Partisan Alignment Increases Voter Turnout: Evidence from Redistricting*

Bernard L. Fraga†
Indiana University

Daniel J. Moskowitz‡
University of Chicago

Benjamin Schneer§
Harvard Kennedy School

November 2019

Abstract

Partisan gerrymandering and polarization have created an electoral landscape where Americans increasingly reside in congressional districts dominated by one party. Are individuals more likely to vote when their partisanship aligns with the partisan composition of the district? Leveraging nationwide voter file data and the redistricting process, we present causal evidence on this question via a longitudinal analysis of individual-level political participation. Tracking turnout before and after a redistricting cycle, where the boundaries of congressional districts change, we observe what happens when registrants experience a shock to the partisan composition of their congressional district. We find turnout increases for individuals assigned to districts aligned with their partisanship as compared to individuals in misaligned districts, consistent with voters deriving expressive benefits from voting for the winning party. By demonstrating how districting influences political participation, our findings suggest a new implication of partisan gerrymandering that may clash with other democratic goals.

*We are grateful for comments from audiences at MPSA 2017 and the MIT Election Sciences workshop. We thank Florida State University for research support in the form of the FYAP Grant.

†Associate Professor, Department of Political Science, Indiana University, 210 Woodburn Hall, Bloomington, IN 47405 (bfraga@indiana.edu).

‡Assistant Professor, Harris School of Public Policy, 1307 East 60th Street, Chicago, IL 60637 (dmoskowitz@uchicago.edu).

§Assistant Professor, Harvard Kennedy School, 79 JFK Street, Cambridge, MA 02138 (benjamin_schneer@hks.harvard.edu).

"...I can say this — winning's a lot more fun." –Richard M. Nixon in his victory speech in 1968[1]

1 Introduction

Decennial redistricting is among the most contentious political processes in the United States. The state officials tasked with re-drawing electoral district lines face a variety of competing interests, and, depending on the rules laid out in their state's constitution, may have to deal with concerns that are political (protecting incumbent politicians and the seats held by their political party), legal (maintaining districts of equal population and not diluting political representation of minority groups), and practical (maintaining relatively compact districts and respecting natural boundaries). For these reasons, redistricting invariably leads to shifts in the geographical composition of congressional districts and, more often than not, the partisan composition of those districts as well.[2] These changes hold enormous implications for who wins seats in local, state, and federal elections, and how citizens' policy preferences are represented in legislatures.

As a result, much research highlights how redistricting can shift the balance of political power within a state or in the U.S. Congress. For instance, scholars have focused on how redistricting affects party control of legislatures — devising methods for evaluating the relationship between votes cast and seats won (e.g., Tufte 1973; Gelman and King 1994; Stephanopolous and McGhee 2015) as well as determining whether gerrymandering has altered partisan polarization (McCarty, Poole, and Rosenthal 2009; Chen and Rodden 2013), the party system (Stephanopoulos and Warshaw 2019), or the incumbency advantage (McKee 2013). In the courts, questions about redistricting have touched upon deliberate attempts to dilute the district-level vote shares of political parties (i.e., partisan gerrymandering). As an example, a 2018 court decision in Maryland noted that state officials had "targeted Republican voters in the Sixth District by, on net, removing roughly 66,000 of them from the district and adding some 24,000 Democratic voters, thereby effecting a swing of about 90,000 voters."[3] Redistricting transformed the Sixth District from "Solid Republican" to "Likely Democratic"; plaintiffs in the case argued that "cracking" a reliably Republican community prevented Republican voters from electing their candidates of choice.

---

[1] `https://www.nixonfoundation.org/1968/11/victory-speech-1968`.

[2] One exception is states with single at-large districts.

[3] Benisek v. Lamone, 348 F. Supp. 3d 493, 501 (D. Md. 2018).

In this case and in others, little attention has been paid to how changes in the partisan composition of districts directly influence voter behavior. With the notable exception of Hunt (2018), most researchers treat voter behavior as fixed rather than as responsive to swings in a district's partisanship — despite the fact that dynamic changes in turnout or vote choice may have important implications for how redistricting shifts the balance of political power within both districts and legislatures. We take up this question by examining how a key determinant of the election outcomes that are the focus of previous analyses of redistricting — who votes — may be shaped by partisan context. How does changing a district's partisan composition influence voter turnout? To be precise, does an "alignment" between the partisan composition of the district and an individual's party affiliation increase citizen participation in an election, and does a "misalignment" created by redistricting inhibit subsequent participation by voters?

These questions have grown increasingly relevant in an era of both extensive partisan gerrymandering and increasing polarization. The vast majority of the voting age population in the United States does not reside in competitive congressional districts but rather lopsided districts that present either a match or mismatch with an individual's partisan affiliation. From 2006 to 2012, in no single election year did more than 20 percent of the voting age population experience a competitive congressional election (i.e., a margin of victory at 10 percentage points or less) (Fraga, Hersh et al. 2018). By the same standard for electoral closeness at the district level, 372 out of 435 congressional districts were uncompetitive in 2012 (86%); 386 congressional districts were uncompetitive in 2014 (89%); 402 congressional districts were uncompetitive in 2016 (92%); and, even in a wave election year such as 2018, 347 congressional districts were nonetheless uncompetitive (80%).[4] Despite this pattern, the effects of partisan alignment or misalignment in lopsided districts remains comparatively neglected while the effect of closeness on turnout stands out as one of the most extensively studied questions in political science (Silberman and Durden 1975; Cox and Munger 1989; Matsusaka 1993; Blais 2006; Geys 2006; Huckfeldt et al. 2007; Moskowitz and Schneer 2019).

In this paper, we focus on the electoral dynamics of lopsided districts and examine the interplay between a person's partisanship, partisan context, and turnout decision, evaluating several competing explanations that might link these factors together. Our focus on partisan context rather than closeness reflects the facts that, first, most registrants reside in lopsided districts and do not

[4] https://ballotpedia.org/Congressional_elections_decided_by_10_percent_or_less,_2018

experience meaningful competition in congressional races, and, second, the relationship between closeness and turnout is already well-trodden territory.

We estimate the effect of changes in district partisanship on changes in rates of participation for individual voters. We present evidence from a real-world electoral setting and largely avoid internal and external validity concerns that plague previous work. Our results, based on national voter file data tracking over six million individuals before and after the 2012 redistricting cycle, suggest that partisan alignment has a modest, positive effect on turnout that ranges from 0.4 to 1.7 percentage points when moving from a district that is a partisan mismatch to a partisan match. We then turn to longitudinal survey data to provide secondary evidence on the mechanisms associated with this empirical pattern. The secondary evidence we examine provides the strongest support for the notion that individuals residing in partisan-aligned districts experience greater expressive benefits to voting than residents of partisan-misaligned districts.

In seeking to understand how redistricting changes both a district's partisan composition and turnout, we clarify the electoral outcomes affected by this contentious political process. Participation in elections is a fundamental building block of democracy and is used as a primary indicator of democratic performance (Powell 1982). If the redistricting process nudges some citizens to vote or not, then these changes in behavior are important to know for practitioners of redistricting, scholars of elections, and the legal institutions that permit or sanction districting schemes. Ultimately, our findings indicate that electoral participation is another competing interest that redistrictors (and, possibly, courts) should consider when evaluating newly drawn electoral jurisdictions.

2 Voter Turnout and Partisan Context

Early rational choice approaches to voter turnout emphasized voting as an instrumental cost-benefit calculation. As understood by Downs (1957), Riker and Ordeshook (1968), and many others, citizens should be increasingly motivated to participate when an internal calculus indicates that their vote is more likely to influence the election outcome. Observational studies often observe a correlation between perceived closeness and voter turnout (Geys 2006), though recent work has challenged the causal link between district competitiveness and turnout in U.S. House elections (Moskowitz and Schneer 2019). Importantly for this study, the idea that instrumental voting drives turnout obviates any effect of partisan alignment or misalignment on participation. If voters base their

turnout decision on such a calculus, they should, on average, respond in the same way to being placed in either a partisan-aligned or misaligned district as these districts are equally uncompetitive regardless of whether the district's partisanship aligns with the voter's partisanship.

However, several other theoretical frameworks predict differential turnout rates depending on the interplay between district and voter partisanship. These may be grouped into three broad categories: expressive voting, elite mobilization, and partisan threat. The expressive voting hypothesis is straightforward: the expressive benefit to casting a ballot for a winning candidate is greater than the expressive benefit to casting a ballot for a losing candidate.[5] For instance, Ashworth, Geys, and Heyndels (2006) find higher turnout rates in Belgian municipalities with a single dominant party, attributing this to expressive voting. More generally, some evidence suggests that voters prefer to be a part of the winning team (Niemi and Bartels 1984; Bartels 1988; Kenney and Rice 1994, but Mutz 1997). A close relative to expressive voting is the voter empowerment hypothesis. Scholars often cite the empowerment hypothesis when examining the racial and ethnic composition of districts (Gay 2001; Barreto, Segura, and Woods 2004), where being in a district with more same-race citizens is associated with higher turnout (Hayes and McKee 2012; Fraga 2018). Applying this hypothesis to partisanship, citizens whose partisan leanings align with the partisan composition of their district grow politically empowered and more likely to feel effectively represented. Indeed, citizens have greater trust in their representatives and feel more efficacious in places where their party wins and the election was not close (Brunell and Buchler 2009), and across democracies we see evidence that those consistently on the losing side of elections develop negative attitudes toward government and their own political efficacy (Anderson et al. 2005).

While the hypotheses discussed so far are voter-centric, the elite mobilization hypothesis focuses on the behavior of office seekers and their agents. Contact by partisan elites is at the heart of mobilization-based understandings of turnout (Wolfinger and Rosenstone 1980; Rosenstone and Hansen 1993), and empirical evidence suggests campaigns have substantively large effects on turnout in recent elections, especially for targeted groups of voters (Enos and Fowler 2016). Additional evidence points to party and candidate contact increasing voter turnout in congressional elections (Wielhouwer and Lockerbie 1994; Caldeira, Aage, and Patterson 1990), and has been posited as

[5]In instrumental models of voting, the size of the expressive benefit to voting is not a function of which candidate wins.

an explanation for higher turnout in close U.S. House elections (Cox and Munger 1989; Jackson 1996). Under this hypothesis, strongly partisan (safe) districts elect representatives who are likely to become incumbents and keep winning in the future. In turn, these incumbents draw on their experience and resources to campaign effectively and turn out their bases of support (Jacobson and Kernell 1983). Higher-quality incumbent candidates will expose their supporters to increased direct voter contact and media advertising, boosting co-partisan turnout. For voters whose party had essentially no chance of winning the election, these outreach efforts would exist to a far lesser degree. Because the change in behavior in this theory occurs at the level of party officials, politicians, and campaign staffers — all keenly aware of the composition of the district — elite mobilization theory does not require citizens themselves to be informed about the composition of their districts. Importantly, when comparing a lopsided district to a competitive district, elite mobilization does not give clear predictions since a close election may do just as much to compel elites into action.

The above hypotheses predict increases in turnout when a citizen's district changes from a partisan mismatch to a partisan match. A final theoretical explanation — "threat" — goes in the opposite direction. If potential voters feel that they must compete harder for resources and representation when they are part of a minority in the district, due to "threat" from the opposing group, then they will be more likely to turn out after the district changes to make them a political minority.[6] This theory has primarily been applied to race, where scholars find evidence for the threat hypothesis at both a macro (Key 1949) and micro level (Enos 2016). The same logic could be applied for party, and while attempts to establish empirical evidence for explicitly partisan threat have not been confirmatory so far (Barber and Imai 2014), the notion that potential voters respond to the increased presence of an out-group with higher levels of participation bears further investigation.

While these theoretical frameworks predict that partisan alignment matters for turnout, empirical tests to measure its effects are fraught with issues of internal and external validity. For one, strategic redistricting (whereby district lines are purposefully drawn to include or exclude voters with certain characteristics) poses a fundamental problem for making firm inferences from cross-sectional studies that focus on the effects of redistricting. Hunt (2018), in an analysis of the

[6]Alternatively, we may consider "threat" to be greatest when the risk of loss is greatest, as in highly competitive districts. In this case, turnout should be highest in the most competitive districts, and less high in both heavily aligned and heavily misaligned districts.

impact of redistricting in Florida, finds suggestive evidence that partisan alignment (misalignment) increases (decreases) turnout, but the analytical framework for this paper focuses on a single year and a single state with a highly contentious redistricting process. Other observational studies may suffer from selection problems. For example, if individuals self-select into homogeneous communities with respect to ideology or party (Motyl et al. 2014), or if members of one party sort (Cho, Gimpel, and Hui 2013; Mummolo and Nall 2016), then partisan alignment may correlate with important observed and unobserved voter characteristics that are also related to turnout. Finally, disaggregating the effects of partisan alignment from the effects of district heterogeneity is also not trivial, as past research has suggested heterogeneity within a district (Kaniovski and Mueller 2006) or neighborhood (Gimpel, Dyck, and Shaw 2004) may have a negative effect on turnout; or alternatively, conflict aversion may depress participation in areas with partisan and ideological diversity (Mutz 2002). Under such a framework, electoral jurisdictions would play no precise role in affecting turnout, except insofar as they reflect the underlying heterogeneity of a community.

While research in a laboratory setting sidesteps many of these problems, it faces other potential stumbling blocks for drawing broader conclusions. On the basis of experimental research, there is reason to suspect that placing voters in a lopsided district aligned with their partisanship may increase their propensity to turn out compared with voters in a misaligned lopsided district. This line of research finds that individuals are more likely to report their intent to participate in elections and are more likely to participate in simulated elections when they think their preferred choice will win (de Bock 1976; Ansolabehere and Iyengar 1994; Agranov et al. 2018); these findings align best with notions of expressive voting. However, the extent to which findings from a lab setting extend to voters making real-world decisions is unclear.

We attempt to balance the tradeoffs between internal and external validity by drawing on methodologies that leverage features of the redistricting process that approximate a natural experiment (Dunning 2012; Sekhon and Titiunik 2012). Importantly, we use a longitudinal approach that uses multiple snapshots of an individual's participation before and after a change in district context, isolating individuals who remained at the same address throughout the period. This limits the possibility that self-selection or other features tied to the types of individuals who live in a particular partisan context drive our results. Similar approaches have been used to study the impact of racial/ethnic context on voter turnout (Fraga 2016; Keele and White 2018; Henderson, Sekhon, and

Titiunik 2016) and the impact of competition on voter turnout (Moskowitz and Schneer 2019). We extend these advances to the study of partisan context, providing increased internal and external validity by using national data to conduct empirical tests that probe the changes in voter behavior, awareness, and campaign contacts resulting from redistricting.

3 Data

To study the turnout behavior of individuals across the redistricting process, we use data from Catalist, LLC.[7] Catalist is a data vendor whose primary product is a "unified national voter file," which they compile from numerous state-level and county-level voter lists across the United States. Catalist standardizes the publicly available information from voter lists, such as registration, turnout history, age, residence, gender, and race, and they routinely update the database with new information such as turnout records and changes in registration status. Catalist further supplements the publicly available data from these voter lists with proprietary commercial data. Relevant to our purposes, Catalist tracks the individuals in their unified file across time, even as their registration may lapse or they move addresses. Most of Catalist's clients are progressive organizations, political action committees, and Democratic candidates, but several academic studies use Catalist data (e.g., Ansolabehere and Hersh 2012; Fraga 2016; Hersh and Nall 2016). For this study, we utilize a sample of the Catalist database that contains 6.4 million individuals.

We restrict the sample to individuals who did not move to a different address during the period under study. This condition allows us to accurately measure the district partisan composition for all individuals in our sample, and it ensures that we are only examining changes in partisan alignment induced by redistricting. This restriction excludes from our sample individuals who relocated and perhaps considered the partisan composition of potential locales (or characteristics correlated with partisan composition) in their relocation decision, and, thus, preserves the validity of our empirical strategy. Additionally, we further restrict the sample to individuals who are of voting age and non-deceased during the entirety of the time period. Finally, our sample only includes individuals who are registered Democrats or Republicans in states with party registration.[8]

[7]See here for basic information on Catalist: `http://www.catalist.us/data/`.

[8]See Appendix Section A.3 for the list of party-registration states in the sample.

In order to construct our measure of partisan (mis)alignment, we require a measure of the partisanship of the congressional district. The primary measure of district partisan composition we employ is the de-meaned presidential vote in the congressional district (Abramowitz, Alexander, and Gunning 2006). Specifically, we use an average of the de-meaned presidential vote from the 2004 and 2008 presidential elections to measure the district partisan composition (Moskowitz and Schneer 2019).[9] By not using congressional election results to construct the measure, we avoid serious endogeneity concerns. In simple terms, this measure of district partisanship indicates, relative to the average congressional district, how many percentage points more Democratic or Republican a given congressional district is compared to the national average. Values of D+10 or R+10 represent districts that favor the Democratic candidate or Republican candidate, respectively. For purposes of classifying districts as partisan aligned or misaligned, we use a ±5 threshold such that districts within the D+5 through R+5 interval are considered competitive.[10] An individual registered as a Republican residing in a D+6 district would be coded as "misaligned," while a registered Republican in an R+6 district would be coded as "aligned."

We also present secondary evidence based on the analysis of survey data. We use data from the 2010-2014 Cooperative Congressional Election Study (CCES) Panel. The CCES Panel allows us to examine the extent to which voters demonstrate awareness of the partisan composition of their congressional districts as well as whether voters in partisan-aligned districts report differential campaign contact. The CCES Panel is a sample of 9,500 respondents who are surveyed during the election season in 2010, 2012, and 2014. This information allows us to examine the mechanisms behind the turnout effects extracted from the voter file.

[9]This measure is calculated by the Cook Political Report to construct their Partisan Voting Index (PVI). We use this same measure based on the 2004 and 2008 presidential election returns to measure district partisanship for pre-2012 district boundaries and post-redistricting boundaries.

[10]Using a binary variable in this context allows us to focus on the comparisons between aligned and misaligned districts rather than changes within each category. Second, and crucially, it allows us to match exactly on similar voters who do and do not experience changes in partisan alignment.

4 Research Design

Using a panel constructed from the voter files, we evaluate the evidence on whether registrants situated in partisan-aligned districts turn out at higher rates than voters in misaligned districts. We conceptualize the "treatment" as occurring when an individual i resides in a lopsided district matching her party registration in year t and state s. If this condition is met, then the binary indicator variable Partisan Alignment$_{ist} = 1$; otherwise, it takes the value 0.[11] Redistricting provides the quasi-experimental variation in treatment. For example, by tracking individual voting behavior in 2008, which is pre-redistricting, and in 2012, which is post-redistricting, we observe how voters respond when placed into new districts through the redistricting process. Some of these voters experience a change in the partisan composition of their district and, thus, their individual partisan alignment.[12] Importantly, we can also restrict our comparison to be between two voters of the same party who reside in the same congressional district in the first period.[13] This approach ensures that treatment and control units reside in roughly the same geographic area with the same pre-treatment electoral experience (with respect to congressional elections); their experience differs only insofar as the redistricting process shuffles one into an aligned district and one into a misaligned district.

Perhaps the greatest threat to internal validity when relying on redistricting to provide variation in partisan alignment is the possibility of strategic redistricting. Specifically, one might worry that state legislatures with partisan interests systematically move partisans into or out of a district based on characteristics including propensity to vote. For example, a Democratic legislature might go out of their way to move Republican voters who reside in a competitive district and who have a high propensity to turn out into a strong majority Republican district, while leaving Republican voters with a lower turnout propensity in the original, competitive district. If this were the case, then we might lack a valid comparison group for the individuals placed into the strong majority Republican district. Our empirical strategies help to address these concerns.

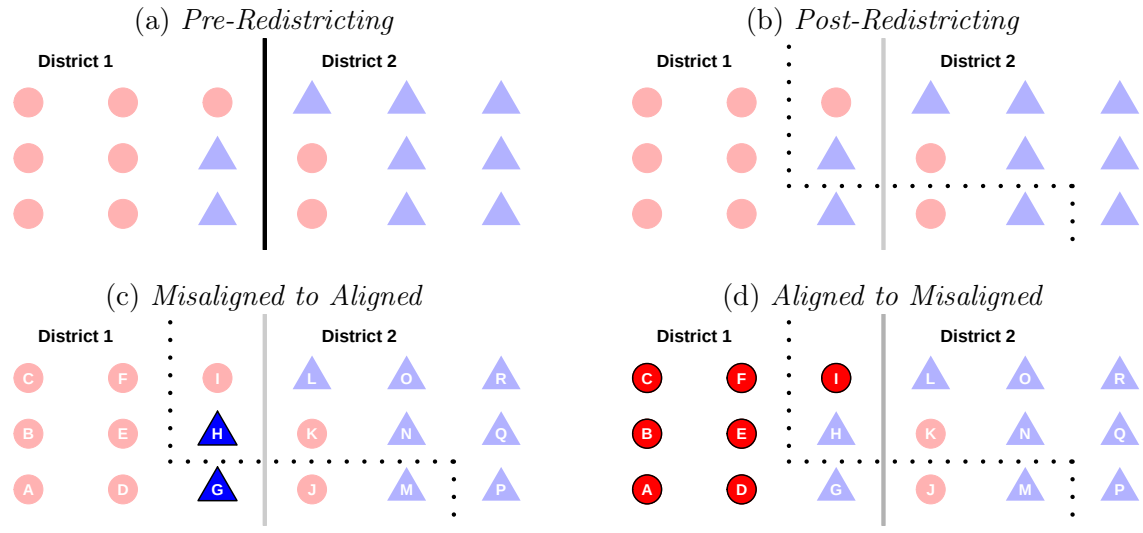
[11] When estimating the effect of moving from a competitive to a misaligned district, we conceptualize the binary variable as Partisan Misalignment$_{ist}$ with a value of 1 when party registration is opposite district partisanship and 0 otherwise.

[12] As noted above, the sample includes only stationary individuals to ensure that changes in partisan alignment occur due to redistricting and rather than an individual selecting into a new locale.

[13] This approach is based on the framework provided in Sekhon and Titiunik (2012).

We use "block" fixed effects to ensure that comparisons occur between voters who start in the same district, share a party affiliation, have identical voting histories, and have similar demographic profiles with respect to age, sex, and race. These are the characteristics observable to those drawing district boundaries, so comparing within groups that share these characteristics guards against concerns about strategic redistricting. We complement this framework with a difference-in-differences approach, in which we take advantage of the over time and across individual variation in the panel data. We apply these approaches to make several different types of comparisons. Figure 1 provides a simplified graphical presentation. Figure 1a displays two districts with District 1 comprised of 7/9 Republicans (red) and 2/9 Democrats (blue), and District 2 comprised of 2/9 Republicans and 7/9 Democrats in the pre-redistricting period. For the sake of simplicity, suppose that Republicans (Democrats) in District 1 match on the observable characteristics that comprise a block with the other Republicans (Democrats) in the district. Part b of the figure illustrates the district composition after redistricting. In this case, the partisan composition of each district remains the same pre- and post-redistricting, but several individual voters switch districts.

Figure 1 – Graphical Representation of the Research Design



First consider the comparison between individuals placed in a partisan-aligned district with individuals placed in a partisan-misaligned district. This comparison is highlighted in Figure 1c. In this figure, G and H both start out (pre-redistricting) in the same district, which is misaligned with their partisanship. However, post-redistricting, G remains in a misaligned district and H is now situated in a district aligned with H's partisanship. Thus, in the first period both voters have a

treatment status (i.e., partisan alignment) equal to zero; in the second period, G's treatment status remains zero but H, who now resides in a partisan-aligned district, has a treatment status equal to one. To estimate the effect of moving from a partisan-misaligned district to an aligned district, we can calculate the difference in turnout in the second period—i.e., $\delta_{m,a}^{BFE} = H_2 - G_2$, in which the subscripts on G and H refer to the pre- or post-redistricting time periods and $\delta_{m,a}^{BFE}$ indicates the estimate from the block fixed effects approach for the effect of moving from a partisan misaligned to a partisan-aligned district. Alternatively, *if we did not form blocks* based on observable characteristics, we could also calculate a difference-in-differences estimate of $\delta_{m,a}^{DID} = (H_2 - H_1) - (G_2 - G_1)$.[14] Similarly, though not highlighted in the figure, we could make the same comparison between K and J who both start out in the same misaligned district; after redistricting K remains in a misaligned district, while J is shifted into an aligned district.

The two key features of these approaches are that (1) they account for time-invariant covariates that might be correlated with both partisan alignment and with turnout; and, (2) they make it possible to compare only individuals who begin in the same district and belong to the same party and, through redistricting alone, experience a changed electoral context.

We can also estimate the effects of moving from a partisan-aligned district to a partisan-misaligned district. Figure 1d illustrates a similar exercise for voters A-F and I, these individuals all begin in a partisan-aligned district. If we let $\bar{Z}_t = \frac{A_t+B_t+C_t+D_t+E_t+F_t}{6}$, the block fixed effects estimate is $\delta_{a,m}^{BFE} = \bar{Z}_2 - I_2$, and the difference-in-differences estimate of partisan alignment is provided by $\delta_{a,m}^{DiD} = (\bar{Z}_2 - \bar{Z}_1) - (I_2 - I_1)$. Again, while not highlighted in the figure, we could make this same comparison for individuals L-R and M.

Finally, in instances with competitive districts (i.e., a relatively even mix of Republican or Democratic residents in a district), then we may also estimate the effects of moving from a competitive district to a partisan-aligned district ($\delta_{c,a}$) or the effects of moving from a competitive district to a partisan-misaligned district ($\delta_{c,m}$) using a similar approach. Figure A.1 in the Appendix provides a graphical example.

[14]Further, note the link between these two estimates: because in the block fixed effects approach, blocks are formed based upon previous turnout history, we know that by definition $H_1 - G_1 = 0$, which implies that when looking within any one block $\delta^{BFE} = \delta^{DID}$.

The linkages between *competitiveness* and partisan alignment/misalignment deserve some attention. Our primary approach comparing voters in aligned and misaligned districts should not be meaningfully influenced by competitiveness because both aligned and misaligned districts are uncompetitive. Furthermore, there are not large imbalances in terms of the changes in competitiveness experienced by voters in these districts, as illustrated in Appendix A.2, which includes histograms showing the distribution of changes in partisanship after redistricting.

On the other hand, specifications comparing competitive districts to aligned or misaligned districts do not provide as clear a distinction between the effects of partisan alignment and the effects of competitiveness. For example, if we observed a decrease in turnout for someone who moved from a competitive district to a misaligned district, either a decrease in partisan alignment or declining competitiveness (or a combination) might explain the effect. To disentangle the role of competitiveness, however, we may take advantage of the fact that the effects of competitiveness are symmetric while the effects of partisan alignment should cut in the opposite direction of partisan misalignment. Thus, if moving from competitive to both misaligned and aligned districts results in effects of the same sign (both negative), then competitiveness predominates; if the signs go in opposite directions for registrants moving from competitive into aligned versus misaligned districts, then the effect of partisan (mis)alignment predominates.

We now outline the empirical strategy more formally. To find the effect of partisan alignment on turnout using block fixed effects, we estimate the turnout decision in a post-redistricting year as follows:

$$E(\text{Turnout}_{ibst}) = \alpha + \gamma_b + \delta \cdot \text{Partisan Alignment}_{ibst} \tag{1}$$

where α is a constant term, γ_b is a block fixed effect, and $\text{Partisan Alignment}_{ist}$ is a binary indicator defined as above. We determine blocks by matching individuals exactly on the following observable characteristics: congressional district pre-redistricting, party registration, Black, Hispanic, Asian, female, age group (18-24, 25-34, 35-44, 45-54, 55-64, and over 65), and turnout in 2008 and 2010.

For the difference-in-differences approach, consider a reduced form empirical model of the turnout decision:

$$E(\text{Turnout}_{ist}) = \alpha + \lambda_{st} + \delta \cdot \text{Partisan Alignment}_{ist} + \text{Vote Propensity}_i' \cdot \psi \tag{2}$$

where α is a constant term, λ_{st} is a state-year fixed effect, Partisan Alignment$_{ist}$ is a binary indicator defined as above, and Vote Propensity$_i$ is an individual's unobserved underlying tendency to vote.[15] By imposing the assumption that unobserved propensity to vote remains constant over time, then we can let $\gamma_i = \alpha + \text{Vote Propensity}_i' \cdot \psi$ and estimate the model:

$$E(\text{Turnout}_{ist}) = \gamma_i + \lambda_{st} + \delta \cdot \text{Partisan Alignment}_{ist} \tag{3}$$

where we identify the effect of residing in a partisan-aligned district based upon variation in partisan alignment over time due to redistricting. By taking this approach, we deal explicitly with the critique that the tendency to reside in a partisan-aligned district might be correlated with observable and unobservable fixed individual characteristics that also affect turnout. For example, a district comprised primarily of a densely populated urban area with a high concentration of low-income voters might tend towards including many citizens whose party registration matches the partisan composition of their district (possibly boosting turnout) while also having other observable (e.g., socioeconomic status) and unobservable characteristics (e.g., lack of time/political resources) known to lower turnout. If turnout choices systematically vary with these characteristics, then estimates of the effect of individual partisan alignment on turnout would be biased if we did not condition on these variables. Since we cannot possibly measure all potential confounders, we instead employ individual and state-year fixed effects to difference out all time-invariant covariates (both measured and unmeasured) that influence turnout.

5 Results: Partisan Alignment and Voter Turnout

Our expectation is that partisan alignment matters and, further, that it boosts rather than depresses turnout. That is, we expect that one of the elite mobilization or expressive voting hypotheses (which predict positive effects), rather than the partisan threat hypothesis (negative effects), prevails.

More formally, we are interested in testing the following hypotheses:

$$H_0 : \delta_{m,a} = 0 \qquad \text{(H1a: } \textit{Misaligned to Aligned}\text{)}$$

$$H_A : \delta_{m,a} \neq 0$$

[15] The state-year fixed effects control for state-specific political conditions in a given election year such as gubernatorial and senatorial elections, changes to election laws, etc. These are redundant when using block fixed effects.

where $\delta_{m,a}$ is the effect of moving from a partisan-misaligned to a partisan-aligned district, and we perform a test with the null being that the alignment treatment has no effect.

Similarly, we test:

$$H_0 : \delta_{a,m} = 0 \qquad \text{(H1b: } \textit{Aligned to Misaligned}\text{)}$$
$$H_A : \delta_{a,m} \neq 0$$

where $\delta_{a,m}$ is the effect of moving from a partisan-aligned to a partisan-misaligned district, and we again test the null hypothesis of no effect from a change between an aligned and misaligned district.

Additional evidence of a positive effect of increasing alignment can occur when examining the transition from competitive to aligned or misaligned districts. If moving from a competitive to a partisan-aligned district ($\delta_{c,a}$) has a greater effect than moving from a competitive district to a partisan-misaligned district ($\delta_{c,m}$), then this pattern helps confirm our expectations. (Note that electoral competition would depress turnout equally for someone moving from a competitive to either an aligned or a misaligned district, and so only increases the difficulty of rejecting the null hypothesis.) We therefore test:

$$H_0 : \delta_{c,a} = \delta_{c,m} \qquad \text{(H1c: } \textit{Competitive to Aligned/Misaligned}\text{)}$$
$$H_A : \delta_{c,a} \neq \delta_{c,m}$$

A second order question is whether the effects of partisan alignment/misalignment operate symmetrically; that is, does moving from a partisan aligned to misaligned district have the same magnitude effect as moving from a partisan misaligned to aligned district? Importantly, we cannot put forth a clear test comparing the magnitude of effects for moves from competitive to aligned versus misaligned districts, since the decrease in competitiveness in both cases does not allow us to separate the effect of changes in competitiveness from the effect of changes in partisan alignment. We test for symmetry as follows:

$$H_0 : \delta_{m,a} = \delta_{a,m} \qquad \text{(H2: } \textit{Symmetry}\text{)}$$
$$H_A : \delta_{m,a} \neq \delta_{a,m}$$

To test H1 and H2, we devise four different sets of comparisons. In the first comparison, we examine individuals who start in a partisan-misaligned district in the first period; in the second

period, some remain in a misaligned district and some, through the redistricting process, are placed into a partisan-aligned district (recall Figure 1c). In the second comparison, we examine the converse of this scenario. In the first period, all voters reside in a partisan-aligned district; however, in the second period, some voters continue in the aligned district, while others are placed in a misaligned district (recall Figure 1d). For the third and fourth scenarios, we instead examine individuals who are in a competitive district in the first period (i.e., one where each party's vote share falls in the ± 5 range). We then study what happens when, in the second period, some voters remain in a competitive district and some are placed into districts with a new partisan composition (in the third scenario a partisan match, as in Appendix Figure A.1c, and in the fourth a partisan mismatch, as in Appendix Figure A.1d).[16]

Table 1 reports the results from each of these approaches for our preferred model specification, which uses block fixed effects to estimate effects for pooled post-redistricting election years (2012, 2014 and 2016). Panel A includes all districts, whether or not any of the residents of a particular district are shifted into a different partisan context due to redistricting — in effect, including individuals in districts without meaningful changes in partisan composition as controls. Panel B instead restricts the sample to pre-redistricting districts where at least some voters end up in a different partisan context post-redistricting; individuals redistricted to a new partisan context are matched with individuals from the same initial district who do not experience a change in partisan context. Table 1 indicates that across all specifications, estimated effects are in the expected direction. Columns 1 and 2 provide the most straight-forward estimates; for these columns, across the years we examine, we observe effect sizes that range from slightly more than two-fifths of a percentage point to a 1.7 percentage point increase in turnout rates attributable to partisan alignment. A 99% confidence interval does not overlap with zero for our estimates of the effect of moving from a misaligned to an aligned district; however, we cannot say the same for the estimates of moving from an aligned to a misaligned district. Overall, the direction, magnitude, and significance of these point estimates provide initial evidence supporting Hypothesis H1a: *Misaligned to Aligned*.

We also can examine Hypothesis H1c: *Competitive to Aligned/Misaligned*, which indicates differences in the effects for individuals moving from competitive to aligned districts *versus* those

[16]For a sense of the extent of changes in partisan composition experienced by voters in the sample, see the histograms in Figures A.2– A.4.

Table 1 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, All Years with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Panel A: All Districts				
Partisan	0.0172	0.0041	0.0070	
Aligned	(0.0055)	(0.0046)	(0.0079)	
Partisan				-0.0148
Misaligned				(0.0057)
Observations	623,820	1,014,561	536,796	522,165
R^2	0.406	0.386	0.403	0.404
Panel B: Redistricted Only				
Partisan	0.0169	0.0060	0.0099	
Aligned	(0.0038)	(0.00404)	(0.0060)	
Partisan				-0.0190
Misaligned				(0.0064)
Observations	443,256	769,119	496,473	481,878
R^2	0.430	0.407	0.407	0.415
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Panel B matches observations in treatment group to controls from same first period CD.
All elections in Louisiana are excluded from the sample due to their unusual rules.

moving from competitive to misaligned districts. If the effect of the former is larger and we can reject the null of no difference in effects, then this provides additional evidence in support of either the expressive voting or elite mobilization theories. Running this hypothesis test, we can indeed reject the null of no effect for both Panels A and B (at $p \leq 0.05$ and $p \leq 0.01$, respectively). For these specifications, moving from a competitive to an aligned district has a meaningfully different effect on turnout than does moving from a competitive to a misaligned district and, specifically, $\delta_{c,a} \geq \delta_{c,m}$. Importantly, this result suggests that the effects of alignment outweigh the effects of (decreasing) competitiveness. A pure competitiveness effect would predict $\delta_{c,a} = \delta_{c,m}$. Overall, then, in each panel, two of the three hypothesis tests conducted allow us to reject the null; these

results suggest that partisan (mis)alignment has an effect on turnout and that increasing alignment leads to higher turnout while decreasing alignment leads to lower turnout.

To test H2: *Symmetry*, we can compare the estimates from models 1 and 2 (i.e., examining $\delta_{m,a}$ versus $\delta_{a,m}$). Here, we can reject the null of no difference in the estimates for Panel A at $p \leq 0.05$ and for Panel B at $p \leq 0.10$. The evidence in this case points towards effects of larger magnitude when an individual is redistricted from a partisan-misaligned district to a partisan-aligned one than vice versa. One plausible explanation would be that habit formation occurs (Meredith 2009), whereby the initial increase in turnout from residing in an aligned district carries over to future elections even when someone no longer remains in the aligned district. However, before exploring this phenomenon in more depth, we must check to see whether the empirical pattern holds up under alternative approaches and specifications.

5.1 Heterogeneity and Robustness Checks

In addition to the results in Table 1, we also estimated effects when separating midterm and presidential election years, and using the difference-in-differences approach instead of block fixed effects. We present the raw results of these analyses in the Appendix and summarize the effects with regard to our hypotheses in Table 2. The first column in the table indicates whether the tests were performed using turnout data from all election years, midterm election years only (2010 and 2014), or presidential election years only (2008 and 2012 as well as another set of results using 2008 and 2016). The second column of Table 2 indicates the modeling approach: difference in differences (DID) versus block fixed-effects (BFE). The "Right Direction" columns refer to whether or not the sign of the effect is in the direction predicted by a given hypothesis. The $p \leq 0.05$ columns refer to whether or not the null hypothesis can be rejected at standard levels of statistical significance.

Across each combination of year and specification, we counted the number of estimates that support Hypotheses 1a, 1b and 1c (in the columns labelled Hyp. 1) and the number of estimates that support Hypothesis 2. When we evaluate Hypothesis 1, which states that moving to (away from) partisan-aligned districts increases (decreases) turnout, we find that the effects operate in a direction that overall supports either the expressive voting or elite mobilization accounts more than three quarters of the time. When formally testing each hypothesis for a given year/specification combination, we can reject the null at $p \leq 0.05$ slightly less than half of the time. Looking more

Table 2 – Summary of Regressions of Turnout on Partisan Alignment

		Hyp. 1		Hyp. 2	
Year	Spec.	Right Direction	$p \leq 0.05$	Right Direction	$p \leq 0.05$
All Years	BFE	6/6	4/6	2/2	1/2
All Years	DID	6/6	0/6	2/2	0/2
Mid-Term	BFE	6/6	2/6	2/2	0/2
Mid-Term	DID	0/6	0/6	0/2	0/2
Pres.	BFE	9/12	7/12	1/4	1/4
Pres.	DID	12/12	5/12	4/4	0/4

closely across years and specifications in Table 2, several patterns emerge worth noting. First, we observe stronger effects of partisan alignment in presidential election years, with notably more mixed results in midterm election years. Second, the results are more likely to allow rejection of the null hypothesis of no effect under the block fixed effects approach as compared to the difference-in-differences approach.

What might explain the larger and more robust effects observed in the presidential election years? One potential explanation is that we are observing a "learning" effect, where the effects of switching to a new district provide more of a mobilizing/demobilizing "shock" in the first election after redistricting than in later years. For example, after a redistricting period, candidates might work harder to reach out to new partisans in their district thereby boosting turnout, efforts that are not as strong in subsequent contests. Such a phenomenon would explain larger effects in 2012 than in 2014 independent of the fact that a presidential election was at the top of the ticket. However, the results from 2016 do not bear out this pattern. In fact, rather than observing effects in line with 2014 we instead observe effects for 2016 more similar in direction and magnitude to 2012.

Thus, years where the House contest coincides with the presidential election yield the strongest pattern of results. Complementarities in mobilizing efforts between presidential and House campaigns may lead to larger, positive effects in presidential election years, or generally heightened attention through media coverage and the perception of higher stakes in presidential election years

may boost turnout effects.[17] Generally higher interest during presidential years may also produce a larger population of voters on the margin who can be influenced by partisan alignment.

We also see that when focusing exclusively on midterm elections, when U.S. House races reside at or near the top of the ticket and garner a greater share of attention from both voters and elites, competition appears to swamp the effects of partisan alignment. Indeed, under both the DID and BFE specifications focusing on midterm turnout only, we see some evidence that moving from a competitive to aligned or competitive to misaligned district *reduces* turnout, consistent with competition outweighing partisan alignment in that context. Given the extensive focus in the existing political science literature on competition and turnout, that phenomenon is not the focus of this paper, but we want to note its effects nonetheless. Furthermore, the possibility of a conditional influence of competition is consistent with past work that has found competition to matter more in top-of-ticket races in midterm years and for marginal voters (Moskowitz and Schneer 2019).

These alternative years and specifications also allow us to test whether the observed effects operate symmetrically. In contrast to our main specification presented in Table 1, we do not find convincing evidence that the effects of alignment differ in magnitude from misalignment. In the Table 2 column labelled "Right Direction" under Hypothesis 2, we count the share of instances in which the effects of partisan alignment as compared to misalignment are positive. This occurs the majority of the time, with the notable exception of the midterm difference-in-differences approach mentioned above. When we test Hypothesis H2: *Symmetry* formally, which compares the magnitudes of the effects, we cannot reject the null in the vast majority of cases. This finding suggests that, for these additional specifications and subsets of the data, we do not have much evidence to suggest that partisan alignment or misalignment operate very differently from one another (i.e., alignment appears as mobilizing as misalignment appears demobilizing).

[17] We sought to distinguish between these two options by examining whether the effect of alignment was larger in battleground versus non-battleground states during presidential elections. We determined battleground status by referring to the classifications made in Enos and Fowler (2016). However, results here were inconclusive, as we found a slight *positive* effect for battleground states in 2012 and a slight *negative* effect in 2016. It is possible that both of these mechanisms are at work without one necessarily overwhelming the other, but future work should examine the nature of this heterogeneity more fully.

The evidence presented thus far suggests partisan alignment/misalignment influences turnout. On the whole, most estimates have values consistent with positive (negative) effects of partisan alignment (misalignment) on turnout. Though the results are less clear for some specifications in midterm years, in the majority of our analyses we see results consistent with mechanisms (elite mobilization or expressive voting) that generate a boost in turnout resulting from partisan alignment. Explanations predicting either no effect of partisan alignment/misalignment (instrumental voting) or negative effects (partisan threat) do not appear consistent with our findings.

While the empirical approach here explicitly addresses most threats to inference surrounding redistricting, some challenges remain. Chief among these is the idea that redistricting represents more than just a change in partisan composition but rather a bundle of different treatments. For example, redistricting may change the partisan composition of a district along with the racial composition. If racial composition changes in tandem with partisan composition, then the former might drive changes in behavior rather than the latter — and we might wrongly attribute changes in turnout to changes in partisan composition when in fact racial composition was the more salient factor. We discuss this issue and related ones in Appendix A.5, and we also include several additional robustness checks that help account for these concerns. Specifically, in one specification, we restrict the sample to states without a majority-minority district. In another, we include a set of time-varying district level characteristics such as racial composition and income to control for elements that may be changing other than district partisanship. In each of these tests, we see confirmatory evidence for relationships between partisan composition and turnout outlined in the results above.

6 Confirmatory Evidence: Voter Awareness & Campaign Contact

Section 5 provides evidence that assignment to a partisan-aligned district leads to a modest increase in turnout as compared to residing in a misaligned district. In this section, we utilize survey data to examine the mechanisms underlying our finding and, to the extent possible, adjudicate between the *expressive voting* and *elite mobilization* hypotheses laid out in Section 2. Specifically, survey data allows us to explore whether patterns of voter awareness and self-reported campaign contact coincide with the increases in turnout that we have observed. Are voters aware of their district's partisan composition? Do voters experience more campaign contact when they are situated in a partisan-aligned district relative to a misaligned district?

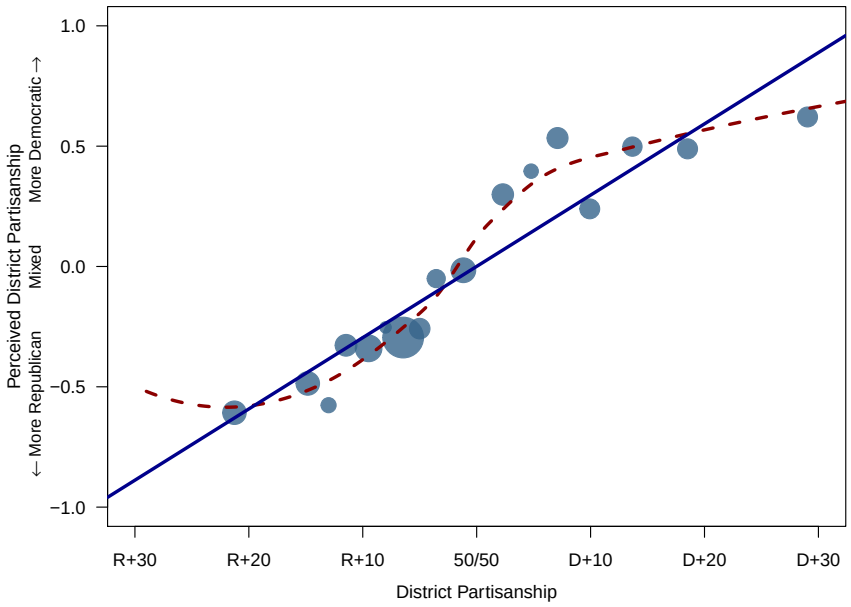
We begin by using data from the 2010-2014 Cooperative Congressional Election Study (CCES) Panel to investigate if citizens are aware of the partisan composition of their congressional districts. The 2010-2014 CCES Panel tracks 9,500 respondents to the 2010 CCES through the 2014 election. In 2012 and 2014, CCES Panel respondents were asked: "How would you describe the new Congressional District you live in?" They could respond: "Most people are Democratic," "Most people are Republican," or "My district is a mix with no single dominant party."[18] We create a perception of district partisanship variable that takes a value of -1 if the respondent states that the district is mostly Republican, 0 if the respondent states that the district is mixed, and 1 if the respondent says the district is mostly Democratic.

Figure 2 plots respondents' perceptions of their district partisanship in 2012 against a measure of the actual district partisan composition (based on the de-meaned presidential vote) in 2012. We see that voters are aware of their district's partisanship to an impressive degree: respondents situated in Democratic districts tend to indicate that they are in mostly Democratic districts, those in competitive districts largely indicate that there is a mix, and respondents in heavily-Republican districts correctly indicate that most people in their district are Republicans. Therefore, respondents seem able to infer when they are in a circumstance in which their party is likely to win, versus congressional districts in which their party is likely to lose; a key prerequisite for expressive voting.

The analysis in Figure 2 indicates that voters correctly identify the partisan composition of their congressional district. However, such a relationship is not definitive evidence that voters are able to perceive the *changes* in district composition that produce the turnout effects we find above. Perhaps voters (correctly) guess the the partisan composition of their immediate surroundings (due to sociodemographic features of their neighborhood, for instance), and use this information as a proxy for the partisan composition of their congressional districts. Based on our research design in Section 5, variation in congressional district partisanship is induced by changes to district boundaries. If our turnout effects are attributable to expressive voting, therefore, voters must also be aware of changes to the partisan composition of their district that result from redistricting.

[18] As in our analyses using voter file data, we restrict to respondents who did not move throughout the period of the panel. This question is only asked to panel respondents (i.e., it is not included in the CCES Common Content for 2012 or 2014).

Figure 2 – Voters' Perceptions of District Partisanship, 2012



This figure demonstrates that voters are largely aware of their congressional districts' partisan composition. This binned scatterplot is based on tabulations of 2012 data from the 2010-2014 CCES Panel. Each point in the figure corresponds to a local mean and is proportional in size to the number of observations within the locale. The dark blue, solid line is based on a linear regression and the red, dashed line is based on a locally weighted regression.

In Table 3, we conduct a more stringent test of voters' ability to judge their congressional district's partisan composition. While model (1) shows the results for the linear regression in Figure 2, models (2) and (3) account for the partisanship of each respondent's *pre*-redistricting congressional district. In model (2), we include fixed effects for respondents' "old" congressional district. By conditioning on the pre-redistricting congressional district, we can isolate voters' perceptions of their current district partisanship from the partisanship of their previous district. In model (3), we take a different approach with the same objective in mind: we condition on the partisan composition of the pre-redistricting congressional district ("lagged PVI"). While the magnitude of the estimated coefficients from models (2) and (3) is somewhat smaller than the naive estimate from model (1), models (2) and (3) still indicate a statistically (and substantively) significant ability of respondents to perceive their congressional district's partisan composition independent of the partisanship of their previous district.[19] In sum, citizens demonstrate a keen awareness of the partisan composition

[19]Moving from an R+10 to a D+10 district is associated with about a 0.4 increase in perceived district partisanship (which is measured on a scale from -1 to 1).

of their congressional district, even when they are in a "new" partisan circumstance in the first election after redistricting.[20]

Table 3 – Perceived Partisan Composition of District | 2012

	(1)	(2)	(3)
PVI	0.0296	0.0213	0.0205
	(0.0014)	(0.0023)	(0.0029)
Lagged PVI			0.0102
			(0.0029)
Constant	0.0013	-0.0087	0.0019
	(0.0193)	(0.0075)	(0.0192)
Observations	7611	7611	7611
R^2	0.257	0.444	0.264
Old District FEs	No	Yes	No

Standard errors, clustered by congressional district, are in parentheses.

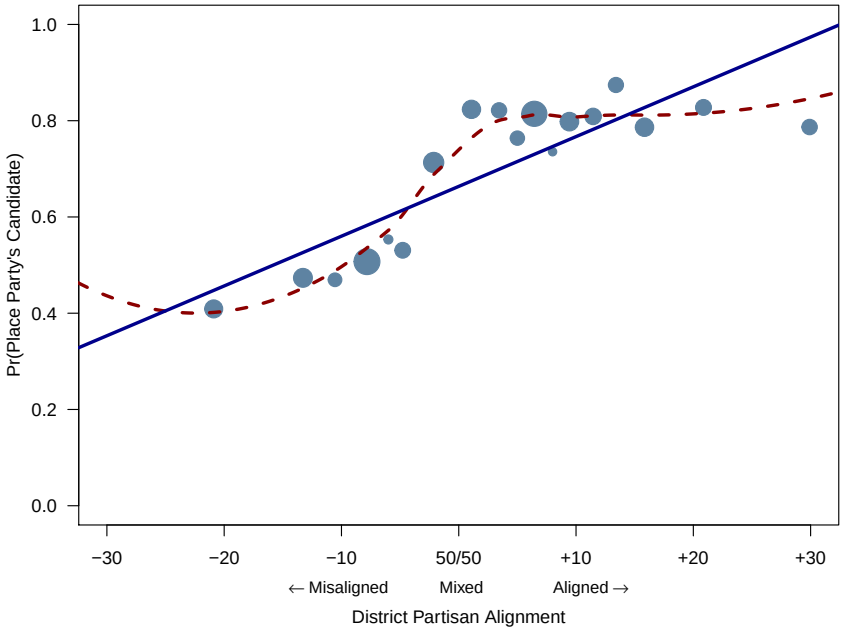
While awareness of the partisan composition of the congressional district is a necessary precondition for individuals to engage in expressive voting, there may be other observable implications of this mechanism. For instance, individuals who engage in expressive voting should also have greater awareness of their party's candidate, that is, their "team leader." In all three years of the 2010-2014 CCES panel, respondents are asked to rate the Democratic and Republican House candidates in their district in terms of competence and personal integrity. Respondents are also asked to place these candidates on an ideological scale. For all three of these questions, respondents can choose the option: "Not sure." We investigate whether individuals situated in partisan-aligned districts are better able to make an evaluation of their party's candidate (i.e., less likely to respond "not sure").[21] It is worth noting that, for a given characteristic, candidate, and year, approximately 35-40 percent of all individuals are unable to make an evaluation. Because this question is asked both pre- and post-redistricting, we can examine whether the same individual is more or less likely to evaluate her

[20]While we focus on perceived district partisanship in 2012, results are extremely similar for perceptions of district partisanship in 2014. See Figure A.5 and Table A.17 in the Appendix.

[21]For technical details on measuring voter awareness of the party's candidate, see Appendix Section A.7.

party's candidate under varying conditions of partisan (mis)alignment.[22] By including individual and state-year fixed effects, we implement a research design similar to our study of turnout reported in Section 5 with many of the same benefits (e.g., protecting against time-invariant confounding).[23]

Figure 3 – Ability to Place Their Party's Candidate on an Ideological Scale, 2012



This figure demonstrates that voters in congressional districts aligned with their partisanship are better able to place their party's candidate on an ideological scale. This binned scatterplot is based on tabulations of 2012 data from the 2010-2014 CCES Panel. Each point in the figure corresponds to a local mean and is proportional in size to the number of observations (accounting for sampling weights) within the locale. The dark blue, solid line is based on a linear regression and the red, dashed line is based on a locally weighted regression.

[22]The partisan-aligned district variable is coded = 1 if the respondent is in a district aligned with her partisan identity (D+6/R+6 or greater) and 0 otherwise; the competitive district variable is coded = 1 if the respondent is in a district where the district partisanship is within the interval of R+5 through D+5 and 0 otherwise; the set of misaligned voters is the reference group for the regression. Respondents' partisanship defined based on their 2010 response. Partisan leaners are included as partisans, but non-leaning independents are excluded from these analyses.

[23]Results are based on candidate evaluations made in 2010 and 2014. We use 2010 and 2014 because the 2010-2014 CCES Panel does not have candidate evaluations for 2008. We exclude respondents in uncontested or same-party matchups and Louisiana due to their unique electoral rules.

Table 4 – Ability to Evaluate Their Party's Candidate

	(1) Competence	(2) Integrity	(3) Ideology
Partisan-aligned district	0.1728	0.1121	0.1424
	(0.0551)	(0.0524)	(0.0634)
Competitive district	0.0705	0.0084	0.0729
	(0.0510)	(0.0569)	(0.0584)
Observations	10734	10782	10650
R^2	0.069	0.066	0.070
Individual FEs	Yes	Yes	Yes
State-Year FEs	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting CD level, are in parentheses. The dependent variable is coded =1 if the respondent is able to make evaluation about their party's candidate.

We begin by reporting the cross-sectional relationship between the degree of partisan alignment and the probability respondents can place their party's candidate on an ideological scale.[24] Relative to voters residing in misaligned districts, voters in partisan-aligned districts have a greater ability to place their party's candidate on an ideological scale. In Table 4, we report the more rigorous test using our panel research design for ideological placement, competence, and integrity. Here the omitted category is a misaligned district. We see that, relative to being situated in a misaligned district, individuals placed in a partisan-aligned district are 17 percentage points more likely to make a competence evaluation, 11 points more likely to make a personal integrity evaluation, and 14 points more likely to make an ideological placement. Voters situated in an aligned district have greater awareness of their party's candidate, again supporting the expressive voting hypothesis.

While voters' greater ability to "say something" about their party's candidate (i.e., make an evaluation) accords with expressive voting, it could also be consistent with elite mobilization. Perhaps voters have greater knowledge about their party's candidate directly as a result of the campaign efforts of that candidate. Importantly, the results in Table 4 do not imply that voters' awareness of their party's candidate is higher in competitive districts, which are the places where incentives to raise candidate salience are strongest. Nevertheless, we search for any evidence in support of the elite mobilization hypothesis.

[24]While we show the relationship between partisan alignment and ideology for 2012, the patterns are generally similar for other characteristics and other years.

Elite mobilization-based explanations of partisanship tend to focus on voter mobilization and contact. Conveniently, CCES panel respondents report if campaigns contacted them during the election and, if so, the methods through which they received contact.[25] Focusing in particular on this channel of direct voter outreach from campaigns to voters makes sense given that Enos and Fowler (2016) find evidence of very large turnout effects from this mode of campaigning. On the other hand, an abundance of studies suggest that television advertising has minimal or no effect on turnout (Ashworth and Clinton 2007; Huber and Arceneaux 2007; Krasno and Green 2008; Vavreck 2007). As a result, if elite mobilization is responsible for the turnout effects reported in the previous section, it likely manifests via direct voter outreach. Again, we first show the cross-sectional relationship between the degree of partisan alignment and the probability respondents report any contact from a campaign in 2012 in Figure 4.[26] As is clear from both the locally weighted regression and the very flat linear regression, individuals residing in aligned districts do not appear to report greater campaign contact; contact increases slightly in more competitive districts but is relatively lower in both aligned and misaligned districts.[27]

Results from our more rigorous panel research design for the "any" campaign contact outcome as well as the individual methods of contact outcomes are reported in Table 5. For nearly all of the outcomes, being situated in an aligned district relative to a misaligned district seems to have little or no effect on reported campaign contact. With one exception, the estimated coefficients have a substantively small magnitude and are not significant from zero. We do find that being situated in either a partisan-aligned district or a competitive district increases the probability of reporting campaign contact via email or text message by about 8 percentage points relative to misaligned districts. While 8 percentage points at first glance might seem like a large effect, given the relatively small turnout effects from most impersonal forms of campaign contact (Malhotra et al.

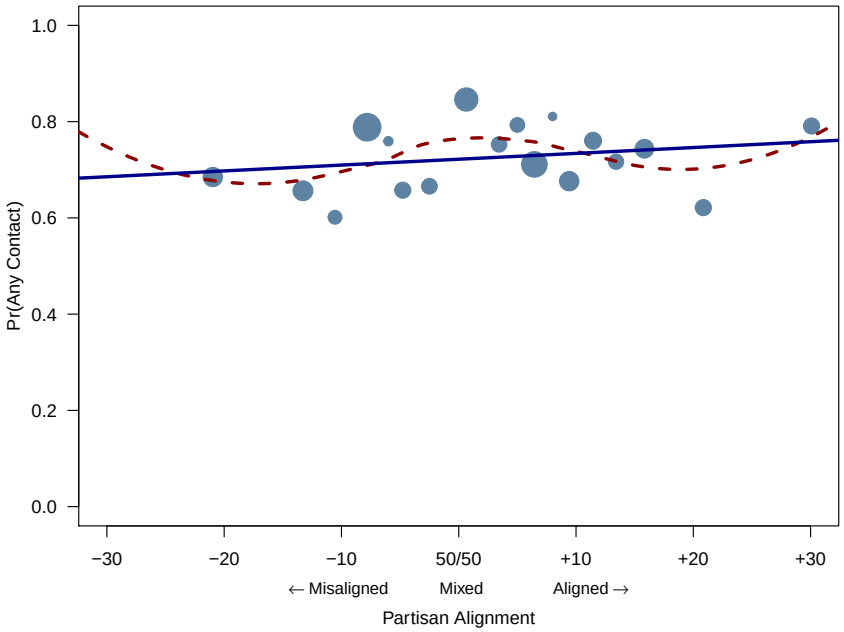
[25]Respondents are asked: "Did a candidate or political campaign organization contact you during the [INSERT YEAR] election?" If "yes," they are asked: "How did these candidates or campaigns contact you...[in person / phone call / email or text message / letter or post card."

[26]We show this relationship for 2010, 2012, and 2014 in Figure A.6 in the Appendix.

[27]The loess curve begins to increase again in the extreme ends of both aligned and misaligned districts, but very few CCES respondents are in these parts of the distribution.

2011; Green, McGrath, and Aronow 2013), an 8 percentage point increase in reported email/text message contact likely only translates into a minuscule increase in turnout.

Figure 4 – Any Campaign Contact, 2012



This figure demonstrates that voters in congressional districts aligned with their partisanship do not report substantially more campaign contact than voters in misaligned districts. This binned scatterplot is based on tabulations of 2012 data from the 2010-2014 CCES Panel. Each point in the figure corresponds to a local mean and is proportional in size to the number of observations (accounting for sampling weights) within the locale. The dark blue, solid line is based on a linear regression and the red, dashed line is based on a locally weighted regression.

In sum, the analyses of survey data presented in this section provide both corroboratory evidence for the effect of partisan alignment on turnout and indications for which mechanisms likely produce the turnout boost. Voters demonstrate strong awareness of the partisan composition of congressional districts and are more likely to rate their party's candidate when situated in a partisan-aligned district relative to a misaligned district or a competitive district. On the other hand, voters do not consistently report more campaign contact when situated in partisan-aligned districts, implying that greater campaign activity is unlikely to be the explanation for increased turnout. Taken together, these findings provide relatively strong support for the expressive voting hypothesis and limited support for the elite mobilization hypothesis.

Table 5 – Reported Campaign Contact

	(1) Any	(2) In-Person	(3) Phone	(4) Mail	(5) Email/Text
Partisan-aligned district	-0.0017	0.0353	-0.0467	0.0519	0.0793
	(0.0452)	(0.0369)	(0.0499)	(0.0609)	(0.0394)
Competitive district	0.0083	0.0253	0.0007	0.0335	0.0799
	(0.0284)	(0.0243)	(0.0313)	(0.0483)	(0.0362)
Observations	12444	12444	12444	12444	12444
R^2	0.060	0.034	0.071	0.036	0.046
Individual FEs	Yes	Yes	Yes	Yes	Yes
State-Year FEs	Yes	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting CD level, are in parentheses.
The dependent variable is coded =1 if the respondent reported campaign contact.

7 Discussion

Few scholars have analyzed the influence of lopsided districts on voter turnout. We find a 0.4-1.7 percentage point increase in turnout resulting from assignment to a partisan-aligned district versus assignment to a misaligned district. Our analyses of survey data show that voters are highly perceptive of their congressional district's partisan composition, and individuals situated in partisan-aligned districts are much more likely to be able to evaluate their party's candidate. However, voters placed in aligned districts, for the most part, do not report significantly more campaign contact relative to voters in misaligned districts. On the whole, evidence from both the voter file and survey data points towards the *expressive voting hypothesis*. First, our findings of positive effects of partisan alignment cut against a pure instrumental voting account, where changes in competitiveness alone drive voter behavior. Second, the fact that we find limited evidence of additional campaign contact in partisan-aligned districts casts doubt on mechanisms associated with the *elite mobilization hypothesis*. Third, the positive effect of partisan alignment on turnout is also at odds with the *partisan threat hypothesis*, whether we think that threat is greatest in lopsided districts in favor of the other party or competitive districts.

These findings have broad implications for debates about redistricting. A cursory glance at our findings would seem to support research by Brunell and Buchler (2009) and Brunell (2010) that suggests "packing" partisans into uncompetitive, homogeneous districts may improve citizens' perceptions of the representation they receive. Given findings that "packing" is an optimal strategy for those seeking partisan advantage through redistricting (Friedman and Holden 2008), the turnout

increases we find with partisan alignment do indeed suggest partisan gerrymandering can yield unexpected benefits. But these results also provide evidence of the challenge to democratic legitimacy produced by "losers" in the electoral process. Building on Hirschman (1970), Anderson et al. (2005) indicate that consistent losers may "exit" from the political process, undermining the legitimacy of subsequent election outcomes. We show that those likely to end up on the losing side of elections as a result of redistricting do indeed "exit," dropping out of the electoral process in subsequent elections. Thus if the potential turnout boost for partisans placed in heavily-favorable districts must be offset by a decrease in voting among out-partisans, the normative implications of our work indicate that it may be better to produce competitive jurisdictions where no single group always ends up on the losing side of the electoral divide. Winning might be more fun, but an inclusive electoral process may yield long-run benefits that outweigh the turnout gains that we find.

This paper also has implications for the ongoing legal battles surrounding redistricting. Courts have struggled to determine clear standards for partisan gerrymandering (Lowenstein 2006; Stephanopolous and McGhee 2015), but understanding turnout effects remains important for courts evaluating gerrymanders based on free speech or equal protection arguments. If turnout declines due to presence in a misaligned district, then partisan gerrymanders "cracking" members of one party may violate these principles. Furthermore, in legal cases where independent experts evaluate the effects of redistricting, they often consider the probability of a party or candidate winning an election given potential changes in district lines. However, the statistical models used in these efforts all assume that turnout remains unaffected by the redistricting process itself. By estimating how partisan context influences turnout, the results of this paper should be useful for evaluating the dynamic impacts of hypothetical districting plans.

The boundaries of electoral districts determine who gets what in politics. We have demonstrated that the partisan consequences of redistricting extend beyond the representation individuals receive, shaping individual involvement in the political process itself. As affective polarization increases and the electorate increasingly views democracy as a clash of identities (Mason 2018; Iyengar et al. 2019), we provide yet another piece of evidence that party shapes political life.

References

Abramowitz, Alan I., Brad Alexander, and Matthew Gunning. 2006. "Incumbency, Redistricting, and the Decline of Competition in U.S. House Elections." *Journal of Politics* 68 (1): 75-88.

Agranov, Marina, Jacob K. Goeree, Julian Romero, and Leeat Yariv. 2018. "What Makes Voters Turn Out: The Effects of Polls and Beliefs." *Journal of the European Economic Association* 16 (3): 825–856.

Anderson, Christopher J., André Blais, Shaun Bowler, Todd Donovan, and Ola Listhaug. 2005. *Losers' Consent: Elections and Democratic Legitimacy*. Oxford: Oxford University Press.

Ansolabehere, Stephen, and Eitan Hersh. 2012. "Validation: What Big Data Reveal About Survey Misreporting and the Real Electorate." *Political Analysis* 20 (4): 437–459.

Ansolabehere, Stephen, and Shanto Iyengar. 1994. "Of Horseshoes and Horse Races: Experimental Studies of the Impact of Poll Results on Electoral Behavior." *Political Communication* 11 (4): 413–430.

Ashworth, John, Benny Geys, and Bruno Heyndels. 2006. "Everyone Likes a Winner: An Empirical Test of the Effect of Electoral Closeness on Turnout in a Context of Expressive Voting." *Public Choice* 128: 383-405.

Ashworth, Scott, and Joshua D. Clinton. 2007. "Does Advertising Exposure Affect Turnout?" *Quarterly Journal of Political Science* 2 (1): 27–41.

Barber, Michael, and Kosuke Imai. 2014. "Estimating Neighborhood Effects on Turnout from Geocoded Voter Registration Records." Available at `https://imai.fas.harvard.edu/research/neighbor.html`. Working Paper.

Barreto, Matt A., Gary M. Segura, and Nathan D. Woods. 2004. "The Effects of Overlapping Majority-Minority Districts on Latino Turnout." *American Political Science Review* 98 (1): 65-75.

Bartels, Larry M. 1988. *Presidential Primaries and the Dynamics of Public Choice*. Princeton, NJ: Princeton University Press.

Blais, André. 2006. "What Affects Voter Turnout?" *Annual Review of Political Science* 9: 111–125.

Brunell, Thomas. 2010. *Redistricting and representation: Why competitive elections are bad for America*. Routledge.

Brunell, Thomas L., and Justin Buchler. 2009. "Ideological Representation and Competitive Congressional Elections." *Electoral Studies* 29 (3): 448-457.

Caldeira, Gregory A., R. Clausen Aage, and Samuel C. Patterson. 1990. "Partisan Mobilization and Electoral Participation." *Electoral Studies* 9 (3): 191-204.

Chen, Jowei, and Jonathan Rodden. 2013. "Unintentional Gerrymandering: Political Geography and Electoral Bias in Legislatures." *Quarterly Journal of Political Science* 8 (3): 239–269.

Cho, Wendy K. Tam, James G. Gimpel, and Iris S. Hui. 2013. "Voter Migration and the Geographic Sorting of the American Electorate." *Annals of the Association of American Geographers* 103 (4): 856–870.

Cox, Gary W., and Michael C. Munger. 1989. "Closeness, Expenditures, and Turnout in the 1982 US House Elections." *American Political Science Review* 83 (1): 217–231.

de Bock, Harold. 1976. "Influence of In-State Election Poll Reports on Candidate Preference in 1972." *Journalism Quarterly* 53 (3): 457–462.

Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper.

Dunning, Thad. 2012. *Natural Experiments in the Social Sciences: A Design-Based Approach*. New York: Cambridge University Press. Kindle Edition.

Enos, Ryan D. 2016. "What the Demolition of Public Housing Teaches Us about the Impact of Racial Threat on Political Behavior." *American Journal of Political Science* 60 (1). Forthcoming.

Enos, Ryan D., and Anthony Fowler. 2016. "Aggregate Effects of Large-Scale Campaigns on Voter Turnout." *Political Science Research and Methods*. `http://journals.cambridge.org/abstract_S2049847016000212`.

Fraga, Bernard L. 2016. "Redistricting and the Causal Impact of Race on Voter Turnout." *Journal of Politics* 78 (1): 19–34.

Fraga, Bernard L. 2018. *The Turnout Gap: Race, Ethnicity, and Political Inequality in a Diversifying America*. New York: Cambridge University Press.

Fraga, Bernard L, Eitan D Hersh et al. 2018. "Are Americans Stuck in Uncompetitive Enclaves? An Appraisal of US Electoral Competition." *Quarterly Journal of Political Science* 13 (3): 291–311.

Friedman, John N, and Richard T Holden. 2008. "Optimal gerrymandering: sometimes pack, but never crack." *The American Economic Review* 98 (1): 113–144.

Gay, Claudine. 2001. "The Effect of Black Congressional Representation on Political Participation." *American Political Science Review* 95 (3): 589–602.

Gelman, Andrew, and Gary King. 1994. "A Unified Method of Evaluating Electoral Systems and Redistricting Plans." *American Journal of Political Science* 38 (2): 514-554.

Geys, Benny. 2006. "Explaining Voter Turnout: A Review of Aggregate-Level Research." *Electoral Studies* 25 (4): 637–663.

Gimpel, James G., Joshua J. Dyck, and Daron R. Shaw. 2004. "Registrants, Voters, and Turnout Variability across Neighborhoods." *Political Behavior* 26 (4): 343-375.

Green, Donald P., Mary C. McGrath, and Peter M. Aronow. 2013. "Field Experiments and the Study of Voter Turnout." *Journal of Elections, Public Opinion & Parties* 23 (1): 27–48.

Hayes, Danny, and Seth C McKee. 2012. "The intersection of redistricting, race, and participation." *American Journal of Political Science* 56 (1): 115–130.

Henderson, John A, Jasjeet S Sekhon, and Rocıo Titiunik. 2016. "Cause or Effect? Turnout in Hispanic Majority-Minority Districts." *Political Analysis* 24 (3): 404–412.

Hersh, Eitan, and Clayton Nall. 2016. "The Primacy of Race in the Geography of Income-Based Voting: Evidence from Public Voting Records." *American Journal of Political Science* 60 (2): 289–303.

Hirschman, Albert O. 1970. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard.

Huber, Gregory A., and Kevin Arceneaux. 2007. "Identifying the Persuasive Effects of Presidential Advertising." *American Journal of Political Science* 51 (4): 957–977.

Huckfeldt, Robert, Edward G Carmines, Jeffery J Mondak, and Eric Zeemering. 2007. "Information, activation, and electoral competition in the 2002 congressional elections." *Journal of Politics* 69 (3): 798–812.

Hunt, Charles R. 2018. "When Does Redistricting Matter? Changing Conditions and their Effects on Voter Turnout." *Electoral Studies* 54: 128-138.

Iyengar, Shanto, Yphtach Lelkes, Matthew Levendusky, Neil Malhotra, and Sean J. Westwood. 2019. "The Origins and Consequences of Affective Polarization in the United States." *Annual Review of Political Science* Forthcoming.

Jackson, Robert A. 1996. "The Mobilization of Congressional Electorates." *Legislative Studies Quarterly* 21 (3): 425–445.

Jacobson, Gary C., and Samuel Kernell. 1983. *Strategy and Choice in Congressional Elections*. New Haven, CT: Yale University Press.

Kaniovski, Serguei, and Dennis C. Mueller. 2006. "Community Size, Heterogeneity, and Voter Turnouts." *Public Choice* 129 (3): 399-415.

Keele, Luke J., and Ismail K. White. 2018. "African American Turnout and African American Candidates." *Political Science Research and Methods* Forthcoming.

Kenney, Patrick J., and Tom W. Rice. 1994. "The Psychology of Political Momentum." *Political Research Quarterly* 47 (4): 923-938.

Key, V.O. 1949. *Southern Politics in State and Nation*. New York: Vintage.

Krasno, Jonathan S., and Donald P. Green. 2008. "Do Televised Presidential Ads Increase Voter Turnout? Evidence from a Natural Experiment." *The Journal of Politics* 70 (1): 245–261.

Lowenstein, Daniel H. 2006. "Vieth's Gap: Has the Supreme Court Gone from Bad to Worse on Partisan Gerrymandering?" *Cornell Journal of Law and Public Policy* N:X (January): 101–130.

Malhotra, Neil, Melissa R. Michelson, Todd Rogers, and Ali Adam Valenzuela. 2011. "Text Messages as Mobilization Tools: The Conditional Effect of Habitual Voting and Election Salience." *American Politics Research* 39 (4): 664-681.

Mason, Lilliana. 2018. *Uncivil Agreement: How Politics Became Our Identity*. Chicago: University of Chicago Press.

Matsusaka, John G. 1993. "Election Closeness and Voter Turnout: Evidence from California Ballot Propositions." *Public Choice* 76 (4): 313–334.

McCarty, Nolan, Keith T Poole, and Howard Rosenthal. 2009. "Does Gerrymandering Cause Polarization?" *American Journal of Political Science* 53 (3): 666–680.

McKee, Seth C. 2013. "Political Conditions and the Electoral Effects of Redistricting." *American Politics Research* 41 (4): 623-650.

Meredith, Marc. 2009. "Persistence in Political Participation." *Quarterly Journal of Political Science* 4 (3): 187–209.

Moskowitz, Daniel J., and Benjamin Schneer. 2019. "Reevaluating Competition and Turnout in U.S. House Elections." *Quarterly Journal of Political Science* Forthcoming.

Motyl, Matt, Ravi Iyer, Shigihero Oishi, Sophie Trawalter, and Brian A. Nosek. 2014. "How Ideological Migration Geographically Segregates Groups." *Journal of Experimental Social Psychology.* Forthcoming.

Mummolo, Jonathan, and Clayton Nall. 2016. "Why Partisans Don't Sort: The Constraints on Political Segregation." *Journal of Politics* 79 (1): 45-59.

Mutz, Diana C. 1997. "Mechanisms of Momentum: Does Thinking Make It So?" *Journal of Politics* 59 (1): 104-125.

Mutz, Diana C. 2002. "The Consequences of Cross-Cutting Networks for Political Participation." *American Journal of Political Science* 46 (4): 838-855.

Niemi, Richard G., and Larry M. Bartels. 1984. "The Responsiveness of Approval Voting to Political Circumstances." *PS: Political Science & Politics* 17 (3): 571-577.

Powell, G. Bingham. 1982. *Contemporary Democracies.* Cambridge, MA: Harvard University Press.

Riker, William H., and Peter C. Ordeshook. 1968. "A Theory of the Calculus of Voting." *American Political Science Review* 62 (1): 25–42.

Rosenstone, Steven J., and John Mark Hansen. 1993. *Mobilization, Participation, and Democracy in America.* Macmillan.

Sekhon, Jasjeet, and Rocío Titiunik. 2012. "When Natural Experiments are Neither Natural Nor Experiments." *American Political Science Review* 106 (1): 35-57.

Silberman, Jonathan, and Garey Durden. 1975. "The Rational Behavior Theory of Voter Participation." *Public Choice* 23 (1): 101–108.

Stephanopolous, Nicholas O., and Eric M. McGhee. 2015. "Partisan Gerrymandering and the Efficiency Gap." *University of Chicago Law Review* 82: 831-900.

Stephanopoulos, Nicholas O, and Christopher Warshaw. 2019. "The Impact of Partisan Gerrymandering on Political Parties.".

Tufte, Edward R. 1973. "The Relationship between Seats and Votes in Two-Party Systems." *American Political Science Review* 67 (2): 540-554.

Vavreck, Lynn. 2007. "The Exaggerated Effects of Advertising on Turnout: The Dangers of Self-Reports." *Quarterly Journal of Political Science* 2 (4): 325–343.

Wielhouwer, Peter W., and Brad Lockerbie. 1994. "Party Contacting and Political Participation, 1952-90." *American Journal of Political Science* 38 (1): 211-229.

Wolfinger, Raymond E., and Steven J. Rosenstone. 1980. *Who votes?* New Haven: Yale. Raymond E. Wolfinger and Steven J. Rosenstone.; Bibliography: p. 143-150.; Includes index.

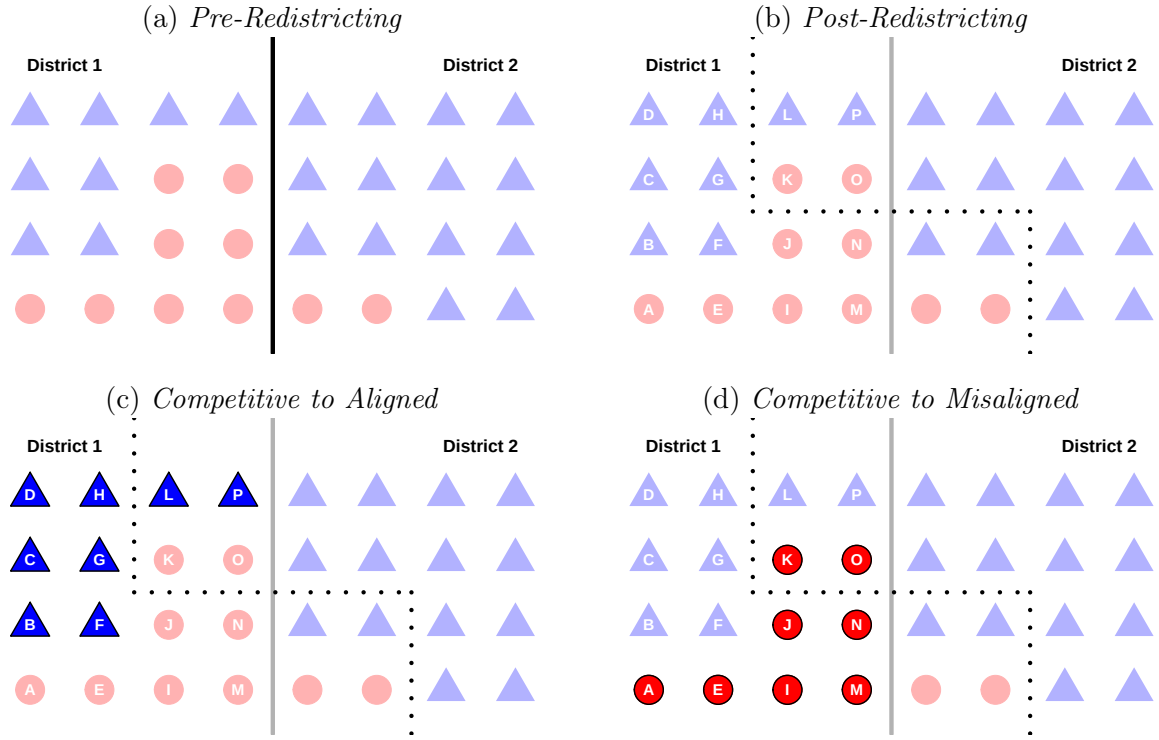
Online Appendix: Supporting Information for

Partisan Alignment Increases Voter Turnout: Evidence from Redistricting

Contents

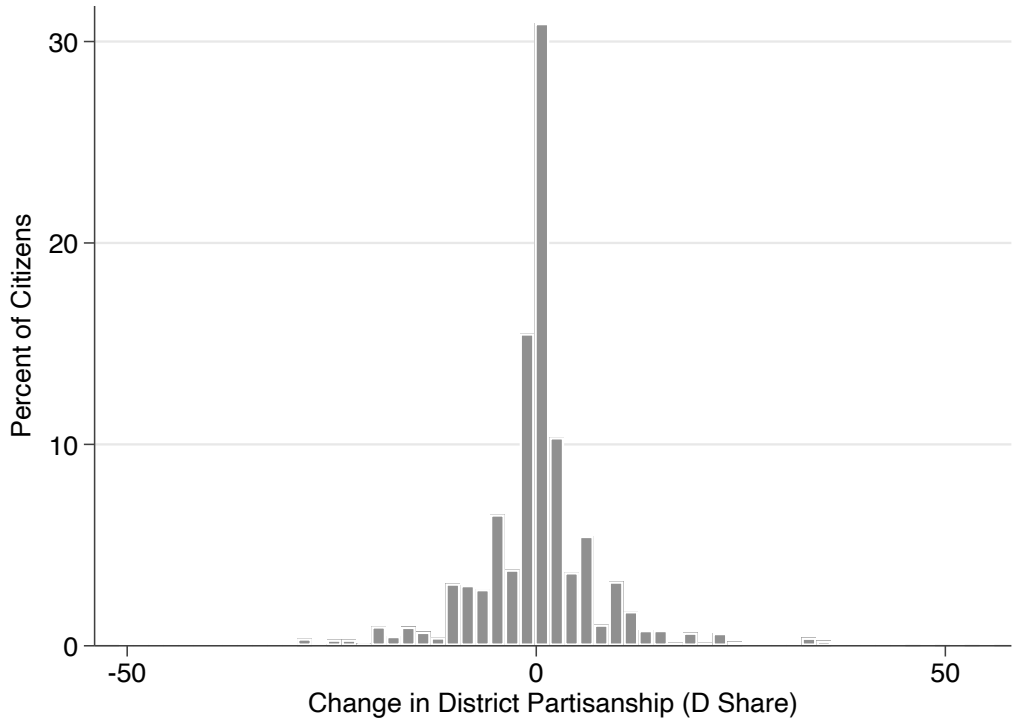
A.1 Graphical Presentation of Research Design

Figure A.1 – Example of Research Design, Competitive to Aligned/Misaligned Districts



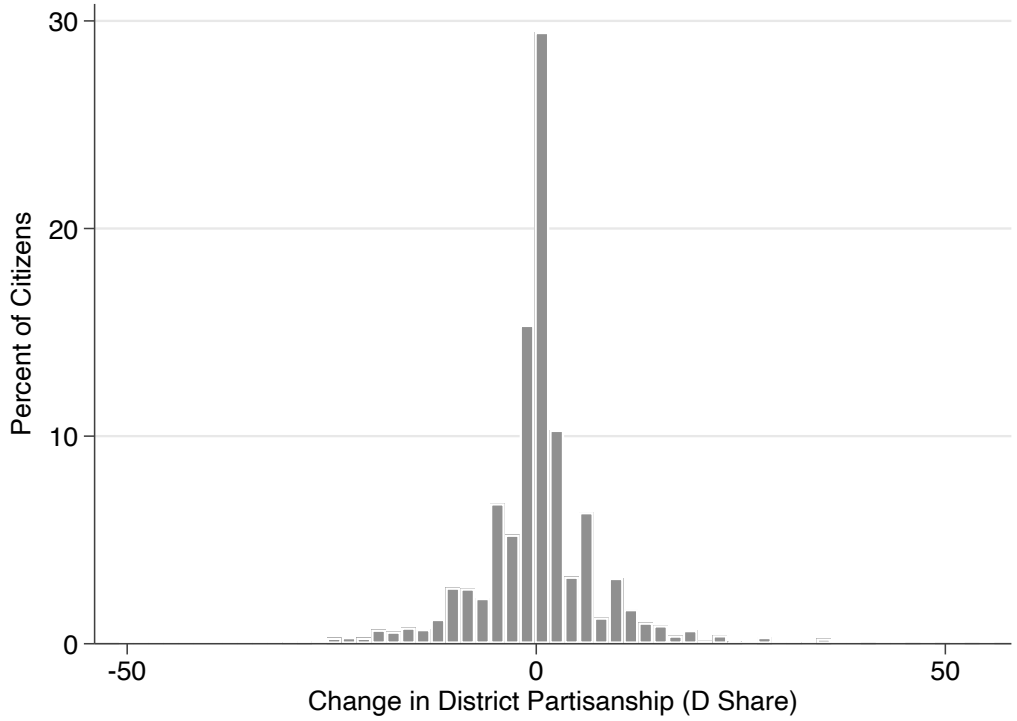
A.2 Changes in District Composition

Figure A.2 – Changes in District Composition, 2008 to 2012



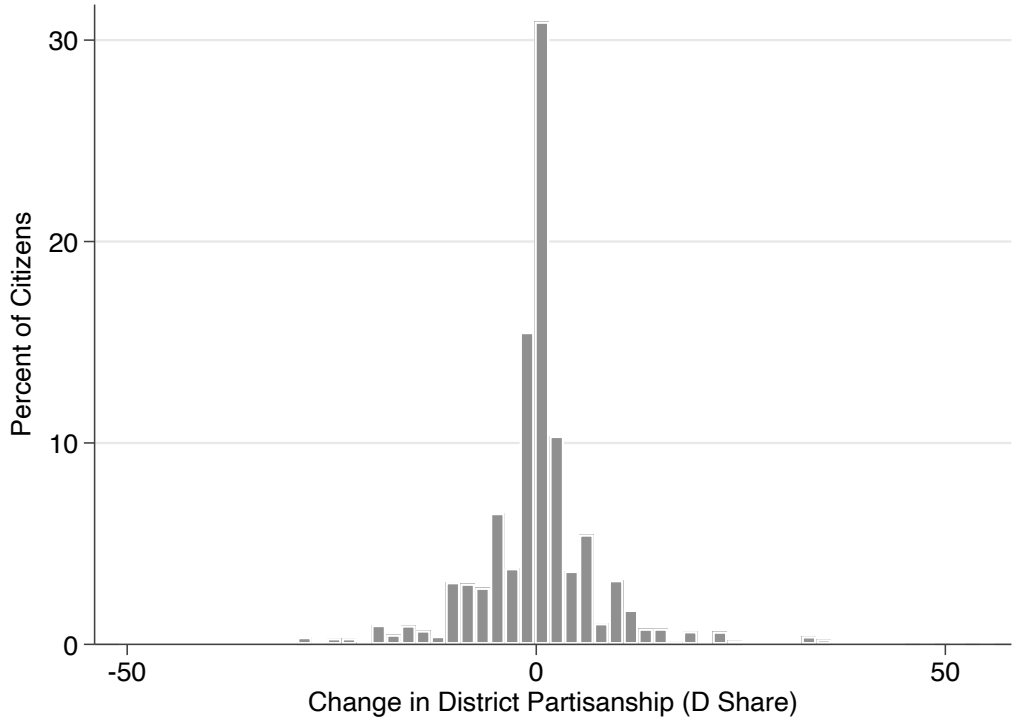
This figure illustrates the distribution of changes in partisan composition for individuals in the sample for years 2008 to 2012.

Figure A.3 – Changes in District Composition, 2008 to 2016



This figure illustrates the distribution of changes in partisan composition for individuals in the sample for years 2008 to 2016.

Figure A.4 – Changes in District Composition, 2010 to 2014



This figure illustrates the distribution of changes in partisan composition for individuals in the sample for years 2010 to 2014.

A.3 States with Party Registration

In order to study the effect of partisan alignment and misalignment, we need to know the partisanship of individual voters to determine whether their partisanship is aligned or misaligned with their district partisanship. As a result, we must restrict our sample to the universe of party-registration states. In these states, voters can register with a party, which offers the best available measure from voter file data of a voter's partisan allegiance. For the time period of our sample, there are 29 party registration states: Alaska, Arizona, California, Colorado, Connecticut, Delaware, Florida, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Maryland, Maine, North Carolina, Nebraska, New Hampshire, New Jersey, New Mexico, Nevada, New York, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Utah, West Virginia, and Wyoming. In addition, we exclude Louisiana from our analyses due to their unusual electoral rules.

A.4 Alternative Modeling Strategies, Effect of Partisan Alignment on Turnout

In the main text we explain that we use a block fixed-effects (BFE) approach to model the effect of partisan alignment on voter turnout. In Table 1 we provide estimates demonstrating that partisan alignment increases turnout and partisan misalignment decreases turnout under a variety of comparisons (i.e., aligned versus misaligned and competitive versus aligned/misaligned) and when including all districts in the sample as opposed to just districts that were redistricted. We also include Table 2 in the main text, which provides a summary of our findings under alternative specifications. Below we produce the raw estimates shown in Table 2.

Tables A.1 to A.6 use the same BFE approach as in Table 1, but separate midterm (2010-2014) and presidential (2008-2012 or 2008-2016) election years. As compared to including all years, the results are generally slightly noisier when looking at just a single pre and post year. Examining the effects when moving from misaligned to aligned/misaligned (column 1 in the tables), we observe results that range from essentially zero (in Table A.1) on the low end to 0.0353 on the high end. The results are slightly weaker when examining individuals who move from aligned to aligned/misaligned districts, ranging from -0.0066 on the low end to 0.008 on the high end. Examining movements out of competitive districts serves as another means of assessing our hypotheses. Here, the results fall generally in line with our expectations but with a notable exception of one negative point estimate

when moving from competitive to competitive/aligned districts for mid-term years (significant at $p \leq 0.10$). We also observe two of six point estimates that are positive and significant at $p \leq 0.01$. Looking at this subset of the data also speaks to the literature on competitiveness and turnout. The prevalent theme in the literature is that competitiveness leads to higher turnout. Under this framework, we would expect to see negative results for both column 3 and column 4, since each indicates the effect of moving from competitive to uncompetitive districts. Echoing the findings in some other recent research (Moskowitz and Schneer 2019), this straightforward story is not exactly what we observe. Instead, 4 of 6 results for column 3 are positive. Interestingly, the lone negative results are for mid-term years. A plausible explanation for this is that when the competitiveness effect plays a role large enough to outweigh the effects of partisan alignment, it occurs in mid-term years, where House races sit closer to the top of the ticket and therefore have more salience. For individuals redistricted from competitive to misaligned districts (column 4), all six point estimates suggest a negative effect on turnout, including in midterm years. In some sense, this is not surprising, because in this case the possible effects of competitiveness and of partisan alignment/misalignment should be operating in the same direction to depress turnout. The estimates in column 4 range from -0.0047 on the low end (in terms of magnitude) to -0.0220 (significant at $p \leq 0.01$) on the high end in terms of magnitude.

Table A.1 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Mid-Term Years with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.000732	0.00992**	-0.00913*	
	(0.00459)	(0.00435)	(0.00517)	
Partisan Misaligned				-0.0215***
				(0.00478)
Observations	251615	433521	201859	195839
R^2	0.433	0.406	0.427	0.429
State-Year FEs				
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.2 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Mid-Term Years (Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.00836*	0.00771	-0.00434	
	(0.00471)	(0.00473)	(0.00541)	
Partisan Misaligned				-0.0221***
				(0.00576)
Observations	174519	324007	185155	180013
R^2	0.444	0.415	0.427	0.433
State-Year FEs				
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.3 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2012) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0106***	-0.000816	0.00366	
	(0.00339)	(0.00330)	(0.00427)	
Partisan Misaligned				-0.00487
				(0.00427)
Observations	265487	461530	202695	196960
R^2	0.509	0.477	0.496	0.497
State-Year FEs				
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.4 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2012, Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0120***	0.000594	0.00108	
	(0.00359)	(0.00362)	(0.00392)	
Partisan Misaligned				-0.0141**
				(0.00664)
Observations	192060	329865	188856	182441
R^2	0.527	0.492	0.507	0.535
State-Year FEs				
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.5 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2016) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0432***	-0.00668	0.0214***	
	(0.00585)	(0.00491)	(0.00820)	
Partisan Misaligned				-0.00759
				(0.00751)
Observations	264608	466541	205163	198974
R^2	0.344	0.307	0.322	0.324
State-Year FEs				
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.6 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2016, Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0361***	-0.00183	0.0222***	
	(0.00578)	(0.00544)	(0.00782)	
Partisan Misaligned				-0.0114
				(0.00838)
Observations	199824	369511	188098	182099
R^2	0.351	0.319	0.333	0.352
State-Year FEs				
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Tables A.7 to A.14 use a difference-in-differences approach, either pooling all years or separating midterm and presidential years. In all cases, we separate results for all districts versus redistricted districts only. The difference-in-differences results generally support the narrative advanced in this paper, but do exhibit some notable departures from expectations. Tables A.7 (all districts) and A.8 (redistricted only) report results when pooling all years. Here we observe noisier results in general than under the block fixed effects approach. The combination of the severe sample restrictions (i.e., restricting to only certain types of districts based on levels of competitiveness) and including individual fixed effects is particularly taxing on the data. Nonetheless, 7 of 8 point estimates in these tables are in the hypothesized directions. The largest effect we observe is for movements from competitive to competitive/misaligned districts at -0.0391. By far the biggest departure we observe from our hypotheses occurs in Tables A.9 and A.10, which report results for the difference-in-differences specification in midterm years. In these cases, we observe negative effects across the board. The most puzzling results are those for columns 1 and 2, where we observe slightly negative results for movements between aligned and misaligned districts. That said, only 1 of the 4 point estimates is statistically significant at $p \leq 0.10$. So, it is at least possible to interpret these as primarily null results that reflect noise in the data. The results for movements out of competitive districts in Columns 3 and 4 are more rationalizable. In these cases, the effects of competitiveness may outweigh the effects of partisan alignment for the subset of voters we are examining. Including voters who moved in the opposite directions (i.e., from aligned/misaligned districts to competitive districts) might, due to the idiosyncrasies of these elections attenuate the negative results.

The results for presidential election years are generally much more in line with expectations. Tables A.11 to A.14 report these results.

Table A.7 – Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, All Years with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.00888	0.00311	-0.00102	
	(0.00800)	(0.00430)	(0.00446)	
Partisan Misaligned				-0.00887*
				(0.00454)
Observations	1019755	1654860	894660	870275
R^2	0.090	0.093	0.093	0.094
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.8 – Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, All Years (Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.00963	0.00372	0.00101	
	(0.00761)	(0.00486)	(0.00475)	
Partisan Misaligned				-0.0178
				(0.0130)
Observations	718815	1245790	827455	803130
R^2	0.102	0.105	0.095	0.101
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.9 – Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Mid-Term Years with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	-0.0109*	-0.00158	-0.0185***	
	(0.00662)	(0.00565)	(0.00530)	
Partisan Misaligned				-0.0151***
				(0.00568)
Observations	503230	867042	403718	391678
R^2	0.024	0.023	0.014	0.015
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.10 – Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Mid-Term Years (Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	-0.0113	-0.000874	-0.0181***	
	(0.00730)	(0.00627)	(0.00553)	
Partisan Misaligned				-0.0129**
				(0.00595)
Observations	349038	648014	370310	360026
R^2	0.026	0.025	0.017	0.017
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.11 – Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2012) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0119**	0.00357	0.00456	
	(0.00474)	(0.00349)	(0.00388)	
Partisan Misaligned				-0.00350
				(0.00464)
Observations	530974	923060	405390	393920
R^2	0.006	0.004	0.003	0.003
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.12 – Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2012, Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0120**	0.00767**	0.000956	
	(0.00489)	(0.00351)	(0.00449)	
Partisan Misaligned				-0.0343
				(0.0291)
Observations	384120	659730	377712	364882
R^2	0.005	0.007	0.002	0.014
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.13 – Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2016) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0266***	0.00718	0.0164**	
	(0.00970)	(0.00706)	(0.00678)	
Partisan Misaligned				-0.00153
				(0.00687)
Observations	529216	933082	410326	397948
R^2	0.007	0.010	0.007	0.006
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.14 – Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2016, Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0242***	0.00900	0.0143**	
	(0.00927)	(0.00743)	(0.00670)	
Partisan Misaligned				0.00132
				(0.0153)
Observations	399648	739022	376196	364198
R^2	0.007	0.015	0.010	0.009
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

A.5 Accounting for Redistricting as a Bundle of Treatments

A variety of district-level characteristics — in addition to partisan composition — may change when redistricting occurs. These changes could serve as a threat to inference if they also influence the decision to vote made by redistricted individuals and are correlated with changes in partisan composition. At a minimum, it seems that other district-level demographic factors likely influence turnout rates: Fraga (2018) documents how voters may grow more likely to turn out when their racial/ethnic group comprises a larger share of the district's population. Since the racial composition of a district is also correlated with the partisan composition of the district, we need to assess whether this or other related factors impact our estimates.

To try to deal with these concerns, we control for several district-level covariates that change in conjunction with redistricting that might also relate to turnout. We estimate specifications that include Census-based information about the racial composition (i.e., percent Black, Hispanic, Asian) and district-level median household income. Table A.15 reveals that when controlling for these redistricting-associated characteristics the direction and statistical significance of the partisan effects we focus on is unchanged. That is, the racial composition of the district or income level of a district does not negate the effect of partisan composition.

All this said, there are reasons we may wish to avoid separating the effects of race from party in the first place. To the extent that the modern Democratic and Republican parties are in part defined by notions of racial identity, efforts to isolate the effects of partisan composition from racial composition might leave us with a version of partisan composition that is conceptually meaningless. On the other hand, for the purposes of this paper — which emphasizes partisan composition — we would nonetheless like to rule out that the effects that we observe are not occurring solely through the channel of race.

To this end, we isolate contexts where redistricting takes place and changes in racial composition likely played a minimal role in turnout decisions. Specifically, we narrow our sample to include only states that did not include a majority-minority district. Given that redistricting decisions occur at the state level — and that the boundaries of one district in a state also affect the boundaries of other districts — this approach balances the tradeoff between providing conceptual clarity and preserving external validity.

Table A.15 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, All Years (Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0106***	0.00890***	0.000946	
	(0.00330)	(0.00303)	(0.00339)	
Partisan Misaligned				-0.0214***
				(0.00636)
Observations	287526	498316	330982	321252
R^2	0.466	0.449	0.454	0.463
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes
Income Controls	Yes	Yes	Yes	Yes
Race Controls	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.16 presents our main results when we estimate models only on those states that do not have any majority-minority districts. The results illustrate that changes in racial composition appear unlikely to be the primary driver behind the effects that we observe. Specifications 1 and 2 remain positive and statistically significant. Specification 4 is of a sizable magnitude and negative, the same as when we estimate this effect in the full sample (though it does not reach the threshold of statistical significance at standard levels). Only Specification 3 (moving from competitive to aligned) does not accord with previous estimates. All told, the available evidence points towards district partisan composition standing on its own as a meaningful factor influencing turnout decisions above and beyond district racial composition or other possible district-level confounding factors.

Table A.16 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, All Years (Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0179*	0.0192***	-0.00586	
	(0.00881)	(0.00463)	(0.0182)	
Partisan Misaligned				-0.0163
				(0.0118)
Observations	50364	84468	135183	132096
R^2	0.502	0.482	0.422	0.437
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01

The sample is comprised of contested general elections by a D and R candidate.

Treatment occurs in second period.

All elections in Louisiana are excluded from the sample due to their unusual rules.

A.6 Perceptions of District Partisanship

Secondary evidence for expressive voting in the main text takes the form of CCES panel survey results spanning the redistricting cycle. Our survey analyses examine voters' perceptions of district partisanship. As stated in the paper, to gauge voter perceptions of district partisanship, we rely on the following question asked in the CCES panel in 2012 and 2014: "How would you describe the new Congressional District you live in?" Respondents could state: "Most people are Democratic," "Most people are Republican," or "My district is a mix with no single dominant party."

For purposes of concision, we report only results for 2012 perceptions of the partisan composition of districts. Below we provide results for 2014 perceptions of district partisanship, where we see patterns that are strikingly similar to 2012 perceptions, even after accounting for the partisan composition of individual's pre-redistricting district.

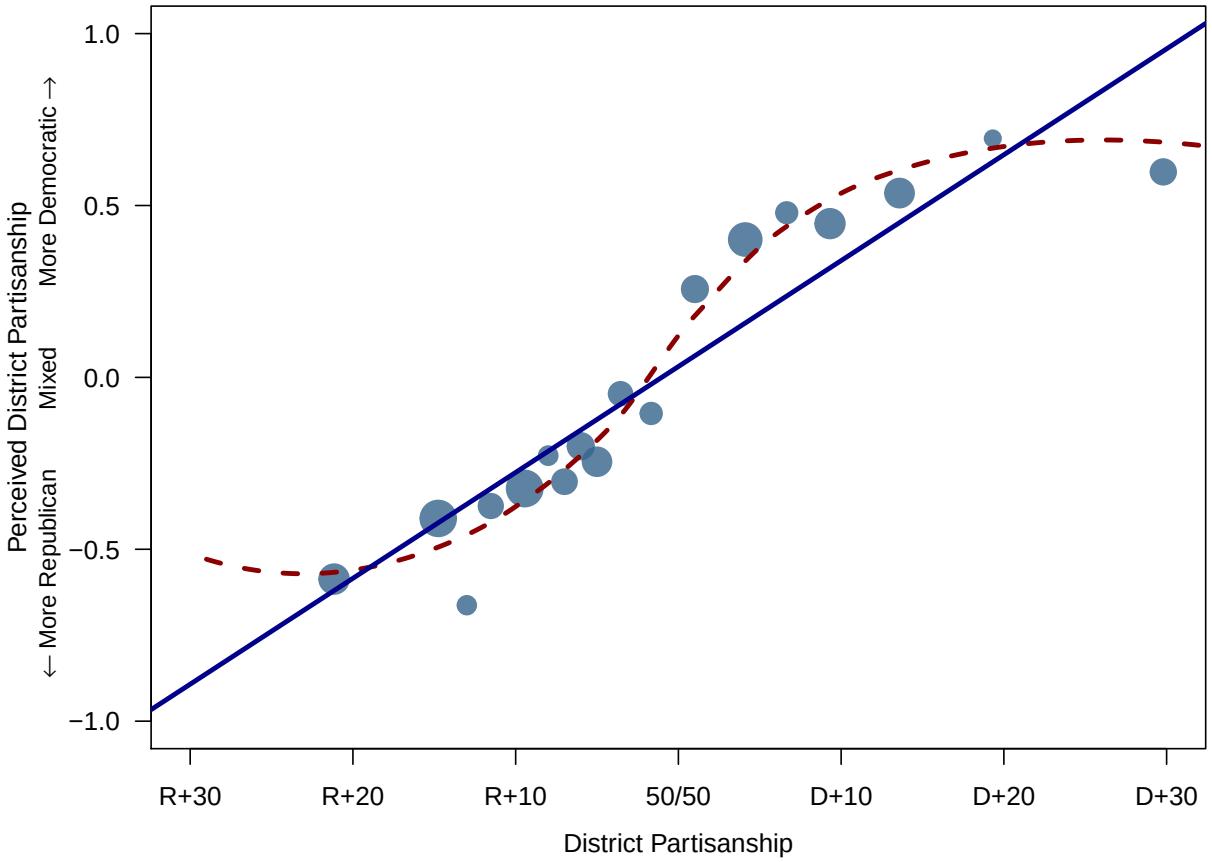
Table A.17 – Perceived Partisan Composition of District | 2014

	(1)	(2)	(3)
PVI	0.0294	0.0227	0.0204
	(0.0018)	(0.0023)	(0.0046)
Lagged PVI			0.0100
			(0.0042)
Constant	0.0100	0.0014	0.0110
	(0.0215)	(0.0074)	(0.0210)
Observations	7647	7647	7647
R^2	0.242	0.463	0.249
Old District FEs	No	Yes	No

Standard errors, clustered by congressional district, are in parentheses.

We find little evidence that campaign contact increases substantially in aligned versus misaligned districts. In the main text, we visually show this evidence for 2012. In Figure A.6, we see that this holds across years.

Figure A.5 – Voters' Perceptions of District Partisanship, 2014



This figure demonstrates that voters are largely aware of their congressional districts' partisan composition. This binned scatterplot is based on tabulations of 2014 data from the 2010-2014 CCES Panel. Each point in the figure corresponds to a local mean and is proportional in size to the number of observations within the locale. The dark blue, solid line is based on a linear regression and the red, dashed line is based on a locally weighted regression.

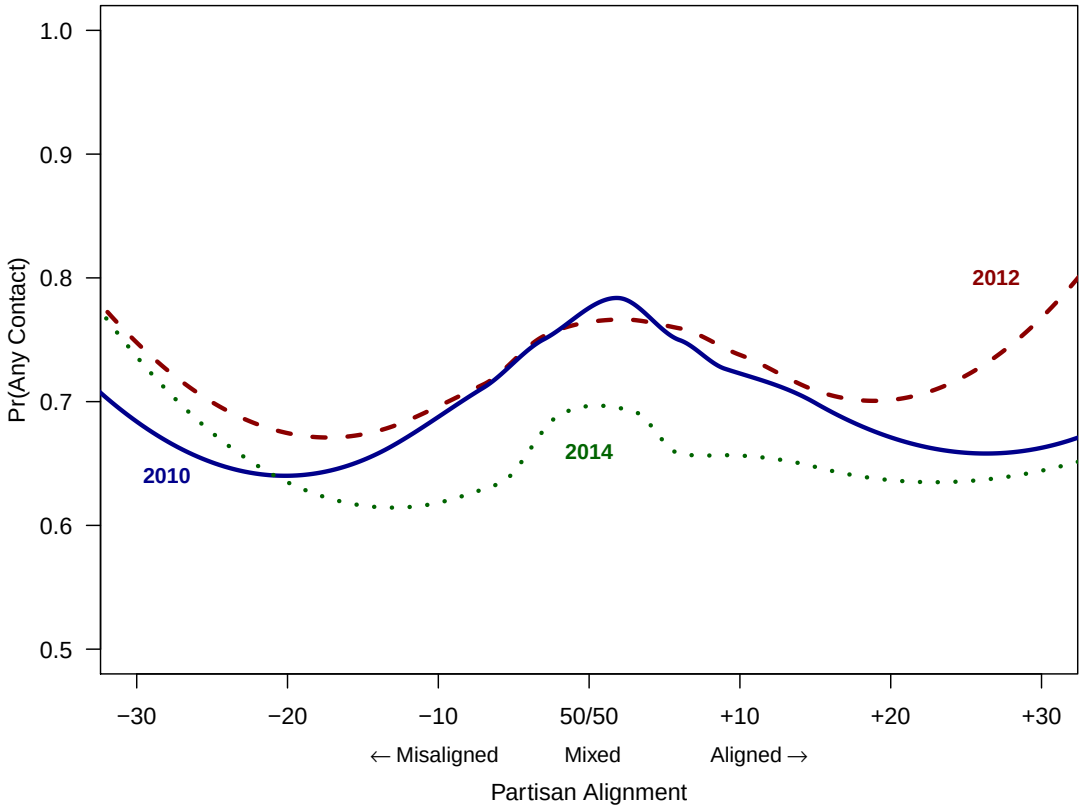
A.7 Technical Details on Voter Awareness of the Party's Candidate

To gauge voter awareness of the party's candidate, we rely on three survey questions that ask respondents to rate House candidates with respect to competence, personal integrity, and ideology. The text of the competence and personal integrity question is as follows: "Please rate the following characteristics of the [Democratic/Republican] candidate [INSERT NAME] for the U.S. House in your district...[Competence / Personal integrity]." Respondents then rate how strong or weak the candidate is on a seven-point scale, or they respond: "Not sure." For placing the candidate on an ideological scale, respondents are asked: "How would you rate each of the following individuals and groups...[INSERT NAME]." Respondents then rate the candidate on a seven-point scale from very liberal to very conservative, or they respond: "Not sure." If the respondent makes an evaluation of her party's candidate for a given characteristic in a given year, Evaluation_{ict} is coded = 1 (where i is the index for respondents in the CCES Panel, c is the set of characteristics to be evaluated: {competence, personal integrity, ideology}, and t is the set of years in the CCES Panel: $\{2010, 2012, 2014\}$). If the respondent cannot make an evaluation of her party's candidate and instead responds not sure, $Evaluation_{ict}$ is coded = 0.

A.8 Self-Reported Campaign Contact in 2014

As in the case for voters' perceptions of district partisanship, for the sake of concision, we only report the results from 2012 for our cross-sectional plots of self-reported campaign contact. In Figure A.6, we provide a plot based on self-report campaign contact in the 2010,2012, and 2014 elections. The pattern of results is similar across all three elections.

Figure A.6 – Any Campaign Contact



This figure demonstrates that voters in congressional districts aligned with their partisanship do not report substantially more campaign contact than voters in misaligned districts. Each curve is fit from a locally weighted regression based on CCES Panel data from each respective year.