set of comparisons ($N = 443$).

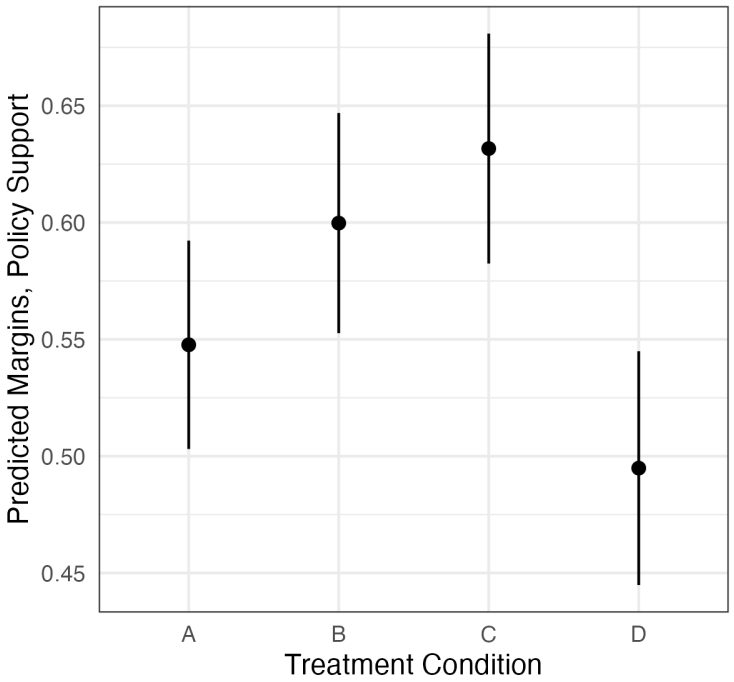

Figure F2: Effects of all four conditions of group targeting Experiment 1, subset to strong identity groups.

G Experimental Results for Incumbent Support

Figure G1 shows the estimated effects for the alternative outcome, hypothetical government support if the proposed policy were to be implemented. The left panels shows the estimates from the main analysis for the policy support outcome, for comparison.

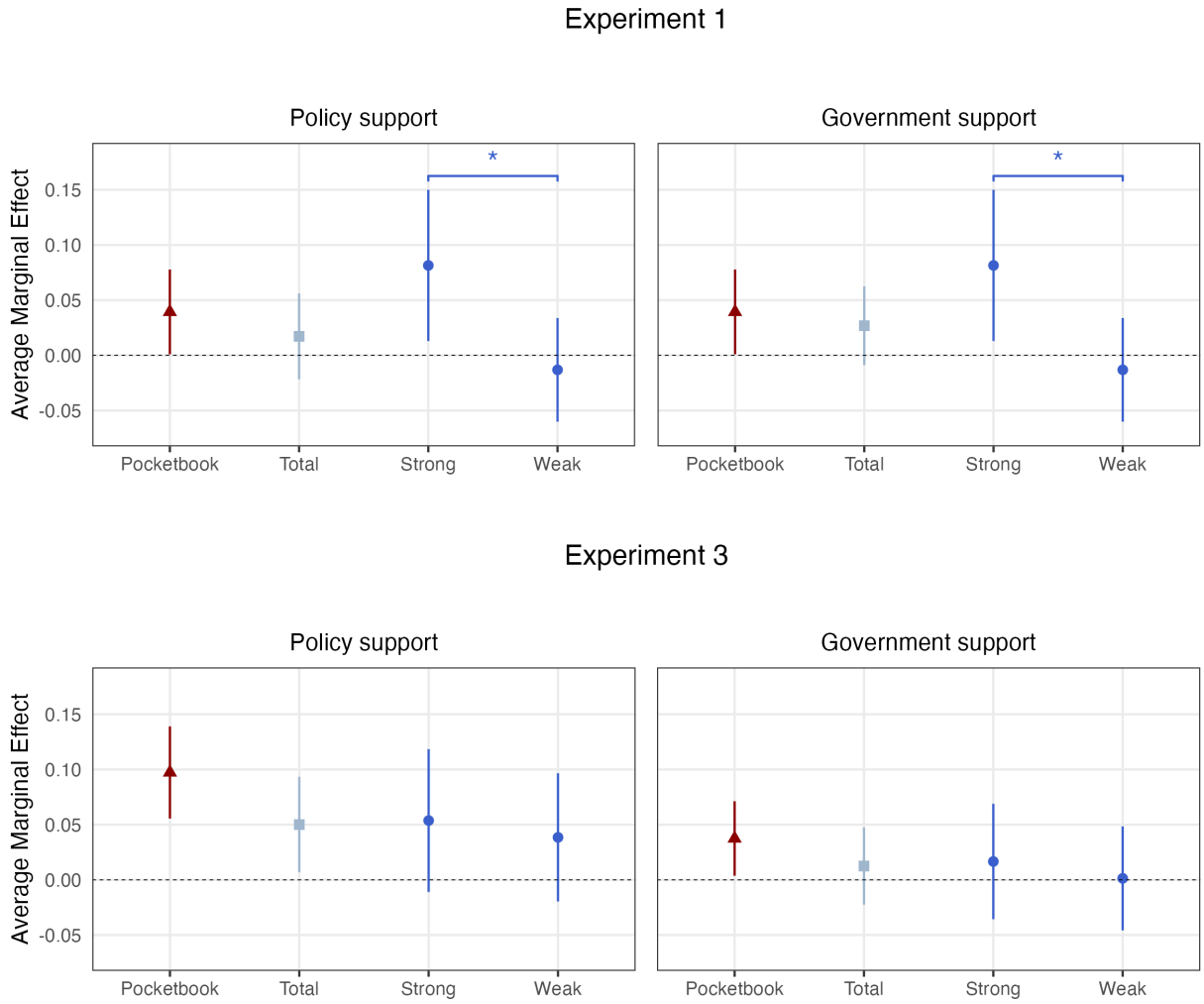

Figure G1: Effects of personal benefit ('pocketbook') and in-group targeting ('total') by group ('strong', 'weak') on policy support and government support.