Voting Against the Grain: Partisan Geography, Electoral Competition, and Voter Behavior

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Abstract

Partisans often face two dilemmas when deciding to vote for a potentially better-performing opposition candidate in clientelistic distributive systems. First, whether the opposition candidate, once elected, will provide them with promised public goods. Second, whether they can sanction the politician should she renege. I argue that partisans' fears of exclusion and inability to punish shirking is much lower in electoral districts where parties' supporters live side-by-side (partisan nonsegregated) *and* elections are competitive compared to other electoral settings. Accordingly, partisans are more likely to cross party lines in nonsegregated and competitive constituencies than in other settings. Using a conjoint experiment administered to voters sampled from a stratified sample of constituencies in Ghana, I show that voters in competitive, nonsegregated districts are the most willing to cross party lines. Additional data on voters' perceptions of actual public goods distribution and political efficacy support the mechanism. My results demonstrate how partisan geography and electoral competitiveness jointly shape democratic accountability in clientelistic systems.

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1 Introduction

Why do some partisans vote for candidates from opposing parties? Although partisanship is often associated with voter loyalty (Campbell et al., 1960), a notable share of self-identified partisans in sub-Saharan Africa nonetheless vote across party lines (Fridy, 2007; Lindberg and Morrison, 2005; Weghorst and Lindberg, 2013; Mattes and Krönke, 2020). Six rounds of Afrobarometer surveys across 30 countries show that roughly 7% of partisans report intentions to vote for opposition presidential candidates,[1] with even higher rates—up to 10%—in legislative contests (Mattes and Krönke, 2020).[2] These defections potentially contribute to high rates of parliamentary turnover (Bowles and Marx, 2022), and to broader patterns of party system volatility, as established parties compete to retain partisan loyalty in competitive but fluid political environments (Weghorst and Bernhard, 2014). Yet we know relatively little about the structural conditions that make partisan defection more or less likely.

Existing research emphasizes the importance of candidate quality, credibility, and shared identity in shaping partisan support. Partisans are more likely to defect when opposition candidates appear more competent, credible, or aligned with their policy preferences (Platas and Raffler, 2019; Brierley, Kramon and Ofosu, 2020; Cruz et al., 2024; Kramon, 2023; Casey, 2015), or when they share salient ethnic or religious ties (Arriola, Choi and Gichohi, 2016; Adida et al., 2016). Endorsements from traditional leaders or chiefs can also sway partisans (Koter, 2013; Baldwin, 2016). In contexts with lower political sophistication and thus limited partisan-motivated reasoning, exposure to new information increases defection rates (Conroy-Krutz and Moehler, 2015). However, the role of structural electoral features—particularly partisan geography and competitiveness—remains underexplored.

This paper develops and tests a theory that partisan geography and electoral competition *jointly* shape partisans' evaluations of opposition campaign promises and their willingness to defect. I argue that local electoral conditions shape voters' expectations about two critical dimensions in clientelist systems: (1) whether opposition candidates will exclude them from resource allocation, and (2) whether voters can effectively sanction non-performing MPs. These concerns are particularly acute in competitive, seg-

[1] The proportion of Afrobarometer respondents who said they feel close to a particular party but intend voting for another party candidate were 6.2%, 6.7%, 6.6%, 7.6%, 7.3%, and 7% in Rounds 3, 4, 5,7, 8, and 9, respectively.

[2] For instance, in South Africa's 2014 elections, (Mattes and Krönke, 2020) report that 9% and 11% of African National Congress partisans defected in national and provincial legislative races, respectively.

regated constituencies, where politicians have electoral incentive and can more easily target co-partisans (Harris and Posner, 2019). By contrast, in competitive and politically integrated settings, partisans may believe they have a better chance of receiving public goods and holding MPs accountable—even if those candidates are from another party.[3]

These expectations are consistent with recent findings in the distributive politics literature. While voters in many African democracies expect politicians to favor co-partisans or co-ethnics (Lindberg, 2010; Barkan et al., 2010; Wantchekon, 2003; Posner, 2005; Ichino and Nathan, 2013; Nathan, 2016), research shows that the spatial concentration of political support shapes politicians' ability to discriminate in office (Harris and Posner, 2019; Ejdemyr, Kramon and Robinson, 2017).[4] In segregated districts, targeting supporters is feasible and effective; in integrated districts, it is harder. In partisan-segregated districts, voters may expect only co-partisan MPs to deliver, reducing the appeal of defection. In integrated and competitive areas, this belief weakens as targeting becomes harder to sustain and accountability more likely. Over time, voters internalize these patterns, which shapes their political evaluation and decision making (Conroy-Krutz, Moehler and Aguilar, 2016).

I test this theory using a mixed-methods design in Ghana – a stable two-party democracy with significant subnational variation in electoral competitiveness and partisan geography. I preregistered this hypothesis to reinforce the credibility of the findings, ensuring that the results presented are not the product of "fishing." Additionally, I purposefully sampled constituencies and respondents to effectively test this theory. First, I use polling station – level election results from the 2016 and 2020 legislative races to classify constituencies by their levels of partisan segregation and electoral competitiveness. Based on this classification, I draw a stratified sample of 2,020 partisans across 12 constituencies (three from each of four district types).

[3]Related work, such as Ichino and Nathan (2013) and Nathan (2016), examines how voting patterns are shaped by expectations about how ethnic segregation influences the distribution of resources in rural and urban contexts, respectively. For example, holding electoral competition constant, Ichino and Nathan (2013) finds that in ethnically segregated areas, minority voters are more likely to support the party associated with the local majority, anticipating exclusion if they do not. In contrast to these studies, which focus on ethnic identity, my work centers on partisanship. I argue that it is partisans in politically integrated constituencies – where rival partisan groups are of roughly equal size – who are more responsive to out-party campaign promises.

[4]Similar voter expectation of politician partisan favoritism in the distribution of resources has been demonstrated in Argentina (Calvo and Murillo, 2013) and India (Auerbach and Thachil, 2019).

Survey evidence shows that co-partisans of incumbent MPs in segregated districts are significantly more likely to expect public goods than opposition supporters. These perception gaps are smaller in integrated districts, especially when electoral competition is high. Also, Afrobarometer data show that voters in competitive constituencies are more likely to report feeling capable of holding MPs accountable. Together, these results provide evidence for the primary assumptions of my hypotheses.

To probe the causality of partisan influence on voter evaluation of campaign promises more directly, I implement a conjoint experiment in which respondents choose between hypothetical candidates who vary in partisanship and the level of public goods they offer. It is challenging to infer the impact on vote choice based on citizens' expectations of opposition versus co-partisan performance from actual votes, as vote counts or survey responses on vote choice may be explained by parties' strategic mobilization efforts (Larcinese, Snyder Jr and Testa, 2013), changes in out-group trust levels (Scacco and Warren, 2018), or cognitive biases (Carlson, 2015; Adida et al., 2017). The conjoint survey allows respondents to compare candidates across various characteristics, similar to real campaigns. Consistent with prior findings, voters prefer co-partisan candidates and those offering more local infrastructure. Yet these preferences vary across contexts. In competitive, integrated districts, partisans are significantly more willing to choose opposition candidates who offer greater benefits. In other electoral contexts, they continue to favor co-partisans—even when opposition candidates promise more.

These findings hold after adjusting for key covariates at both the individual (education, ethnicity, political interest) and constituency (urbanization, campaign intensity) levels. At the individual level, characteristics such as education, exposure to diverse information sources, ethnic attachment, gender, and wealth may shape partisanship and the influence of opposition appeals (Ishiyama and Fox, 2006; Carlson, 2016; Harding and Michelitch, 2019). At the constituency level, factors like urbanization can influence party mobilization strategies and partisan attachment (Resnick, 2012; Nathan, 2016; Harding and Michelitch, 2019; Wahman and Boone, 2018). If these characteristics vary by constituency type, they may explain the relationship between partisanship and cross-party voting across settings. However, my results are robust to these factors.

Finally, I examine external validity using actual defection rates in Ghana's 2020 legislative elections. In competitive, integrated constituencies, opposition candidates won 52% of seats. In competitive

but segregated districts, that figure drops to just 13%, suggesting competition is necessary but not sufficient for cross-party voting. While this finding offers a partial test of this implication, as it does not account for candidate qualities or campaign promises, the differences are striking.

This study contributes to three areas of scholarship. First, it adds to research on partisan bias and campaign evaluation by showing how local context shapes the influence of partisanship (Bonilla, 2024; Cruz et al., 2024). Second, it extends the literature on party switching in Africa by focusing on core partisans rather than swing voters (Weghorst and Lindberg, 2013). Third, it contributes to distributive politics by linking voters' perceptions of political favoritism to local patterns of segregation and competition (Carlson, 2016; Diaz-Cayeros, Estévez and Magaloni, 2016; Harris and Posner, 2019). Echoing Xu (2024), who shows that spatial integration along class lines aligns the poor and rich urban residents preferences for public goods, I find that partisan geography shapes not only politicians' allocation behavior, but also voters' expectations, evaluations campaign promises, and voting decisions.

2 Crossing party lines: the dual importance of partisan geography and electoral competition

Citizens' *beliefs* about politicians' biased distribution of local non-excludable goods such as clinics, schools, bridges, and markets is often thought to drive partisan (or ethnic) voting in African countries (Bates, 1983; Chandra, 2007; Ferree, 2006; Posner, 2005; Conroy-Krutz, Moehler and Aguilar, 2016). Such beliefs accord with theoretical and empirical research that suggests that politicians tend to target political goods to their supporters because it is more efficient (Dixit and Londregan, 1995) or it helps them to encourage their core voters to turn out at the polls (Cox and McCubbins, 1986; Nichter, 2008; Stokes et al., 2013; Rosas, Johnston and Hawkins, 2014).

Recent scholarship shows that politicians' ability to selectively target co-partisans or coethnics with local public goods depends on the geographic distribution of their supporters. In segregated districts – where supporters reside in spatially distinct communities – politicians are more able to deliver benefits exclusively to their base. For instance, Ejdemyr, Kramon and Robinson (2017) demonstrate that ethnic segregation enables Malawian politicians to direct public goods to coethnic areas, while Harris and Posner (2019) finds that partisan bias in Kenyan legislators' allocation of constituency development funds

(CDFs) is largely confined to politically segregated constituencies. In parallel, scholars have shown that electoral competitiveness can also shape distributive behavior. Competitive environments may incentivize politicians to broaden their appeal by providing public goods more equitably. In Mexico, for example, Diaz-Cayeros, Estévez and Magaloni (2016) find that competitive elections increase the likelihood that both supporters and non-supporters receive public goods. Similarly, Asunka (2017) shows that Ghanaian legislators are less likely to exercise discretion over CDF allocations in competitive districts, thereby increasing the likelihood of benefits reaching non-supporters.

While these studies have deepened our understanding of how local electoral conditions – partisan geography and competitiveness – influence politicians' distributive strategies, we know far less about whether and how these same conditions shape voters' expectations about politicians' behavior and influence their willingness to defect from their preferred party. Some evidence suggests that local demographic and political geography can influence vote choice. In Ghana, Ichino and Nathan (2013) show that in ethnically segregated rural areas, ethnic minorities often support the party associated with the local majority group, anticipating exclusion from national resource flows. Similarly, De Kadt and Sands (2021) find that white South Africans living in racially isolated areas were more likely to vote against black political parties—a legacy of apartheid's spatial order—though the mechanism remains speculative. In terms of electoral competitiveness, Brierley, Kramon and Ofosu (2020) show that partisan voters in Ghana who were exposed to a candidate debate were more likely to support an opposition candidate – but only in electorally competitive areas. These findings suggest that local political context may shape not just how politicians behave, but how voters perceive and respond to them.

Nonetheless, we still lack a systematic account of how the interaction between partisan geography and electoral competitiveness conditions voters' expectations and, ultimately, their decision to support out-partisan candidates.

I argue that partisan geography and electoral competition jointly shape a partisan voter's likelihood of supporting an opposition candidate in a given election. Specifically, the geographic distribution of party supporters within a voter's constituency affects her expectations about whether she will benefit from an opposition candidate's promised public goods. At the same time, the degree of electoral competitiveness influences her beliefs about whether her vote could be pivotal—either in helping elect a credible,

public-good-promising opponent, or in voting out an incumbent who reneges on their pledges. These beliefs vary systematically across different constituency types and affect the probability of crossing party lines.

To formalize this argument, I consider a setting in which voters and politicians belong to one of two parties—Party A or Party B—and compete in single-member electoral districts. Voters prefer candidates who deliver local public goods (e.g., roads, schools, clinics, streetlights) (Harding, 2015; Barkan et al., 2010; Lindberg, 2010; Weghorst and Lindberg, 2013). Each electoral constituency is composed of multiple polling station catchment areas (hereafter, "communities") that vary in the partisan composition of their residents and in the overall competitiveness of the district. Voters are assumed to know both the dominant party in their community and the electoral competitiveness of their constituency—reasonable assumptions in many contexts, including my own, where polling station and constituency results are publicly announced and widely disseminated.

Figure 1 illustrates four ideal-type constituency configurations, arrayed by two dimensions: partisan geography (segregated vs. nonsegregated) and electoral competitiveness (competitive vs. noncompetitive). In segregated constituencies (Column 1), each community is politically homogeneous and dominated by supporters of either Party A (P_A) or Party B (P_B). In nonsegregated constituencies (Column 2), communities are politically mixed, with both P_A and P_B supporters present.

Competitiveness is defined at the constituency level. A district is competitive when the electorate is roughly evenly split between P_A and P_B supporters; it is noncompetitive when one party holds a clear majority. This partisan balance shapes the geographic distribution of party supporters:

- In competitive-segregated constituencies (Cell 1), half of the communities are dominated by P_A and half by P_B. Thus, partisans are highly likely to reside in a community where their party is dominant. It is these partisans living in their dominant communities in competitive-segregated constituencies that I hypothesize.[5]

[5]Note that considering ethnic segregation, Ichino and Nathan (2013) focus on those living in the homelands of other ethnic groups.

- In noncompetitive-segregated constituencies (Cell 2), most communities (e.g., three-quarters) are dominated by the majority party (P_A or P_B), with minority-party supporters clustered in a few remaining areas.

- In competitive-nonsegregated constituencies (Cell 3), each community contains an approximately even mix of P_A and P_B supporters, i.e., $\pi(P_A) \approx \pi(P_B)$, where $\pi(.)$ denotes a party's share of voters in a community.

- In noncompetitive-nonsegregated constituencies (Cell 4), the dominant party (P_A or P_B) maintains a local majority across all communities, but minority-party supporters remain spatially dispersed.

This typology allows us to theorize how voters' expectations about distributive outcomes and their own electoral leverage vary across constituency types—thereby shaping the strategic incentives for partisan defection.

While the logic of exclusion in my argument draws inspiration from the literature on instrumental ethnic voting, my focus is on partisanship. The two are highly but imperfectly correlated in some settings, including Ghana (see Ichino and Nathan, 2013). Cross-nationally, Harding and Michelitch (2019) also demonstrates that ethnicity is not equal to partisanship. Moreover, my focus on parliamentary elections, in which citizens often pick among co-ethnics contesting on different party tickets, helps minimize the concern that ethnicity might drive my results on vote choice (Ferree, 2022). Also, in my conjoint survey design, I use the hometown status of the hypothetical candidate to signal their ethnicity. Accordingly, respondents made their choices with knowledge of whether the candidate hails from the constituency.

2.1 Theoretical expectations: crossing the party line for public goods

I argue that partisans are more likely to cross party lines in competitive and nonsegregated constituencies than in other types of districts. Opposition candidates, if they were elected, will find it hard to exclude supporters of the other party from local public goods. Partisans will also believe that their votes are needed to elect better politicians. These double assurance conditions do not hold in other electoral settings, which implies that partisans are unlikely to trade even a poor quality copartisan aspirant for a better opposition candidate (Keefer and Vlaicu, 2005).

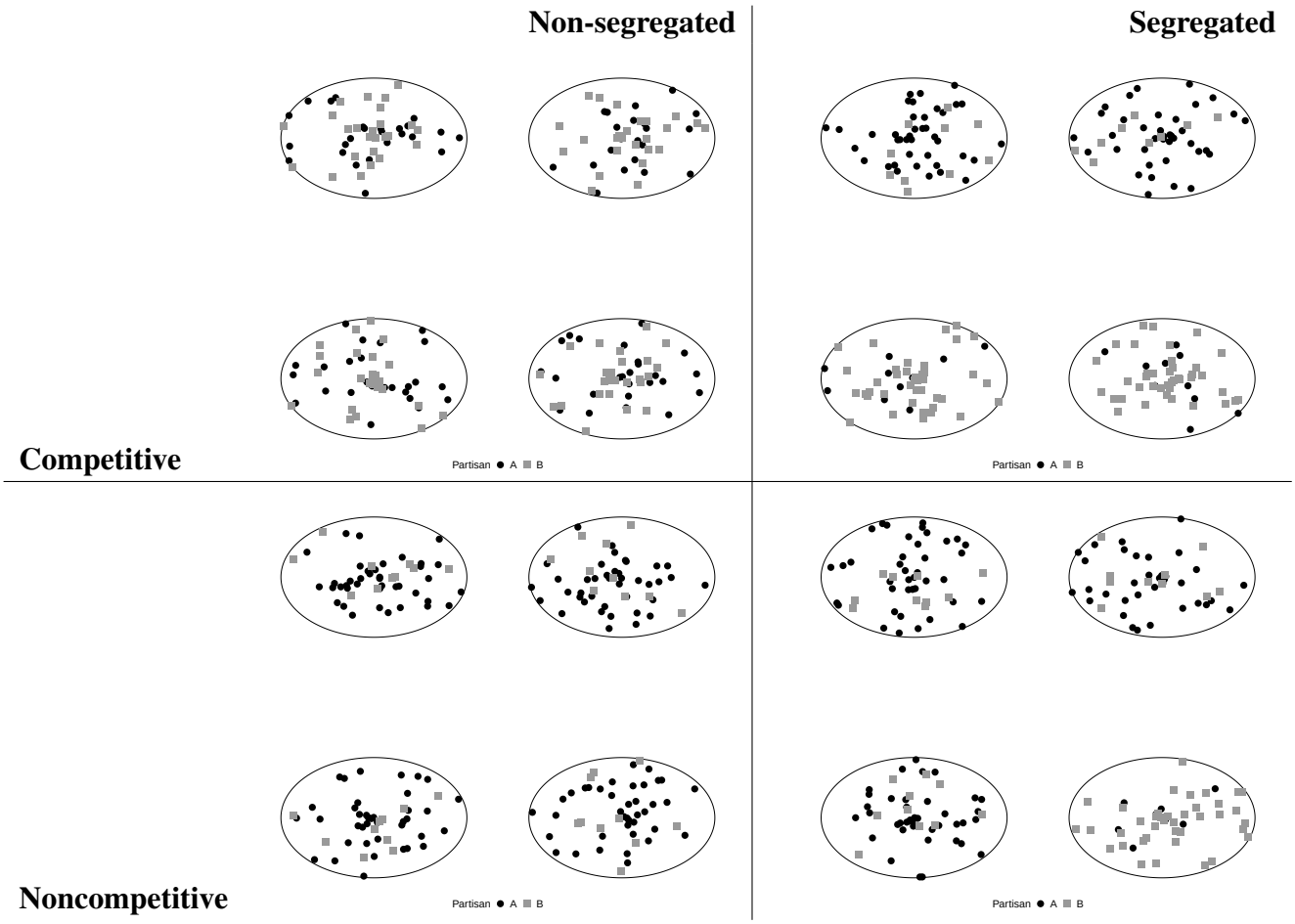


Figure 1: Constituency types

Notes: Figure 1 Each oval represent a polling station/community and points represents supporters of party A (black circles) and B (grey squares).

To illustrate my argument, first imagine that V_A (i.e., party A voter) lives in a competitive and segregated constituency (Figure 1 Cell (1)). In such a setting, V_A should expect to receive fewer or no public infrastructure projects from a non-copartisan candidate C_B should they win office, because C_B can target such projects to the communities that support them.[6] Thus, if opposition candidate C_B pledges to distribute public goods to V_A's community, V_A will not be persuaded to vote for C_B. Voters will be less likely to vote for an opposition candidate in a segregated constituency because they do not expect to benefit from such promises.

Second, imagine that V_A lives in a nonsegregated electoral district (Figure 1 cells (3) and (4)) where supporters of both parties live side by side within the local communities. In such settings, candidate C_B will find it hard to exclude her non-copartisan voter, V_A, from using the public infrastructure she provides to all communities. Thus, citizens who reside in nonsegregated constituencies can expect to benefit equally from public goods provided by opposition officeholders. Accordingly, in nonsegregated electoral districts, voters will equally prefer copartisan and non-copartisan candidates who promise to invest in local infrastructure because politicians cannot discriminate among voters. Yet this expectation may only hold in competitive districts (cell (3)), where voters expect that their vote can help elect a higher-quality opposition candidate (Weghorst and Lindberg, 2013).

In noncompetitive settings, supporters of the majority party are unlikely to switch to an opposition public-goods-promising candidate because she is not viable. Voters who belong to the minority party in uncompetitive and nonsegregated settings are unlikely to be swayed because they cannot be excluded from local public infrastructure and their vote is not pivotal to electing the better majority-party candidate. Indeed, minority partisans in noncompetitive and nonsegregated settings can simply engage in costless expressive voting.[7]

[6] Of course, some local public goods, such as roads and bridges, may help multiple communities that may not be the primary targets of the officeholders. Nonetheless, according to this model the primary beneficiaries are those in the catchment area of the polling station.

[7] A potential implication of this argument is that in noncompetitive and nonsegregated settings, voters who belong to the minority group will be less likely to show up at the polls than those who align with the majority party. I am unable to test such a prediction using my research design. Moreover, examining the turnout rate for minority-party voters in these settings may be misleading because presidential and parliamentary elections are held concurrently in Ghana. Accordingly, minority-party supporters may be motivated to turn out to vote for the presidential candidate. I find similar reported turnout rates for minority and majority groups in non-competitive/non-segregated constituencies in my data. However, my argument is that, conditional on voting, public goods promised by a majority party's candidate will not sway a minority-party voter in such an electoral setting.

My analysis plan specified comparing outcomes in competitive and nonsegregated constituencies with those in the others separately. However, because my expectations are similar for these other constituencies, I have combined these other types to simplify the discussions. Appendix Figures D.2 and D.3 show the results in the full sample and in each constituency type.

3 Partisan voting and allocation of discretionary resources by MPs in Ghana

Ghana's roughly three decades of stable democratic rule provides a useful setting for this study. Ghanaians elect their Members of Parliament (MPs) for four-year terms using plurality rule in single-member districts, which incentivizes legislators to provide constituency services to cultivate personal support (Cain, Ferejohn and Fiorina, 1987; Carey and Shugart, 1995). There are no term limits for MPs. Since the country's democratic transition in 1992, Ghana has held eight elections, which have been dominated by two parties — the National Democratic Congress (NDC) and the New Patriotic Party (NPP) (Fridy, 2007; Gyimah-Boadi, 2009). While both parties have strongholds among the country's 275 constituencies that they have consistently won over time, the turnover rate among reelection-seeking incumbents is about 25% (Ofosu, 2019). About 63% of Ghanaians say they feel close to a political party according to Afrobarometer data collected between 1999 and 2018 (R1 to R7).

The country's stable, competitive two-party system has provided citizens an opportunity to observe partisan favoritism in their constituencies for at least two reasons. First, citizens vote at polling stations located in their communities. Election results are first announced at the polling station and then transferred to the Electoral Commission's district collation centers for aggregation. Thus, voters are reasonably aware of the level of support for each party in their community and across communities within the constituency. Indeed, informal conversations with community residents during my fieldwork to pilot the survey revealed that communities are labeled pro-NPP, pro-NDC, or mixed based on information disseminated via local radio reports or word of mouth.

The second reason that voters can form reasonable expectation about the level of partisan favoritism is that Ghana provides all legislators with equal amounts of individual CDFs, which are referred to as MPs' "Common Funds." Similar to legislators in other developing countries, MPs established the fund to help deliver both private benefits and public goods (infrastructure) to address the gaps in public

service delivery in their constituencies (Baskin, 2014). Ghanaian legislators choose which individuals and communities benefit from their CDFs. Politicians often organize public events to announce beneficiaries, and public goods projects feature signs indicating that the MP donated it from their CDF. Accordingly, citizens are aware of whether their communities have benefited from such funds in the past, which allows them to assess whether they are likely to benefit in the future. Legislators, especially those from the incumbent party, can also influence where the president-appointed head of their local government places projects in the constituency.

Past research on legislator–voter relationships in Ghana provides significant insights into how MPs perceive their roles, how they respond to voters' expectations, and whether or not voters reward incumbents who offer private and public goods (Harding, 2015; Weghorst and Lindberg, 2013; Lindberg, 2010). For instance, Lindberg (2010) found that Ghanaian MPs believe voters are most likely to hold them accountable for personal assistance (e.g., school fees, medical bills, start-up financing for small businesses or farms, building materials for personal homes) and community development projects (e.g., roads, schools, health clinics, toilets, and safe sewage). While there is near consensus that undecided voters can be swayed by the provision of these benefits, it is unclear where the move partisans. Lindberg and Morrison (2008) report that about 80% of voters chose the same party candidate in the legislative elections in 1996 and 2000, which suggest core voters may not be persuadable. Weghorst and Lindberg (2011) report that in Ghana's 2008 elections between 22 and 25 percent of voters who declared an intention to vote for a particular party were willing to switch if another party promised to "deliver better community development, provide executive oversight, or voice constituency concerns on the floor of parliament" (pg.1199). Similarly, Brierley, Kramon and Ofosu (2020) show that partisans were persuaded by the policy positions (promises) of opposition candidates in Ghana's 2016 parliamentary debates but only in competitive electoral districts. Accordingly, it remains uncertain whether partisans can be sway and under what conditions. I address this gap.

4 Research design

4.1 Sampling of constituencies, polling stations (communities), and respondents

I sampled 2,020 participants from a random set of polling stations nested within a sample of 12 constituencies equally distributed across electoral district type. I classified the country's 275 constituencies along two dimensions: competition and partisan segregation. Constituencies were classified as competitive if the winners of the two prior legislative elections (2012 and 2016) won with a margin of 10% or less and non-competitive otherwise.

To measure partisan segregation — the extent to which supporters of the two major parties (NPP and NDC) were clustered in distinct polling stations in a constituency — I used an entropy index (Reardon and O'Sullivan, 2004) that ranges from 0 (maximally mixed) to 1 (maximally segregated). Appendix A describes the detail of the estimation. Using data from the country's 2016 legislative elections, the index ranged from 0.008 to 0.559 with a mean of 0.091, suggesting that many constituencies were nonsegregated. Indeed, even the constituency with a maximal score is only slightly more than halfway the theoretically maximal segregated district. Thus, while the country is ideal for the research regarding its stable competitive two-party system, it is limiting in terms of obtaining perfectly partisan segregated districts. Therefore, I adopt a sampling approach, although imperfect, to mitigate this limitation. First, I classified constituencies as (relatively) segregated if their entropy score was equal to or greater than the 90th percentile (≥ 0.172) of the country's distribution. There are no set thresholds for designating electoral districts as segregated, but choosing such a threshold ensures each constituency type sufficiently mimics the conditions stipulated by my theory. After crossing these two variables, I randomly selected three constituencies from each cell.[8]

Second, a simple random sampling method was used in nonsegregated constituencies to select polling stations because each community's partisan composition is a microcosm of party constituency-level vote share, on average. However, recall that in segregated constituencies, partisans live in distinct communities, in theory. A simple random sampling of polling stations from such an ideally segregated constituency can generate rogue samples with partisans of only one party, which can undermine statistical power and theoretical inference. Moreover, while these electoral districts are relatively segregated, they do not satisfy the maximum threshold entirely. Accordingly, some communities will have an equal mix

[8]Appendix Table A.1 shows the distribution of all 275 constituencies across the different electoral settings. Appendix Figure A.2 displays examples of NPP support distribution in segregated and nonsegregated constituencies.

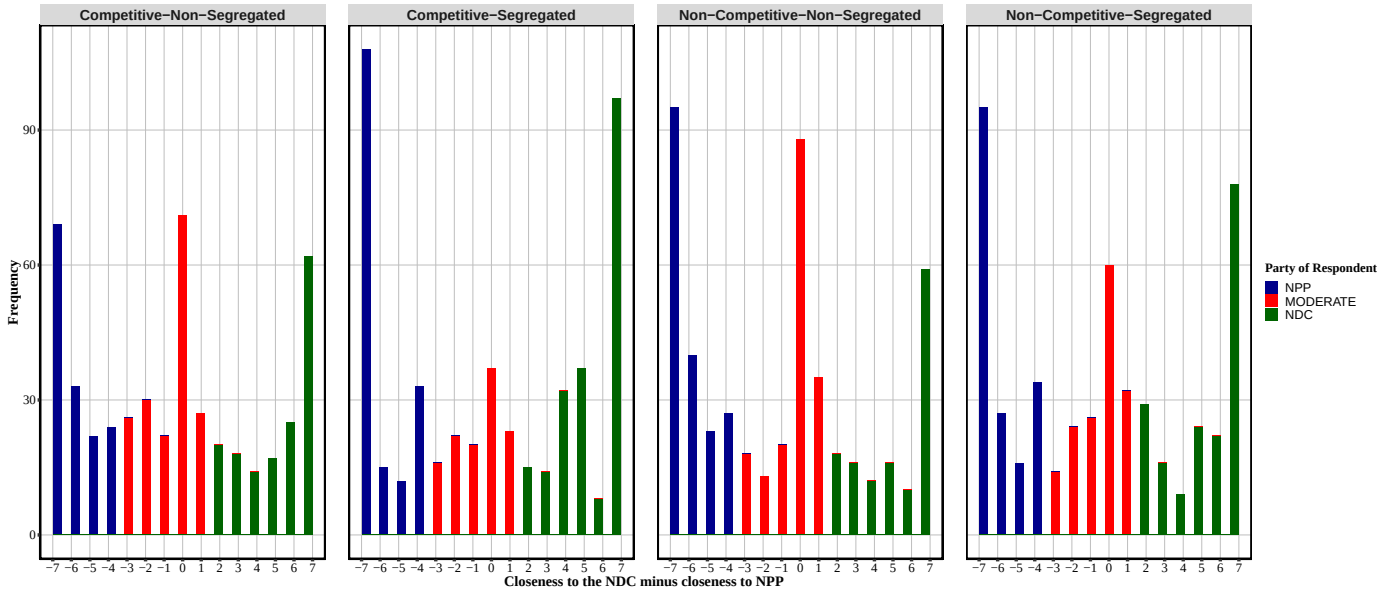
of the partisan groups in these "segregated" districts. Thus, in these constituencies, I first identified all the polling stations that overwhelmingly supported one party (using a 75% vote share as the threshold). Then, I randomly selected an equal number of stations that were strongholds of each party in these settings. The few partisans living in opposition areas in the sampled places are excluded from the analysis as pre-specified.

4.2 Measuring partisanship

I use respondents' self-reported level of attachment to each of the two major parties to identify strong partisans. Specifically, the survey asked respondents how close they felt to each of the two major parties on a 0–7 scale. Subtracting the score of one party from another result in a partisanship score ranging between -7 and 7. Respondents with higher negative values are closer to the NPP, and those with higher positive values are closer to the NDC. Using the distribution of these scores across the entire sample, I classified participants in the lowest and highest terciles as NPP and NDC partisans, respectively, as pre-specified.

Figure 2 shows that the distribution of these scores and those classified as partisans are similar across the four electoral settings, which implies that individuals with similar levels of partisanship are compared across contexts. The drawback of my approach is that individuals who might not be "strong" partisans may be classified as such, distorting my inference. However, two factors mitigate such concerns. First, Appendix Table B.2 shows a strong correlation between the coding and reported past vote choice and intended vote choice (in the 2020 elections), which provides confidence in the classification. Second, Appendix E replicate the main results (in section 7.2) focusing on respondents who scored five and above in absolute terms. The findings remain robust to this specification.

Figure 2: Distribution of partisanship scores across constituency types



Notes: Figure 2 displays respondents' level of attachment to one of the major parties relative to the other across electoral settings. Each respondent reported on a 0–7 scale how attached there were to the NPP and NDC.

4.3 Conjoint survey experiment

To assess whether partisans are more or less likely to choose an opposition candidate who promises a similar amount of (or more) public goods as a copartisan politician in a given electoral setting, I use data from a forced-choice conjoint survey experiment. Survey respondents were asked to choose between two hypothetical MP candidates to represent their constituency. Each candidate had a set of attributes including their partisanship and how they plan to allocate their CDF to provide private and public goods. Because the values of each attribute were randomized, I can simultaneously estimate the average marginal component effect (AMCE) of each attribute's level on vote choice (Hainmueller, Hopkins and Yamamoto, 2013).

Importantly, the forced-choice conjoint survey design also helps me to estimate the *average combination effect (ACE)* of a combination of values from a subset of attributes relative to a pre-specified baseline (Egami and Imai, 2019). This approach allows me to assess, for example, whether partisans are more or less likely to choose an opposition candidate who promises a large amount of public goods compared to a copartisan aspirant who commits to the same amount or fewer public goods.

I used the conjoint survey to investigate how a candidate's promise to spend more of their CDF on public goods influences respondents' level of support. I generated four potential allocations of an incumbent's CDF between public and private goods ($P_{\text{public(\% CDF),private(\% CDF)}}$).[9] At the extreme ends, politicians promised to use their funds to provide mainly public goods ($P_{\text{public(90\% CDF),private(10\% CDF)}}$) or private goods ($P_{\text{public(10\% CDF),private(90\% CDF)}}$). In another treatment arm, they promised to divide their fund equally between each ($P_{\text{public(50\% CDF),private(50\% CDF)}}$). I use minimal spending on each type, $P_{\text{public(10\% CDF),private(10\% CDF)}}$, as the baseline category because some MPs spend very little of their funds. Because understanding percentages can be challenging for some respondents, my research assistants and I formulated a standard intuitive narrative for the interviews. For example, respondents were told "if the government allocates, say, GHC 10,000 to the MP in CDF, she says she plans to use only GHC 1,000 to support private benefits (, and use the remaining GHC 9,000 to build local infrastructure (citing examples in conjoint for each)."[10]

In addition to randomizing how candidates promise to spend their CDFs, the conjoint survey also included attributes related to their party affiliation, other constituency services (casework, visit the constituency, meeting and listening to constituents' concerns, and attending or supporting social events), and personal characteristics. The values for each of these attributes were randomized. In this paper, I assess the impact of promised CDF allocations and candidates' party affiliation; I systematically analyze the other dimensions in a complementary paper.[11]

Columns (1) and (2) of Table 1 show the abridged set of attributes (i.e., partisanship and CDF spending) and the levels I used in the experiment.[12] Column (3) displays the probabilities assigned to each attribute. All respondents ("voters") were presented with three "voting tasks" in which they were asked to choose between two hypothetical candidates competing in the next election in their constituency.

[9] Ofosu (2019) confirms that MPs use their CDFs to provide private benefits and local public goods, and shows significant variation in CDF utilization. Therefore, such divide provides external validity to the design.

[10] Ideally, one would use no spending as the baseline. However, because voters may not consider CDF spending in their choice of MPs in the first place, choosing a 0% use of CDF could simply prime respondents rather than elicit a genuine response.

[11] Appendix Table D.1 shows the results of all the attributes in the full sample. Among the other factors considered in the conjoint survey, only the impact of the promise to organize regular community meetings (at least once every six months) is as important as the pledge of local infrastructure from the CDF in determining respondents' choice.

[12] Appendix Table C.1 shows the full set of characteristics and their levels. I piloted the survey in the following constituencies: Awutu Senya West (competitive/segregated), Sege (non-competitive/non-segregated), and Krowor (competitive/non-segregated) in August 2018.

To ensure that participants took the voting task seriously, they were given GHC 2 in four coins of GHC 0.50 and asked to donate part to their preferred candidate. Before they selected their preferred candidate, they were told that candidate with the most preferred attribute selected by residents will receive the total donation of survey respondents.

Of course, it is against research ethics to donate study funds to party candidates. Instead, participants were debriefed and told that the money will be used to share the results of the research. The amount raised was used to co-sponsor a dissemination workshop with the Ghana Center for Democratic Development, a reputable civil society organization dedicated to the promotion of issue-based campaigns, to share the findings with parties, candidates, and the general public. The workshop was broadcast live on radio and TV.[13]

Appendix Figure C.1 shows an example of a choice presented to a respondent. The profiles were presented side by side, each pair on a separate screen. Appendix C shows the interview procedure and the narrative presented to respondents. Appendix Table C.3 shows that the order in which the profile appeared did not affect the results. The attributes were presented in a randomized order that was fixed across the three pairings for each respondent to ease the cognitive burden for respondents and minimize primacy and recency effects. Appendix Table C.2 shows that the randomization was successful. Controlling for a few variables that were not balanced across treatments, as expected by chance, does not change the results.

Table 1: Values of candidates' CDF promise and partisanship in the conjoint survey

Candidate attribute	**Attribute levels**	**Probabilities**
Political Party	Independent (IND)[1]	1/3
	New Patriotic Party (NPP)[2]	1/3
	National Democratic Congress (NDC)[3]	1/3
Use of MP's Common Fund (CDF)	Candidate promises to use [**Levels: (1) 10%; (2) 50%; (3) 90%**] of CDF to support the construction or renovation of community schools and clinics, repairs of roads and bridges, and other community self-help projects; and [**Levels: (1) 10%; (2) 50%; (3) 90%**] to pay school fees, medical bills, and apprenticeship fees for some individual constituents. [**Used levels:**	
	$P_{10,10}$ [1]	1/4
	$P_{50,50}$ [2]	1/4
	$P_{10,90}$ [3]	1/4
	$P_{90,10}$ [4]	1/4

[13]The state newspaper also published the results [link redacted]. Naturally, the setup of conjoint surveys ensures that half of the profiles are selected by respondents, while the other half is not. Accordingly, 50% of the profiles received 0 GHC in donations. The modal donation to a preferred candidate profile was 1 GHC (43%). More than a third gave the minimum required donation of 0.5 GHC (33.7%). Appendix Figure C.2 shows these results.

5 Estimation strategy

To test my hypothesis, I focus on two sets of *average combination effects* (*ACE*s) – a non-interactive causal effect (Egami and Imai, 2019). The unit of analysis is a rated *profile*, and the dependent variable is coded 1 for the preferred candidate profile within a pair, and 0 otherwise. The independent variables are dummy variables for both attribute levels of interest (i.e., CDF allocation and party ID). I recoded the party ID of candidates in the profile to indicate whether they were the respondent's copartisan, opposition, or an independent aspirant. First, I estimated the difference in means of selecting an opposition versus a copartisan candidate profile for the same amount of promised public goods using the following equation:

$$\tau_{PC}\{(p_0, c_j; p_1, c_j)\} = E\{Y_i(p_0, c_j)\} - E\{Y_i(p_1, c_j)\}$$

where $E\{Y_i(p_0, c_j)\}$ is the mean of selecting a profile i with an opposition candidate, p_0, and a promised amount of public good, c_j, and $E\{Y_i(p_1, c_j)\}$ represents that of a profile containing a copartisan politician, p_1. I estimate these causal effects in competitive and nonsegregated constituencies, $\tau_{PC}\{(p_0, c_j; p_1, c_j)\}_{cns}$, and jointly for the "other types" of electoral districts, $\tau_{PC}\{(p_0, c_j; p_1, c_j)\}_{ot}$ (i.e., noncompetitive and nonsegregated, competitive and segregated, and noncompetitive and segregated). Thus, this approach incorporates the comparison of marginal means within subgroups (constituency type) in my analysis and accounts for potential varying baseline support levels across groups (Leeper, Hobolt and Tilley, 2019). If the probability of selecting opposition over copartisan candidates is higher in competitive and nonsegregated constituencies for the same amount of promised public goods compared to that in other electoral districts, that will provide support for my hypothesis (i.e., $\tau_{PC}\{(p_0, c_j; p_1, c_j)\}_{cns} > \tau_{PC}\{(p_0, c_j; p_1, c_j)\}_{ot}$).

Second, I estimate the *ACE*s of selecting a profile i with an opposition candidate, p_0, and a promised high amount of public good, $c_j = \text{high}$ (i.e., $P_{\text{public (90\% CDF),private (10\% CDF)}}$) over a copartisan profile, p_1, with a minimal pledge of public goods, $c_j = \text{low}$ (i.e., $P_{\text{public (10\% CDF),private (10\% CDF)}}$). Specifically, I calculate:

$$\tau_{PC}(p_0, c_j = \text{high}, p_1, c_j = \text{low}) = E\{Y_i(p_0, c_j = \text{high})\} - E\{Y_i(p_1, c_j = \text{low})\}$$

Again, I calculate the ACE in competitive and nonsegregated constituencies, $\tau_{PC}(p_0, c_j = \text{high}, p_1, c_j = \text{low})_{cns}$, and compare it to that of other constituencies, $\tau_{PC}(p_0, c_j = \text{high}, p_1, c_j = \text{low})_{ot}$. I perform a similar calculation using $P_{\text{public (10\% CDF),private (90\% CDF)}}$ as the reference category to assess whether partisan switches are driven primarily by the desire for public goods.

6 Examining the non-exclusion and electoral pivotability assumptions

Before I present the conjoint survey results, I examine my theoretical assumptions. I argued that partisans are more likely to cross party lines when they believe that (1) they are likely to benefit from the public goods provided by an opposition politician and that (2) their vote will be pivotal. I suggested that residing in a competitive and nonsegregated electoral district can provide such double assurance. To test these assumptions, I assess whether partisans living in nonsegregated constituencies sense of *partisan bias* in the distribution of public goods by officeholders (especially opponents) is less than that of those in segregated constituencies. I draw on survey data that I collected immediately after respondents took the conjoint survey.

In the survey, I asked respondents if they expect their incumbent MP to invest in public infrastructure in their community before the end of their current term.[14] Figure 3 displays the proportion of copartisans and non-copartisans of the MP who expect to receive public goods, for the full sample and broken down by constituency type. Appendix Table F.3 shows the OLS regression estimating the differences in these proportions.

In the full sample, copartisans of a sitting legislator were 32 pp more likely than opposition voters to say that they expect the incumbent to provide public infrastructure to their community. This finding is in line with Nathan (2016), who uses a survey experiment to show that (urban) voters expect more favoritism from a coethnic party than a non-coethnic party.

[14]The survey was conducted roughly two years before the next parliamentary election.

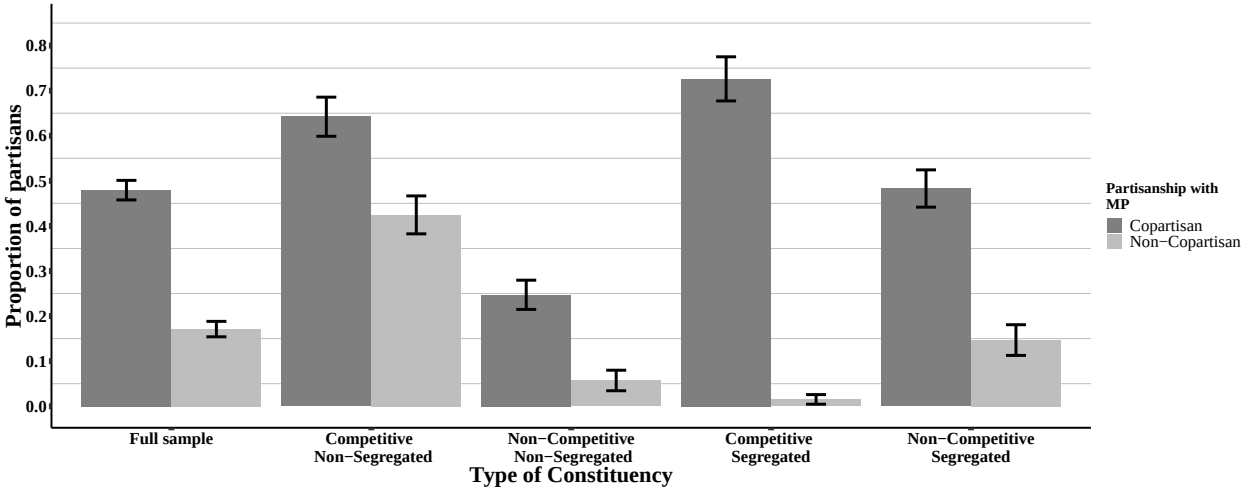


Figure 3: Voters' perceptions of MP's partisan favoritism in the allocation of public goods, by constituency type

Consistent with my expectation, when I disaggregate these results by constituency type, expected partisan bias by officeholders is much lower in nonsegregated than in segregated constituencies. Specifically, in competitive and nonsegregated areas, copartisans of the MP were only 17 pp more likely to expect infrastructure than his non-copartisans. In contrast, in competitive and segregated electoral districts, the difference between coopartisans and non-copartisans of the incumbent was 70 pp ($p < 0.05$). Similar patterns of an increased sense of partisan bias exist in noncompetitive constituencies. While the difference in expected provision of public goods was 15 pp ($p < 0.1$) in nonsegregated places, it was 31 pp ($p < 0.01$) in segregated constituencies.

Appendix Table F.4 shows the corresponding results for the reported — as opposed to expected — (*actual*) receipt of public goods from the MP during the current term. The results are similar to those for public goods *expectations*, and also display much larger differences in segregated constituencies.

There are still statistically significant differences in expectations to receive public goods from a copartisan versus non-copartisan MP in nonsegregated constituencies. These differences may represent partisan bias in the responses (Carlson, 2016). However, what is essential for my argument is that the differences are significantly lower than in segregated districts, not that there is no difference at all.

While critical to my argument, it is hard to test voters' sense that their vote makes a difference in any election. Nonetheless, it is reasonable to expect voters in competitive constituencies to believe

their vote will make a difference compared to those in noncompetitive settings. Nevertheless, I provide an indicative test of this assumption.

To test whether party switching occurs in competitive and nonsegregated settings because partisans also believe their vote may be crucial in electing and sanctioning the opposition (i.e., beliefs about *pivotality*), I use data from the Afrobarometer round 7. Appendix Table F.5 presents the results and indicates that partisans have a greater sense of political efficacy in competitive compared to noncompetitive constituencies. Specifically, I find that partisans in competitive electoral districts (48.3%) were about 9 pp ($p < 0.05$) more likely to say that *voters* are responsible for making sure MPs do their job relative to those in uncompetitive constituencies (39.9%) (see Appendix Table F.5). This result suggests that partisans in competitive districts believe they have a greater responsibility to hold elected representatives to account relative to those in noncompetitive settings. While these analyses are not direct tests of perceptions of pivotality, they are consistent with expectations related to pivotality beliefs.

7 Results

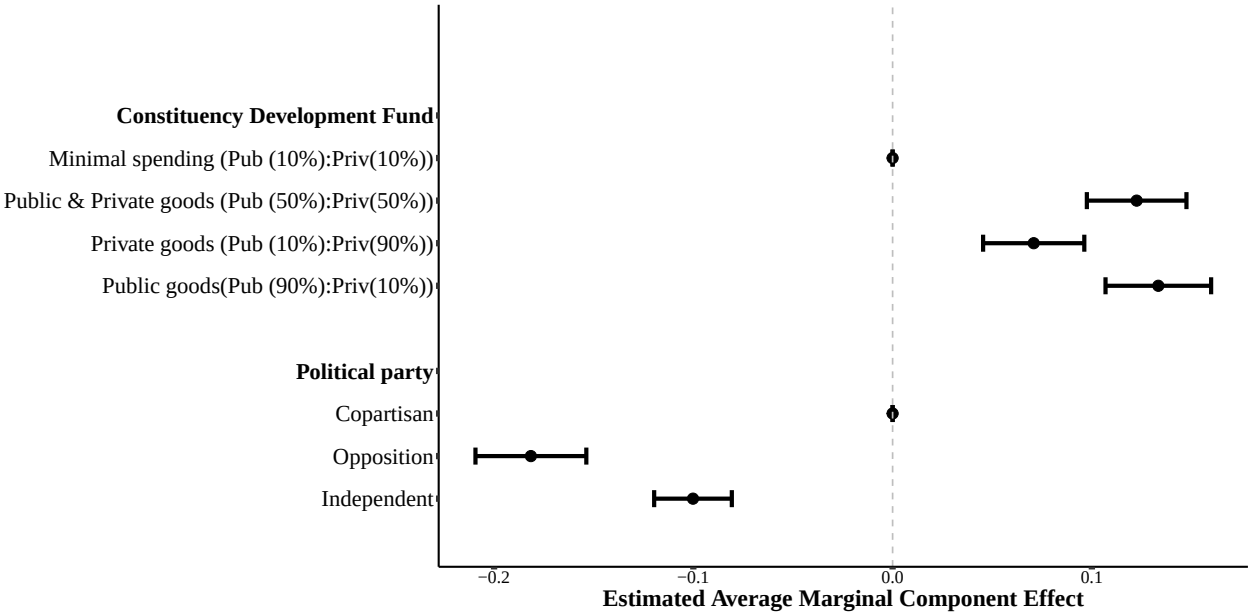
7.1 Effects of candidates' promised public goods and party identity on vote choice

Before turning to the main findings, I estimate the AMCEs of promised CDF allocation and party ID on respondents' vote choice to show that voters prioritize public goods and candidates' party identity when casting their ballots. Figure 4 shows how promised CDF allocations and party ID values affect preferences for candidates in the full sample. The figure displays the AMCEs (points) and 95% confidence intervals (bars).[15] Regarding public goods, citizens are 12.5 percentage points (pp) and 13.5 pp more likely to prefer a candidate who promised to spend half ($P_{\text{public(50\% CDF),private (50\% CDF)}}$) or almost all ($P_{\text{public (90\% CDF),private (10\% CDF)}}$) of their CDF on public infrastructure, respectively, compared to those who pledged to use only a small amount on private and public goods ($P_{\text{public (10\% CDF),private (10\% CDF)}}$).[16] These estimates are statistically significant at $p < 0.01$. Although the promise to divide funds equally

[15] Appendix D Table D.1, Columns (1) and (2), shows the full regression results.

[16] **?** warns against interpreting the AMCE as the "true preference of the majority." I use "prefer" to indicate that respondents put more weight on a particular attribute value relative to the baseline (conditional on other randomized attributes) in their voting decision.

Figure 4: Average marginal component effect of a candidate's promised CDF allocation on being preferred as an MP



Notes: Figure 4 shows estimates of the effects of randomly assigned candidates' promised allocations of CDFs to private vs. public goods and party ID on respondents' vote choices. These estimates are based on an ordinary least squares (OLS) model with standard errors clustered at the respondent level as shown in Appendix Table D.1. The points without horizontal bars (95% confidence intervals) represent the reference category of the attribute.

between public and private benefits had a similar effect as focusing primarily on public infrastructure, these results suggest citizens are unlikely to punish a move away from transfers to individuals but reward it. Indeed, the promise to use the lion's share of the CDF ($P_{\text{public (10\% CDF),private (90\% CDF)}}$) to provide private financial benefits to constituents increases the probability of choosing a candidate by only 7 pp ($p < 0.01$) relative to the baseline.[17]

Respondents were 18 pp ($p < 0.01$) and 10 pp ($p < 0.01$) less likely to pick an opposition or independent candidate than a copartisan politician, respectively.

Thus, consistent with assumptions of the theory, these results suggest that citizens prioritize the promise of public goods over personal financial benefits in their vote choice and strongly favor copartisan candidates.

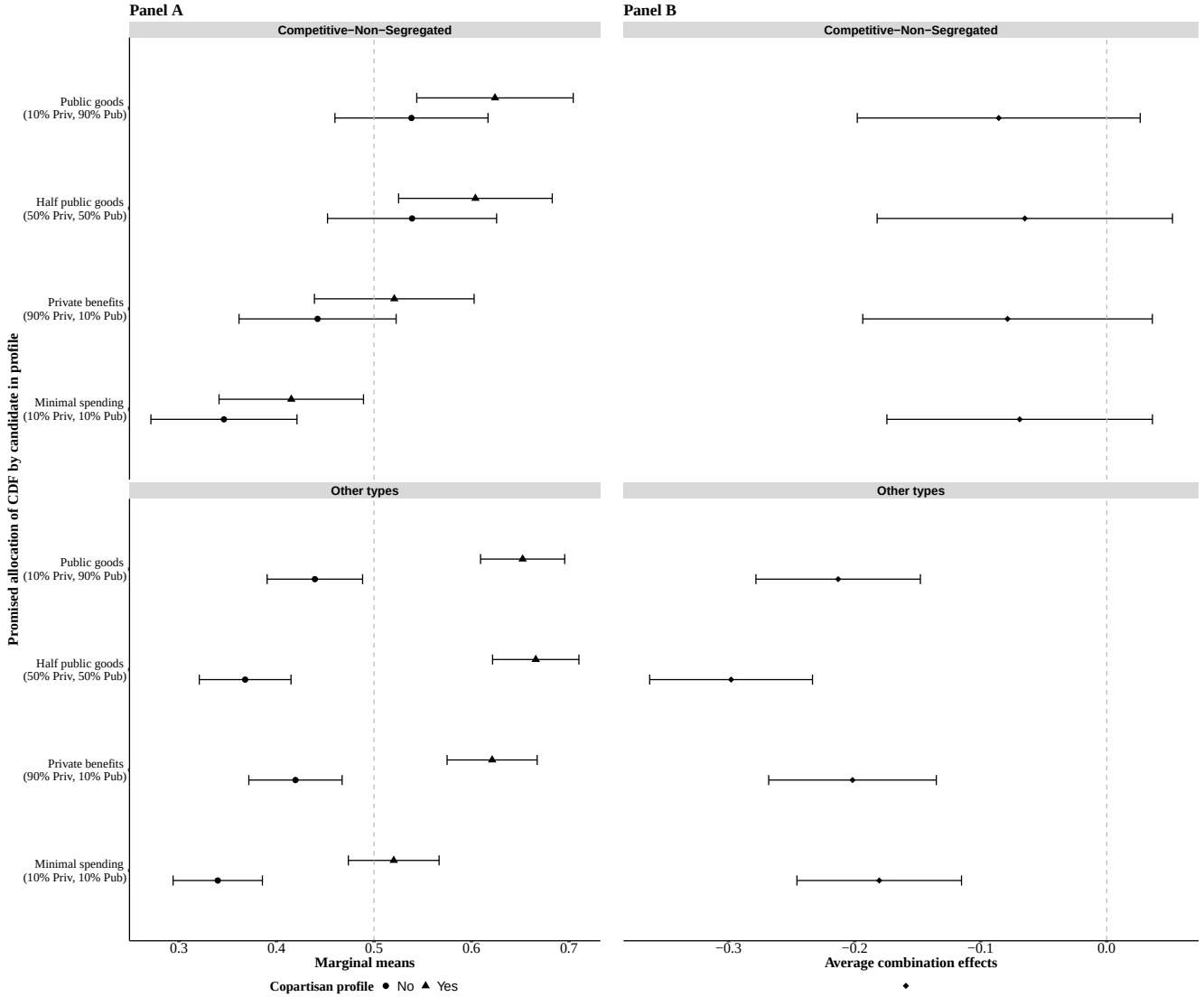
[17] In Appendix Figure D.1, I show that these results are similar for the different partisan groups.

7.2 When do partisans cross party lines?

In Figure 5, I examine whether, for the same amount of promised public goods, participants were more or less likely to select an opposition over a copartisan candidate profile in each electoral setting. Panel (A) displays the marginal means (i.e., probability) of selecting a candidate at the different values of promised CDF allocation by shared partisanship in competitive and nonsegregated (first row) and other constituencies (bottom row). The corresponding ACEs (differences) are presented in Panel (B) with 95% confidence intervals. Consistent with my argument, the results in Figure 5 Panel (B) show that in competitive and nonsegregated electoral districts, partisans were equally likely to select an opposition or copartisan politician if they promised the same amount of public goods. In the other constituencies, partisans were significantly less likely to select an opposition aspirant who pledged the same amount of public goods as a copartisan candidate.

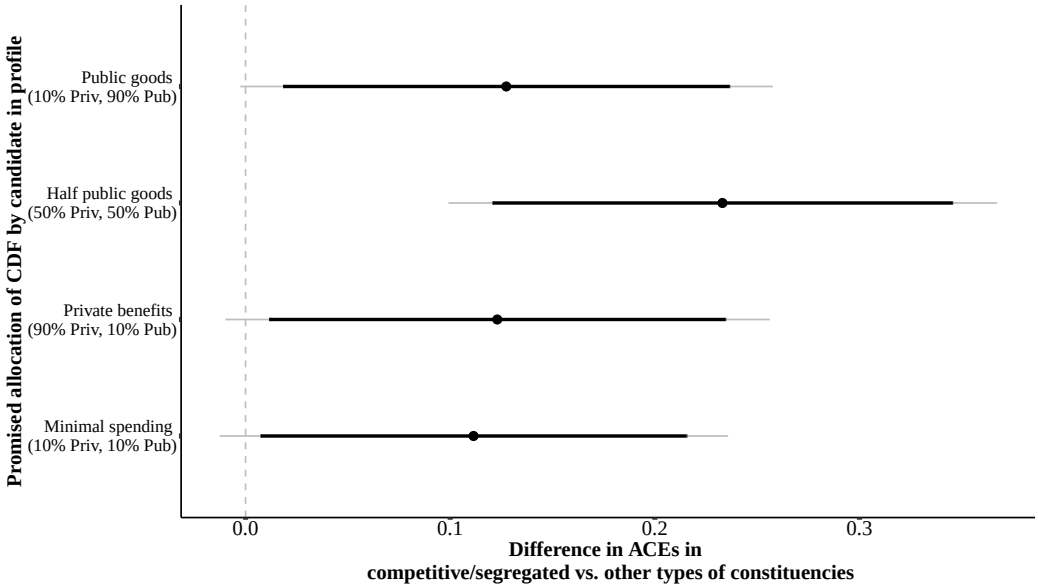
While the ACEs in competitive and nonsegregated constituencies are not distinguishable from zero as predicted, the estimates are negative with large confidence intervals. Thus, these results may suggest a slight preference for copartisans even in this setting when an opposition candidate offer the same amount of public goods. However, the main *quantity of interest* is whether these ACEs are higher in competitive and nonsegregated districts relative to other constituencies. In other words, do opposition candidates do better among partisans when they promise the same amount of public goods as a voter's copartisan candidate? The results in Figure 6 demonstrate that they do, which supports my argument. Specifically, partisans were between 12pp and 23pp more likely to choose opposition rather than copartisan candidates promising the same amount of public goods in competitive and nonsegregated compared to other constituencies. These estimates are statistically significant (at least) at the 90% confidence level.

Figure 5: Marginal means and ACEs of choosing an opposition over a copartisan politician pledging the same amount of public goods by constituency type



Notes: Figure 5 Panel (A) shows the means of selecting a profile with randomly assigned promised CDF allocations and party IDs for hypothetical candidates. The means for copartisan (non-copartisan) aspirants are represented by triangles (solid circles). The horizontal bars represent 95% confidence intervals. Panel (B) shows the corresponding ACE with 95% confidence intervals.

Figure 6: Difference in ACEs of choosing opposition over copartisan politicians promising the same amount of public goods in competitive/non-segregated relative to other constituency types



Notes: Figure 6 shows the difference in the probability of choosing an opposition over a copartisan candidate who promises the same amount of benefits in competitive/non-segregated compared to other types of constituencies. The horizontal black and grey bars represent 90% and 95% confidence intervals for the estimated differences, respectively.

In Figure 7, I focus on the ACEs concerning when the opposition commits to provide more public goods and when a copartisan pledges a minimal amount, providing a significant test of the theory. By design, the conjoint also allows me to test the propensity for partisans to switch to a better public goods-promising opponent over a copartisan pledging of a minimal amount of public goods but a high amount of private benefits. Panels (A) and (B) display the results for these possibilities, respectively. Panel (A) of Figure 7 shows that in competitive and nonsegregated constituencies, partisans were 12 pp (se 5.49) more likely to vote for an opposition aspirant compared to a copartisan. In other electoral settings, partisans were 8 pp (se 3.44) less likely to pick the opposition candidate promising more public goods than a copartisan candidate. The difference between these two estimated ACEs, the quantity of interest, shows that partisans were about 21 pp (se 6.48) more likely to select an opposition over copartisan candidate promising to supply more public goods in competitive and nonsegregated compared to other types of constituencies.

Similarly, the results in Figure 7 Panel B show that partisans are more willing to substitute a public goods-promising opposition candidate for a private benefits-promising copartisan in competitive and nonsegregated than in other types of constituencies. Specifically, in competitive and nonsegregated constituencies, partisans were indifferent (a toss-up) between opposition and copartisan politicians. However, in other types of constituencies, they were 18 pp (se 3.43) less likely to pick the opposition candidate who promised better public infrastructure than the copartisan candidate committed to spending almost all her funds on personal benefits for constituents. Nonetheless, partisans are still about 20 pp (se 6.73) more likely to substitute a public-goods-promising opposition candidate for a private-benefits-promising copartisan candidate in competitive and non-segregated compared to other constituencies.

These results suggest that partisans are more likely to switch to an opposition candidate offering better public services than their copartisans only in competitive electoral settings where they live side-by-side with opposition supporters. In other places, they strictly prefer their copartisan, irrespective of an opposition candidate's counteroffer.

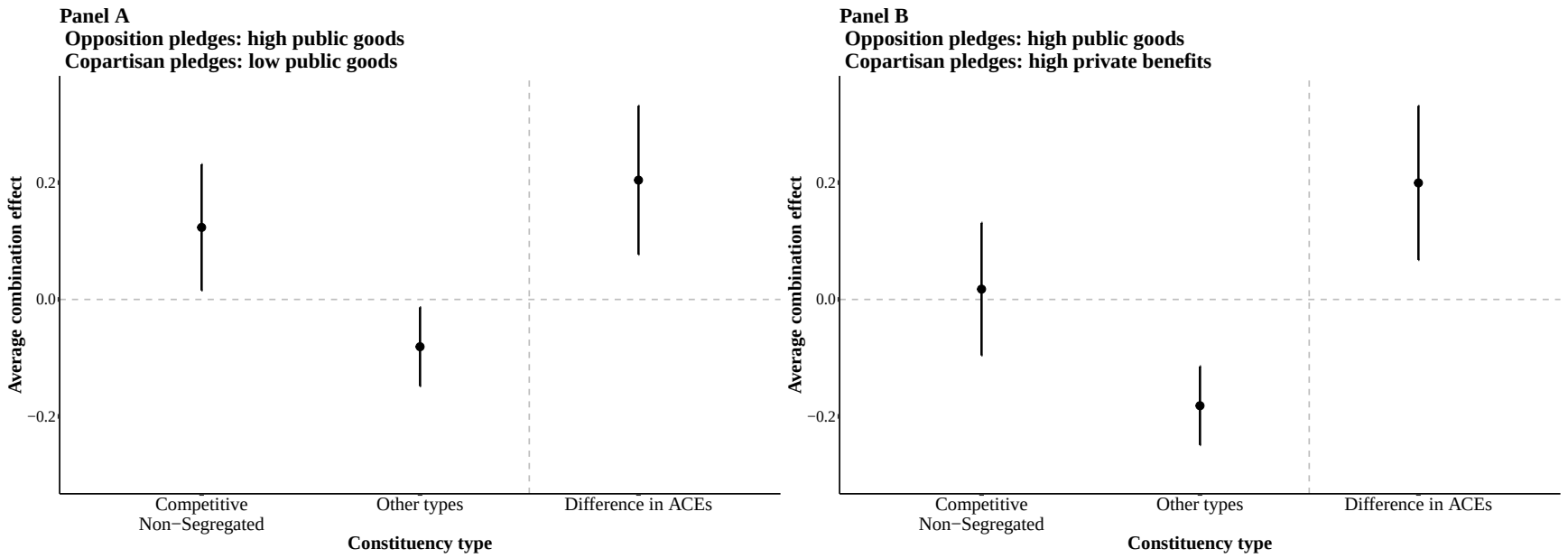


Figure 7: Probabilities (ACEs) of choosing an opposition candidate promising more public goods over a copartisan pledging a minimal amount, by constituency type

8 External validity

An empirical implication of my argument is that party turnovers will be higher in competitive and nonsegregated compared to other types of constituencies. Because I measured constituency's level of segregation using data from the 2016 elections, I investigate the extent of opposition victories in the different types of constituencies in the country's 2020 elections (which were held after the end of the study). Consistent with my argument, Table 2 shows that opposition-party candidates won about 52% of the MP positions in competitive and nonsegregated constituencies compared to 18% in the other types (43 of 233). Of the country's eight competitive and segregated electoral districts, only one flipped to the opposition. Thus, while competitive places in 2016 remained contested in 2020, party turnovers were higher in competitive and nonsegregated compared competitive and segregated constituencies. These results provide some support for the external validity to my findings.

Table 2: 2020 Parliamentary elections outcome: percent of seats changing party

	Competitive		Non-competitive	
Party changed in 2020	Nonsegregated	Segregated	Nonsegregated	Segregated
Yes	52.38 (22)	12.5 (1)	19.0 (39)	15.0(3)
No	47.6 (20)	87.5 (7)	81.0 (166)	85.0 (17)
N	100 (42)	100 (8)	100 (205)	100 (20)

9 Alternative arguments

The results reported above support my argument that candidates can sway opposition voters with promised better performance in competitive and nonsegregated constituencies than in other types of electoral districts. However, constituency types are not randomly assigned to voters, suggesting that my inference may be driven by other constituency factors or other individual characteristics.

First, partisan switching may occur in competitive and nonsegregated electoral districts because party supporters are more concerned about infrastructure development in these areas — perhaps because of a deficit — than partisan loyalty relative to those in other constituencies. However, Appendix Table F.1 demonstrates that the communities in the sample have similar levels of infrastructure provision. Communities in competitive and nonsegregated constituencies are equally or better endowed with piped water,

cell phone services, post offices, schools, police stations, and clinics than those in other types of districts. However, they tend to have fewer paved roads. I asked respondents why they voted for their chosen candidate in the previous (2016) elections; partisans in nonsegregated and competitive constituencies were significantly less likely than those in other settings to report that their voting decision was based on a candidate's promise to invest in infrastructure (Appendix Figure F.1). Instead, they were more likely to say that their favored candidate was a "good person" or promised individual benefits. These results suggest that partisans in nonsegregated and competitive constituencies were not likely to switch because they were *overly* concerned about the need for infrastructure compared to party supporters elsewhere. Nonetheless, accounting for differences in community-level infrastructure and individual rationales for prior vote choice in OLS regressions in Appendix Table F.2 does not alter the main results.

Second, partisanship attachment in nonsegregated and competitive districts may not be as strong compared to other constituencies, encouraging partisans to try out opposition politicians. I do not find support for this argument. First, Figure 2 shows that the analysis compare voters with similar partisan attachment across constituency type. Second, partisans in nonsegregated and competitive areas were just as likely as those in other types of constituencies to mention partisanship as one of the top three reasons they voted for a particular candidate, suggesting they were no less partisan. Further, Appendix Figure F.2 shows that respondents in nonsegregated and competitive districts were *more* likely than those in other types of constituencies to say they felt closer to a political party. Nonetheless, Appendix Table F.2 shows that controlling for these differences does not change the primary results.

Third, while the causal estimates in each electoral setting are independent of individual characteristics, on average, participants in the sample may differ in theoretically important ways across these constituency types. Appendix Figure F.2 shows that an equal proportion of males and females were interviewed across settings, suggesting that gender cannot explain the results. Participants were equally knowledgeable across locations: they were similarly likely to obtain their information from radio, to know the MP's name, and to report having voted in the 2016 elections.

Finally, recent research shows that the extent of partisan attachment may vary with urbanization due to varying party mobilization strategies in urban versus rural settings (Resnick, 2012; Nathan, 2016; Harding and Michelitch, 2019). For example, scholars have shown that rural voters may be more parti-

san because they are mobilized by traditional leaders (Harding and Michelitch, 2019), or they may not have access to alternative sources of information (Conroy-Krutz and Moehler, 2015) or effective cross-pressure from other parties (Wahman and Boone, 2018). If competitive and nonsegregated constituencies are more urban than the other electoral districts, then the differences I find might be explained by such urban-rural dynamics. Using Ghana's 2010 census data that report the proportion of rural population per district, I find that competitive and nonsegregated constituencies (57%) are not significantly urban that noncompetitive and nonsegregated (56%) and noncompetitive and segregated (55%) ones (see Table B.3). However, competitive and segregated constituencies are primarily rural (72%), partly accounting for acute partisanship in respondents' choices in this setting. Yet, Appendix Figure D.3 shows that my results are not driven by urban-rural differences (i.e., the findings are not driven by results in competitive segregated constituencies). Voters also exhibit similar levels of partisanship in noncompetitive areas that are also urban.

10 Conclusion

In this study, I examine when partisans are likely to vote for an opposition candidate in parliamentary elections when distributive politics involves the discretionary allocation of public goods to communities (i.e., clientelistic). Drawing on the literature on distributive politics, instrumental (ethnic) voting, and electoral accountability in new democracies, I argue that when partisans live side by side with opposition voters (partisan nonsegregated) in equal numbers (competitive), they are more likely to cross party lines to elect a potentially better opposition candidate. In partisan nonsegregated and competitive electoral districts, partisans are less concerned about being excluded from targetable local public goods. Moreover, switching sides can help select (and sanction) opposition politicians. In other settings, partisans are less likely to cross party lines because they are unlikely to benefit from targetable public good from the opposition, or their votes are not pivotal in electing (or sanctioning) a better opponent (should they renege), or both. Partisan nonsegregated and competitive constituencies provide a *double assurance* that motivates switching to opposition candidates for better provision of public goods and services.

To test my hypothesis, I use data from a conjoint survey experiment from citizens sampled from each constituency type in Ghana. The conjoint survey experiment helps directly manipulate expectations

about public goods provision by opposition versus copartisan candidates, a common assumption in the instrumental voting literature. I first show that citizens prefer politicians who will provide local public goods (i.e., invest in their community's development). Second, partisans often stick with copartisan candidates irrespective of the amount of public goods the opposition promises. Carlson (2015) reports similar findings among coethnic voters in Uganda. Disaggregating the results by constituency type, however, I demonstrate that voters in competitive, nonsegregated districts are the most willing to cross party lines, supporting my argument. Additionally, data on partisans' reports of actual and expectation of public goods distribution and their sense of electoral efficacy supports the proposed mechanisms.

My focus on a single country (Ghana) in this study is appropriate for systematically testing assumptions about when partisans will switch for a potentially better opposition candidate. Understanding these findings' generalizability will largely depend on replicating the research in other settings. However, two scope conditions are worth noting. First, Ghana provided a setting with a stable, solid, and competitive two-party system, which is essential for citizens to observe and form expectations about partisan bias in the distribution of political goods by officeholders. The study's findings are thus likely to replicate in such a setting. Second, electoral districts in Ghana were largely nonsegregated along partisan lines, and even relatively "segregated" places in the study do not reached the theoretical maximum. Accordingly, although my expectations held in this setting, the impact may be more substantial elsewhere with acute levels of partisan segregation.

Finally, I focus on testing whether the causal effect of opposition relative to copartisan candidate promises varies with the local political context. Accordingly, I consider a few constituencies from clearly defined local contexts as stipulated by my theory and show how these causal effects vary with these settings. Future research can leverage a larger sample of electoral constituencies with plausible exogenous variations in partisan segregation and electoral competition to identify the causal impact of these local conditions.

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Online Appendix

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A Spatial segregation of partisans within constituencies

In this study, I take partisan segregation to imply the extent to which supporters of the two major parties in Ghana, the National Democratic Congress (NDC) and the New Patriotic Party (NPP), are clustered in distinct polling stations in a constituency. Accordingly, constituencies are considered partisan segregated when supporters of each party live overwhelmingly in distinct polling stations, and nonsegregated when they are evenly spread. To measure the level of partisan segregation for constituencies, I adopt a formula provided by White (1986) that builds on an entropy index that measures the spatial distribution of multiple groups within localities. Specifically, White (1986) measures the level of group segregation S for an entire city by estimating the proportion of the deviation of the average of entropy indices of its individual subunits weighted by population from the entropy index of the entire city. Specifically,

$$S_j = \frac{\hat{H}_j - \bar{H}}{\hat{H}_j}$$

where S_j is the level of segregation of the constituency j. $\hat{H}_j$ represents the entropy index for the constituency as a whole and $\bar{H}$ is the population-weighted average of the entropy indices for polling stations in constituency j, h_{ij}. The entropy index for constituency j is given by:

$$\hat{H}_j = -\sum_{k=1}^{g} p_{jg} ln(p_{jg})$$

where:

$k =$ number of political parties (groups)

$p_{jg} =$ proportion of voters who support the g^{th} party in constituency j as a whole (i.e, $p_{jg} = \frac{n_{jg}}{n_j}$)

$n_{jg} =$ number of voters who support the g^{th} party in constituency j as a whole

$n_j =$ number of voters in constituency j

Similarly, the entropy index index for polling station i in constituency j is given as:

$$h_{ij} = -\sum_{k=1}^{g} p_{ig} ln(p_{ig})$$

where:

k = number of political parties

p_{ig} = proportion of voters who support the g^{th} party at polling station i (i.e, $p_{ig} = \frac{n_{ig}}{n_i}$)

n_{ig} = number of voters who support the g^{th} party at polling station i

n_i = number of voters at polling station i

Finally, the average of the entropy indices of m polling stations located in constituency j weighted by proportion of voters is given by:

$$\bar{H} = \sum_{i=1}^{m} \frac{n_i}{n_j} * h_{ij}$$

The maximum value of S_j is 1, when each polling station contains only one partisan group. The minimum value of S_j is 0, when every polling station has the same composition as the constituency. Simply, constituencies with higher values of S have *less* uniform partisan distributions while those with lower values have *more* uniform partisan distributions.

I use the 2016 parliamentary election results at the polling station level for candidates of the two major parties (NPP and NDC) to compute the level of segregation for each constituency. The minimum and maximum values of S for the 275 constituencies in Ghana are 0.008 and 0.559, respectively with a mean of 0.091. Figure A.1 shows the distribution. To simplify my sampling, I classify constituency above the 90th percentile (≥ 0.172) of the distribution of S_j as segregated, and nonsegregated otherwise.

Table A.1: Classification of constituencies

	Geographical distribution of NDC and NPP supporters	
Competition	Segregated	Non-segregated
Competitive	8	42
Non-competitive	20	205

B Summary statistics of sample constituencies and respondents

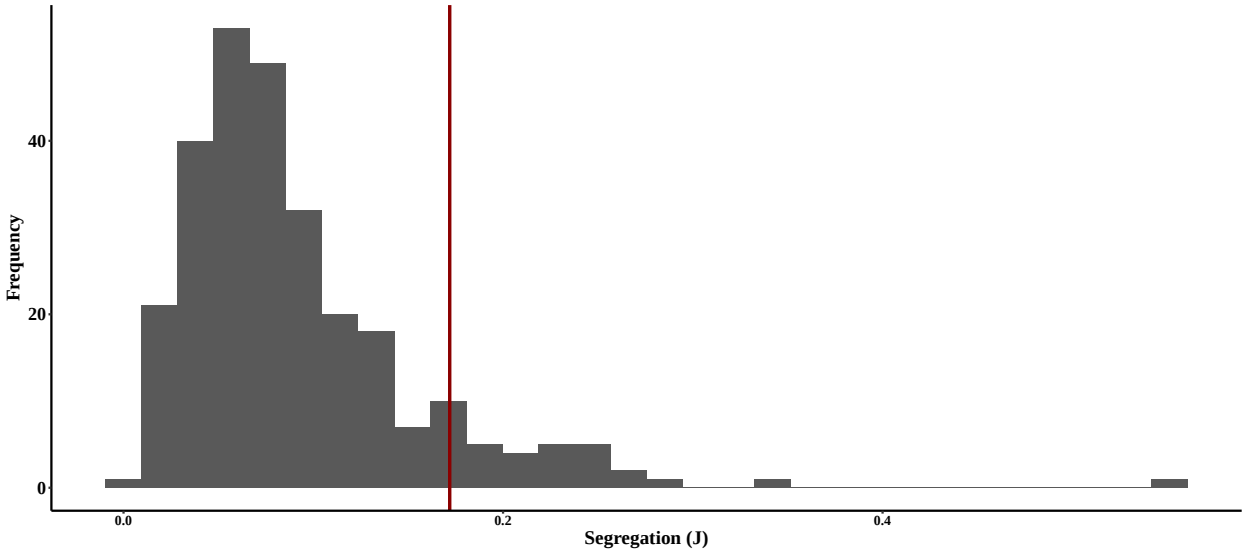
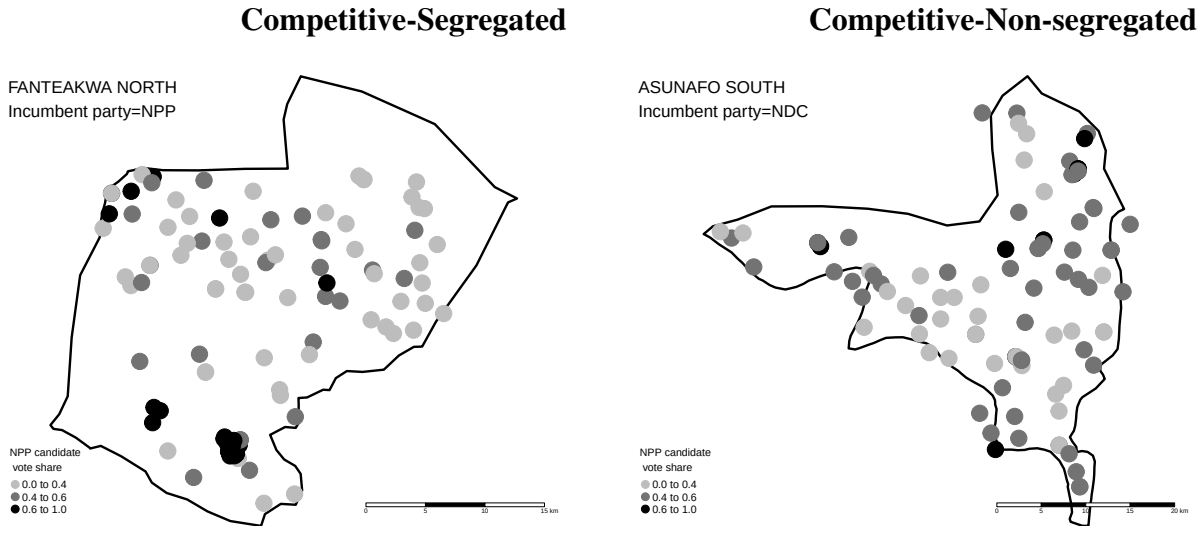


Figure A.1: Distribution of Constituency-level Segregation

Notes: Red verticle line indicates the 90th percentile of the distribution.

Figure A.2: Spatial distribution of incumbent party (NPP) candidates' polling station vote shares in illustrative sampled constituencies



Notes: Figure A.2 shows the location of polling stations in a selection of sampled constituencies. The intensity of the color indicates the incumbent-party candidate's vote share in the 2016 election. Some points are slightly outside the constituency boundaries because of measurement error of the geocoordinates.

Table A.2: Characteristics of sampled constituencies

Constituency	Competition	Segregation	MP name	Party
Asunafo South	Competitive	Non-Segregated	Eric Opoku	NDC
Bunkpurugu	Competitive	Non-Segregated	Solomon Namliit Boar	NPP
Suhum	Competitive	Non-Segregated	Drederick Opare-Ansah	NPP
Bawku Central	Competitive	Segregated	Mahama Ayariga	NDC
Fanteakwa North	Competitive	Segregated	Kwabena Amankwa Asiamah	NPP
Zabzugu	Competitive	Segregated	Alhassan Umar	NDC
Manso Nkwanta	Non-Competitive	Non-Segregated	Joseph Albert Quarm	NPP
Nabdam	Non-Competitive	Non-Segregated	Mark Kurt Nawaane	NDC
Saboba	Non-Competitive	Non-Segregated	Charles Binipom Bintin	NPP
Kwabre East	Non-Competitive	Segregated	Francisca Mensah Oteng	NPP
Mpraeso	Non-Competitive	Segregated	Seth Kwame Acheampong	NPP
Nkwanta South	Non-Competitive	Segregated	Geoffrey Kini	NDC

Table B.1: Summary statistics of respondents' characteristics

Statistic	N	Mean	St. Dev.	Min	Max
Age	2,016	38.937	14.730	18	95
Job with cash income	2,022	0.572	0.495	0	1
Gender(Female=1)	2,022	0.496	0.500	0	1
Employed (full time)	1,157	0.917	0.276	0	1
Own a mobile phone	2,022	0.752	0.432	0	1
Own a radio	2,022	0.469	0.499	0	1
Own a TV	2,022	0.456	0.498	0	1
Own a blender	2,022	0.065	0.246	0	1
Own a car	2,022	0.015	0.121	0	1
Total assets (out of 5)	2,022	1.758	1.131	0	5
Turnout (2016 election)	2,022	0.863	0.344	0	1
Feel close to a political party	2,022	0.740	0.439	0	1
Close to the incumbent party (NPP)	1,497	0.555	0.497	0	1
Closeness to the opposition party (NDC)[0-7]	1,969	3.415	2.838	0	7
Closeness to opposition party (NPP)[0-7]	1,973	3.878	2.840	0	7
Voted for the incumbent party's MP candidate in 2016	1,744	0.541	0.498	0	1
Will vote for incumbent party's MP candidate tomorrow	2,022	0.407	0.491	0	1
Report to know MP's name	2,022	0.750	0.433	0	1
Correctly names MP	1,517	0.957	0.203	0	1
Gone without food in past year	2,022	0.192	0.394	0	1
Gone without clean water in past year	2,022	0.258	0.438	0	1
Gone without medicine	2,022	0.245	0.430	0	1
Gone without cooking fuel	2,022	0.166	0.372	0	1
Gone without cash income	2,022	0.613	0.487	0	1
Lives in a hut/shack	2,015	0.454	0.498	0	1
Poverty index	2,015	1.928	1.538	0	6
Often get news from radio	2,022	0.577	0.494	0	1
Often get news from TV	2,022	0.458	0.498	0	1
Often get news from newspaper	2,022	0.011	0.106	0	1
Often gets news from internet	2,022	0.094	0.293	0	1
Often get news from social media	2,022	0.105	0.307	0	1

Table B.2: Relationship between respondents' partisanship as classified and reported vote choice in prior (and future) parliamentary elections

	Classification of respondents into partisan groups											
	NPP	Moderate	NDC	NPP	Moderate	NDC	NPP	Moderate	NDC	NPP	Moderate	NDC
Election year	2018 (intention)			2016			2012			2008		
Vote choice	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NDC	0.07	0.42	**0.93**	0.05	0.36	**0.87**	0.07	0.39	**0.90**	0.09	0.41	**0.89**
NPP	**0.88**	0.45	0.04	**0.95**	0.61	0.12	**0.93**	0.58	0.09	**0.90**	0.55	0.10
CPP	0.01	0.03	0.01	0.00	0.02	0.00	0.00	0.02	0.00	0.01	0.02	0.00
PPP	0.00	0.03	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.03	0.07	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00
Respondents	637	508	629	600	487	584	590	471	568	538	402	510

Note: Regarding vote choice in prior elections, respondents were ask which party's candidate they voted for in the said elections whereas for vote choice for 2018 (intention) refers to respondents' answers to the question: "which party's parliamentary candidate would you vote for if the election were held [today]." Column (1) shows the options.

Table B.3: Characteristics of constituencies by type

	Competitive and nonsegregated	Competitive and segregated	Stronghold and nonsegregated	Stronghold and segregated
Area constituency in Km Sq	963.223	1657.601	809.443	978.654
Distance to capital KM	266.78	362.983	222.19	297.434
Rural population	0.573	0.721	0.557	0.547
Ethnic fractionalization	0.241	0.014	0.104	0.051
N	42	8	205	20

C Conjoint design: narratives

I trained twelve experienced research assistants to conduct the in-person interviews across the selected constituencies.[18] After introducing the conjoint and instruction, enumerators read (narrated) the attributes and values of the conjoint survey as "campaign promises" of hypothetical candidates (i.e., what a particular candidate will do when elected to office). Enumerators started the conjoint surveys as follows:

1. As you may know, during elections, candidates with different qualifications and characteristics compete to represent your constituency as a Member of Parliament (MP). These candidates also make promises as to what they would do to serve you and your constituency when you elect them

[18]While each constituency was assigned to an enumerator, in some cases pairs of RAs helped each other to survey their constituency. As a robustness check, I will include enumerator fixed effects.

as your MP. There could be only one MP. Let us say two people are standing for elections in your constituency for the 2020 parliamentary elections. I am going to tell you a little bit about these two people and then ask your opinion about them.

2. After describing these candidates, I will also like you to take this GHC 2. You cannot keep all the amount for yourself. However, you can give any amount between GHC .50 and GHC 2 to your preferred candidate. We will donate the total amount collected to the aspirant similar to the candidate most preferred by respondents in this constituency during the 2020 parliamentary elections.

3. Should I repeat these instructions?

My RAs then narrated the attributes and their corresponding values of two hypothetical candidates in pairwise comparison. They then asked respondents whether they should repeat the attributes and its values. Respondents were then asked the following questions:

Questions:

1. Which of these two candidates would you vote for?

   [ ] Candidate A

   [ ] Candidate B

2. Please choose the amount of you would like to donate to your preferred candidate.

   [ ] GHC 0.50

   [ ] GHC 1.00

   [ ] GHC 1.50

   [ ] GHC 2.00

Table C.1: Values of candidates' promises and characteristics in the conjoint survey

Candidate Attribute	**Attribute levels**	**Probabilities**
Political Party	Independent (IND)[1]	1/3
	New Patriotic Party (NPP)[2]	1/3
	National Democratic Congress (NDC)[3]	1/3
Hometown	Hails from and resident in constituency [1]	1/3
	Does not hail but resident in constituency [2]	1/3
	Hails from but not resident [3]	1/3
Profession	Farmer/Agriculturalist (1)	1/6
	Lawyer (2)	1/6
	Educationist/teacher (3)	1/6
	Business person (4)	1/6
	Accountant (5)	1/6
	Architect (6)	1/6
Gender	Female [0]	1/5
	Male [1]	4/5
Use of MP's Common Fund (CDF)	[**Levels: 1) Ten (10) percent; 2) 50 percent; 3) 90 perecent**] of MPCF to support the construction or renovation of community school and clinics, repairs of roads and bridges, and other community self-help projects. [**Levels: 1) Ten (10) percent; 2) 50 percent; 3) 90 perecent**] of MPCF to pay school fees, medical bills, and apprenticeship fee for some individual members of this constituency. [**Use levels:**	
	$P_{10,10}$ [1]	1/4
	$P_{50,50}$ [2]	1/4
	$P_{10,90}$ [3]	1/4
	$P_{90,10}$ [4]	1/4
Time in constituency versus capital	Constituency (C): [$\mathbf{25},\mathbf{50},\mathbf{75}$] percent; Accra (A):[$\mathbf{25},\mathbf{50},\mathbf{75}$] percent [**Use levels** ($T_{C,A}$):	
	$T_{25,75}$[1]	1/3
	$T_{50,50}$[2]	1/3
	$T_{75,25}$ [3]	1/3
Personal assistance	[**Levels:** Hardly (1/10)[1], Sometimes (5/10)[2], Always (10/10)[3]] support constituents who need help to obtain government services such as business license, passport, birth certificate, facilitate loans or get government jobs	
	Hardly (1/10)[1]	1/3
	Sometimes (5/10)[2]	1/3
	Always (10/10)[3]	1/3
Community meetings	Never [1]	1/5
	Monthly [2]	1/5
	Every three months [3]	1/5
	Every six months [4]	1/5
	Yearly [5]	1/5
Social events	[**Levels:** Hardly (1/10)[1], Sometimes (5/10)[2], Always (10/10)[3]]: attend or contribute to social events such as funerals, church/mosque activities, and traditional festivals.	
	Hardly (1/10)[1]	1/3
	Sometimes (5/10)[2]	1/3
	Always (10/10)[3]	1/3

Figure C.1: An example of candidates' profiles respondents saw

Table C.2: Randomization Check

	Dependent variable:									
	Age	Closeness incumbent party	Turnout (2016)	Education	Employed	Akan	Ewe	Kokomba	Correctly names MP	Total assets
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constituency Development Fund:										
Public,50:Private,50	0.311	0.003	0.004	−0.026	−0.002	−0.007	0.005	−0.0004	−0.003	−0.0004
	(0.366)	(0.015)	(0.009)	(0.053)	(0.012)	(0.011)	(0.007)	(0.008)	(0.006)	(0.028)
Public,10:Private,90	0.309	−0.003	−0.001	−0.016	0.0003	−0.017	0.005	0.002	0.009*	−0.043
	(0.393)	(0.015)	(0.009)	(0.055)	(0.013)	(0.012)	(0.007)	(0.008)	(0.005)	(0.030)
Public,90:Private,10	0.167	0.020	0.006	−0.019	0.023*	0.003	−0.0002	0.013	−0.001	−0.050*
	(0.372)	(0.015)	(0.009)	(0.056)	(0.013)	(0.012)	(0.007)	(0.009)	(0.005)	(0.029)
Time in Constituency vs. Capital										
Const.:50-capital:50	0.091	−0.012	0.010	0.052	0.015	0.017*	0.006	−0.001	−0.005	0.021
	(0.338)	(0.013)	(0.007)	(0.045)	(0.011)	(0.010)	(0.006)	(0.007)	(0.006)	(0.024)
Const.:75-capital:25	0.365	−0.025*	0.003	0.052	−0.006	0.0003	0.004	−0.007	0.001	0.042
	(0.365)	(0.014)	(0.009)	(0.052)	(0.012)	(0.011)	(0.007)	(0.008)	(0.005)	(0.028)
Community meeting										
Monthly	0.303	−0.002	−0.007	−0.048	−0.021	0.011	−0.003	−0.010	−0.007	0.004
	(0.435)	(0.017)	(0.010)	(0.059)	(0.015)	(0.013)	(0.008)	(0.010)	(0.006)	(0.033)
Every three months	0.204	−0.007	0.007	−0.079	−0.025*	−0.004	−0.006	−0.005	−0.0002	0.013
	(0.432)	(0.016)	(0.010)	(0.057)	(0.014)	(0.013)	(0.008)	(0.010)	(0.007)	(0.032)
Every six months	−0.471	0.008	−0.007	−0.057	−0.012	0.010	0.0003	−0.008	−0.008	−0.043
	(0.430)	(0.016)	(0.010)	(0.061)	(0.014)	(0.013)	(0.008)	(0.010)	(0.007)	(0.032)
Yearly	0.009	0.002	−0.005	−0.117*	−0.015	0.024*	−0.003	−0.0004	−0.006	−0.021
	(0.437)	(0.017)	(0.010)	(0.060)	(0.014)	(0.013)	(0.008)	(0.010)	(0.006)	(0.033)
Social event										
Sometimes	−0.373	0.018	−0.008	−0.005	0.006	0.032***	−0.006	−0.009	0.007	0.043*
	(0.333)	(0.013)	(0.008)	(0.046)	(0.011)	(0.010)	(0.006)	(0.008)	(0.006)	(0.025)
Always	0.027	0.006	−0.003	−0.075	0.011	0.009	0.0004	−0.011	0.009**	0.002
	(0.326)	(0.013)	(0.008)	(0.047)	(0.011)	(0.010)	(0.006)	(0.007)	(0.005)	(0.026)
Personal assistance (casework)										
Sometimes	−0.262	−0.005	0.008	0.012	−0.008	−0.012	−0.001	−0.003	0.002	0.014
	(0.327)	(0.013)	(0.007)	(0.045)	(0.011)	(0.010)	(0.006)	(0.008)	(0.004)	(0.025)
Always	−0.151	−0.010	−0.004	0.027	−0.005	−0.021**	−0.001	0.015**	−0.001	−0.010
	(0.325)	(0.013)	(0.008)	(0.047)	(0.011)	(0.010)	(0.006)	(0.007)	(0.005)	(0.025)
Profession										
Lawyer	−0.426	0.034*	−0.011	0.026	−0.002	−0.011	−0.008	−0.0002	−0.011	−0.006
	(0.434)	(0.018)	(0.010)	(0.063)	(0.015)	(0.014)	(0.008)	(0.010)	(0.007)	(0.035)
Educationist/teacher	0.021	0.002	−0.025**	−0.004	−0.010	0.007	0.0001	0.008	−0.014**	−0.015
	(0.447)	(0.018)	(0.011)	(0.065)	(0.015)	(0.014)	(0.009)	(0.010)	(0.007)	(0.035)
Business person	−0.197	0.005	−0.005	−0.008	0.012	0.003	−0.001	−0.007	−0.003	0.022
	(0.457)	(0.018)	(0.010)	(0.066)	(0.016)	(0.014)	(0.008)	(0.010)	(0.006)	(0.035)
Accountant	0.076	0.012	−0.009	−0.065	−0.006	0.006	−0.001	−0.003	−0.006	0.042
	(0.465)	(0.018)	(0.010)	(0.063)	(0.015)	(0.014)	(0.009)	(0.010)	(0.006)	(0.035)
Architect	−0.295	0.022	−0.001	0.057	0.0003	0.011	−0.002	0.010	−0.005	0.018
	(0.485)	(0.019)	(0.011)	(0.067)	(0.016)	(0.015)	(0.009)	(0.011)	(0.007)	(0.036)
Gender										
Male	0.721**	0.005	−0.003	−0.147***	−0.013	−0.005	0.006	0.011	−0.005	−0.036
	(0.339)	(0.013)	(0.008)	(0.049)	(0.011)	(0.010)	(0.006)	(0.007)	(0.006)	(0.025)
Political party										
New Patriotic Party	−0.310	0.004	−0.018**	−0.027	0.014	0.002	0.007	−0.012*	−0.002	−0.034
	(0.328)	(0.013)	(0.008)	(0.045)	(0.011)	(0.010)	(0.006)	(0.007)	(0.005)	(0.026)
National Democratic Congress	−0.242	−0.037***	0.0002	−0.049	0.006	0.007	0.004	−0.003	0.005	−0.028
	(0.319)	(0.013)	(0.007)	(0.046)	(0.011)	(0.010)	(0.006)	(0.007)	(0.005)	(0.025)
Hometown										
Does not hail but resident in constituency	−0.104	0.012	−0.009	−0.013	−0.015	−0.017*	−0.006	0.009	0.003	0.023
	(0.326)	(0.013)	(0.007)	(0.047)	(0.011)	(0.010)	(0.006)	(0.007)	(0.005)	(0.025)
Hails from but not resident	−0.134	0.026**	0.008	−0.061	−0.011	−0.013	0.003	0.017**	0.003	0.029
	(0.328)	(0.013)	(0.007)	(0.047)	(0.011)	(0.010)	(0.006)	(0.007)	(0.006)	(0.024)
Constant	38.671***	0.541***	0.878***	3.629***	0.589***	0.283***	0.076***	0.117***	0.964***	1.776***
	(0.765)	(0.029)	(0.017)	(0.109)	(0.025)	(0.022)	(0.014)	(0.017)	(0.010)	(0.057)
Observations (rated profiles)	12,096	8,982	12,132	12,030	12,132	12,132	12,132	12,132	9,102	12,132
R^2	0.001	0.003	0.002	0.002	0.002	0.003	0.001	0.002	0.002	0.002
Adjusted R^2	−0.001	0.001	0.0005	0.0003	−0.0003	0.001	−0.001	0.0005	−0.0002	0.0001
Prob >F (23 attributes)	**0.841**	**0.121**	**0.199**	**0.275**	**0.672**	**0.049**	**0.991**	**0.193**	**0.561**	**0.381**

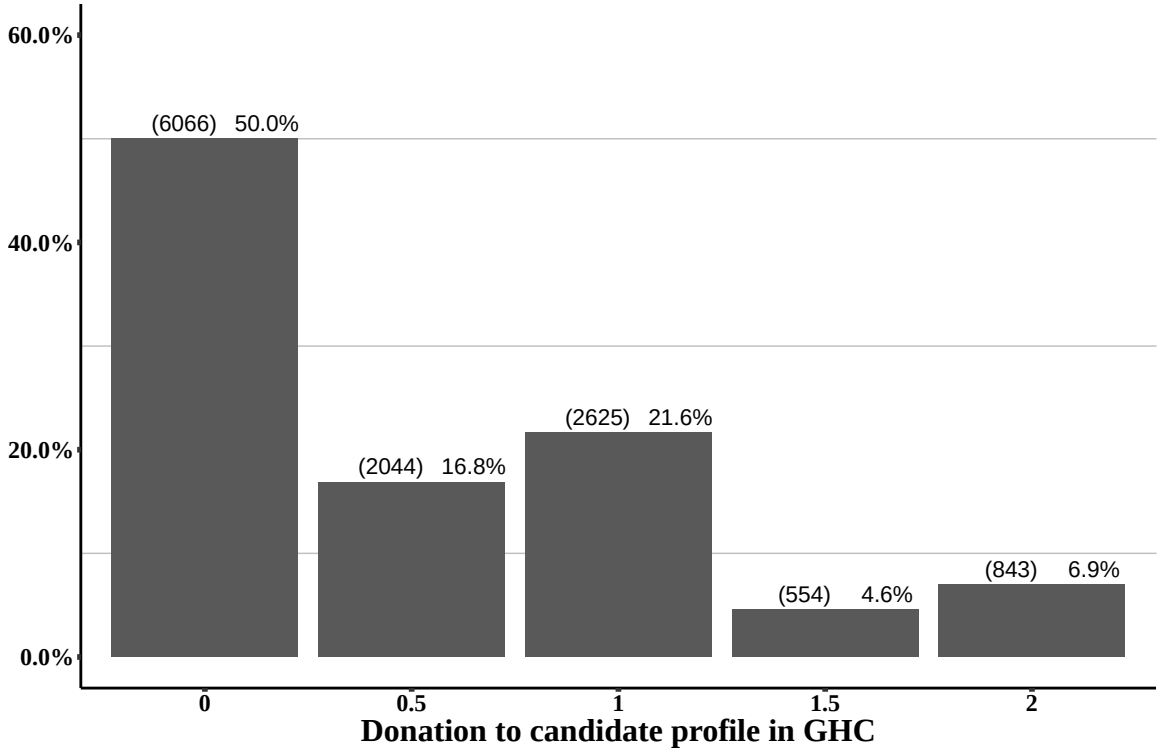
Notes: Standard errors are clustered at the individual level. *p<0.1; **p<0.05; ***p<0.01

Table C.3: The profile order of the three "voting task" has no effect of the effect of attributes

	Dependent variable		
		Preferred candidate profile	
	Variable coefficient	Interaction effect (*Second profile)	Interaction effect (*Third profile)
Second profile	−0.036		
	(0.056)		
Third profile	−0.056		
	(0.056)		
Constituency Development Fund			
Public (90%):Private (10%)	0.126***	0.027	−0.001
	(0.023)	(0.032)	(0.032)
Public (50%):Private (50%)	0.096***	0.054*	0.025
	(0.022)	(0.030)	(0.031)
Public (10%):Private (90%)	0.049**	0.031	0.031
	(0.022)	(0.031)	(0.030)
Time in Constituency vs. Capital			
Const.:50-capital:50	−0.002	0.038	−0.003
	(0.018)	(0.026)	(0.028)
Const.:75-capital:25	0.009	0.057**	0.021
	(0.020)	(0.026)	(0.028)
Community meeting			
Monthly	0.139***	−0.018	−0.001
	(0.024)	(0.033)	(0.034)
Every three months	0.149***	−0.051	0.007
	(0.025)	(0.035)	(0.035)
Every six months	0.095***	−0.0005	0.064*
	(0.024)	(0.035)	(0.035)
Yearly	0.035	0.027	0.046
	(0.024)	(0.035)	(0.033)
Social event			
Sometimes	0.033*	0.018	0.011
	(0.019)	(0.027)	(0.027)
Always	0.089***	−0.019	−0.013
	(0.019)	(0.027)	(0.026)
Personal assistance (casework)			
Sometimes	0.079***	0.011	−0.032
	(0.019)	(0.027)	(0.027)
Always	0.109***	0.001	−0.020
	(0.019)	(0.026)	(0.026)
Profession			
Lawyer	−0.031	0.031	0.035
	(0.026)	(0.038)	(0.038)
Educationist/teacher	0.032	−0.005	0.013
	(0.026)	(0.037)	(0.038)
Business person	−0.012	0.041	−0.013
	(0.027)	(0.038)	(0.038)
Accountant	0.019	−0.001	−0.033
	(0.027)	(0.038)	(0.038)
Architect	0.003	0.038	−0.007
	(0.028)	(0.040)	(0.039)
Gender			
Male	0.014	−0.040	0.004
	(0.019)	(0.027)	(0.027)
Political party			
New Patriotic Party	0.049***	−0.020	−0.030
	(0.019)	(0.026)	(0.026)
National Democratic Congress	0.029	−0.024	−0.024
	(0.019)	(0.026)	(0.027)
Hometown			
Does not hail but resident in constituency	−0.063***	0.060**	0.066**
	(0.019)	(0.027)	(0.027)
Hails from but not resident	−0.051***	0.025	0.016
	(0.019)	(0.027)	(0.027)
Constant	0.241***		
	(0.040)		
Observations (Rated Profiles)	12,132		

Notes: Standard errors are clustered at the individual level. *p<0.1; **p<0.05; ***p<0.01

Figure C.2: Distribution of the amount donated by respondents to their preferred candidate profile



D Full AMCE table and additional ACE results

Table D.1: Effects of candidate attributes on the probability of being selected as Member of Parliament

	Dependent variable:			
	Preferred candidate profile		Donation to preferred candidate profile	
	(1)	(2)	(3)	(4)
Constituency Development Fund				
Public (50%):Private (50%)	0.123***	0.123***	0.131***	0.132***
	(0.013)	(0.013)	(0.015)	(0.015)
Public (10%):Private (90%)	0.070***	0.070***	0.080***	0.081***
	(0.013)	(0.013)	(0.016)	(0.016)
Public (90%):Private(10%)	0.135***	0.136***	0.144***	0.145***
	(0.014)	(0.014)	(0.017)	(0.017)
Time in Constituency vs. Capital				
Constituency (50%) : Capital (50%)	0.030***	0.031***	0.041***	0.042***
	(0.011)	(0.011)	(0.013)	(0.013)
Constituency (75%) : Capital (25%)	0.015	0.016	0.040***	0.042***
	(0.012)	(0.012)	(0.015)	(0.015)
Community meeting				
Monthly	0.135***	0.134***	0.155***	0.156***
	(0.014)	(0.014)	(0.017)	(0.018)
Every three months	0.134***	0.133***	0.162***	0.162***
	(0.014)	(0.014)	(0.017)	(0.017)
Every six months	0.117***	0.117***	0.130***	0.131***
	(0.014)	(0.014)	(0.017)	(0.017)
Yearly	0.062***	0.060***	0.065***	0.065***
	(0.014)	(0.014)	(0.016)	(0.016)
Social event				
Sometimes	0.042***	0.043***	0.041***	0.043***
	(0.011)	(0.011)	(0.014)	(0.014)
Always	0.078***	0.079***	0.083***	0.084***
	(0.011)	(0.011)	(0.014)	(0.014)
Personal assistance (casework)				
Sometimes	0.072***	0.073***	0.076***	0.075***
	(0.011)	(0.011)	(0.014)	(0.014)
Always	0.102***	0.104***	0.107***	0.109***
	(0.011)	(0.011)	(0.014)	(0.014)
Profession				
Lawyer	−0.009	−0.008	−0.006	−0.005
	(0.016)	(0.016)	(0.019)	(0.019)
Educationist/teacher	0.035**	0.033**	0.037**	0.036*
	(0.015)	(0.015)	(0.019)	(0.019)
Business person	−0.003	−0.003	−0.009	−0.008
	(0.016)	(0.016)	(0.020)	(0.020)
Accountant	0.007	0.004	−0.005	−0.009
	(0.015)	(0.015)	(0.019)	(0.019)
Architect	0.014	0.013	0.018	0.017
	(0.017)	(0.017)	(0.020)	(0.020)
Gender				
Male	0.001	0.0003	−0.013	−0.012
	(0.011)	(0.011)	(0.014)	(0.014)
Political party				
New Patriotic Party (incumbent)	0.032***	0.031***	0.031**	0.030**
	(0.011)	(0.011)	(0.014)	(0.014)
National Democratic Congress (opposition)	0.011	0.010	0.003	0.001
	(0.011)	(0.011)	(0.014)	(0.014)
Hometown				
Does not hail but resident in constituency	−0.021*	−0.023**	−0.017	−0.019
	(0.011)	(0.011)	(0.014)	(0.014)
Hails from but not resident	−0.038***	−0.036***	−0.038***	−0.036***
	(0.011)	(0.011)	(0.013)	(0.013)
Controls	No	Yes	No	Yes
Constant	0.210***	0.210***	0.282***	0.296***
	(0.023)	(0.024)	(0.034)	(0.042)
Observations	12,132	11,994	12,132	11,994
R^2	0.037	0.037	0.044	0.046
Adjusted R^2	0.034	0.034	0.041	0.042

Notes: Table D.1 shows estimates of the effects of randomly assigned parliamentary candidate attribute values on the probability of being preferred as Member of Parliament in the next election. Estimates are based on an OLS model with standard errors clustered by repondent. The model also includes constituency fixed effects to ensure within constituency comparison. *p<0.1; **p<0.05; ***p<0.01.

Figure D.1: Marginal means of selecting a candidate with a profile that includes a randomize CDF allocation value, by voter partisanship

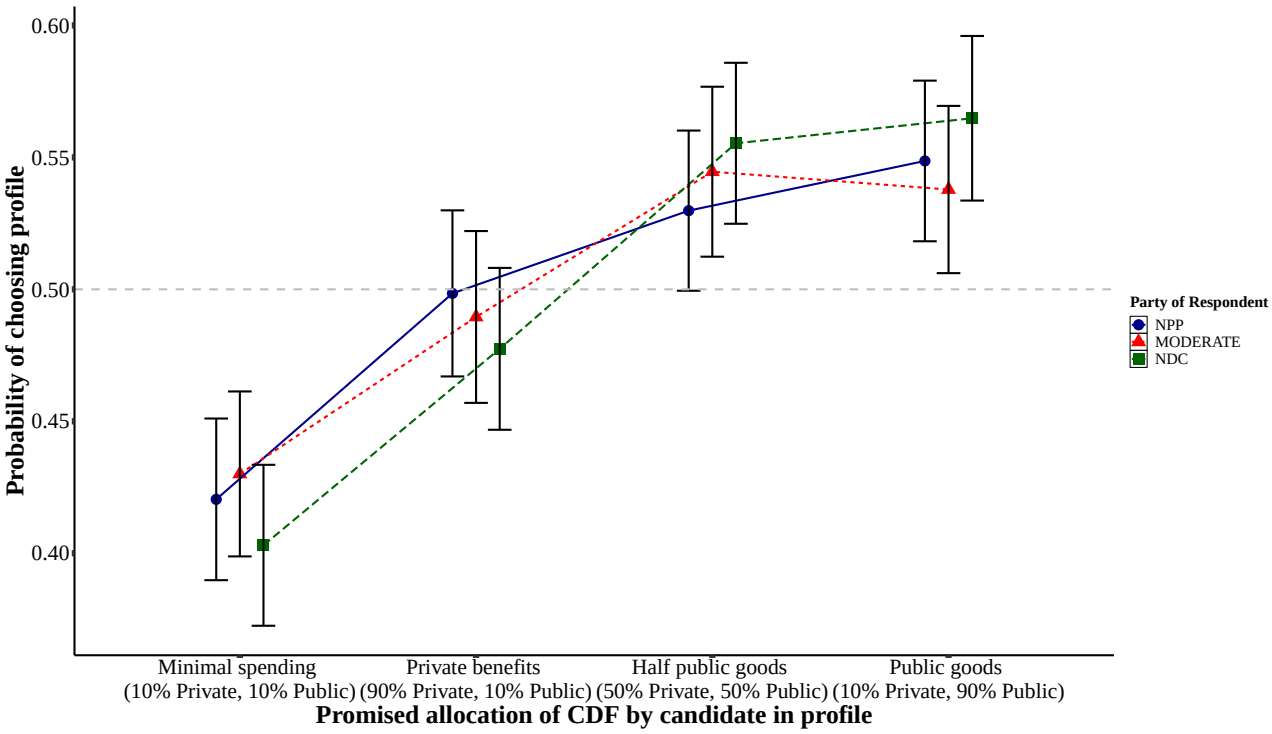
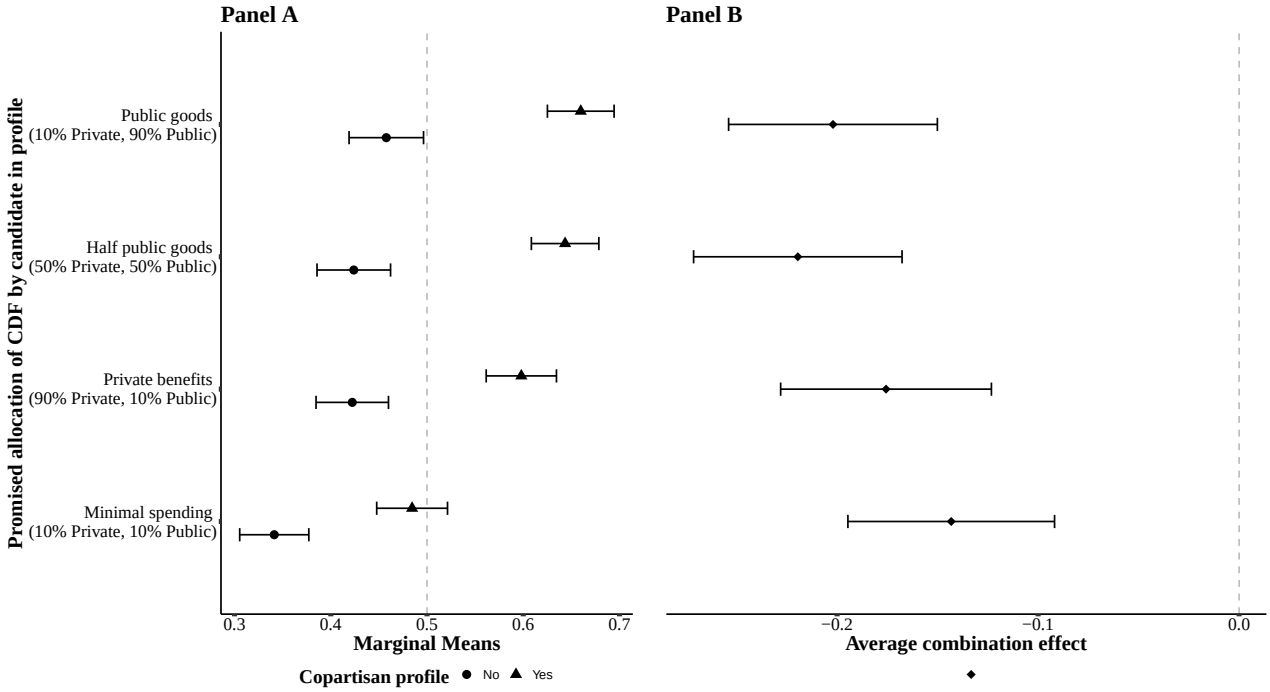
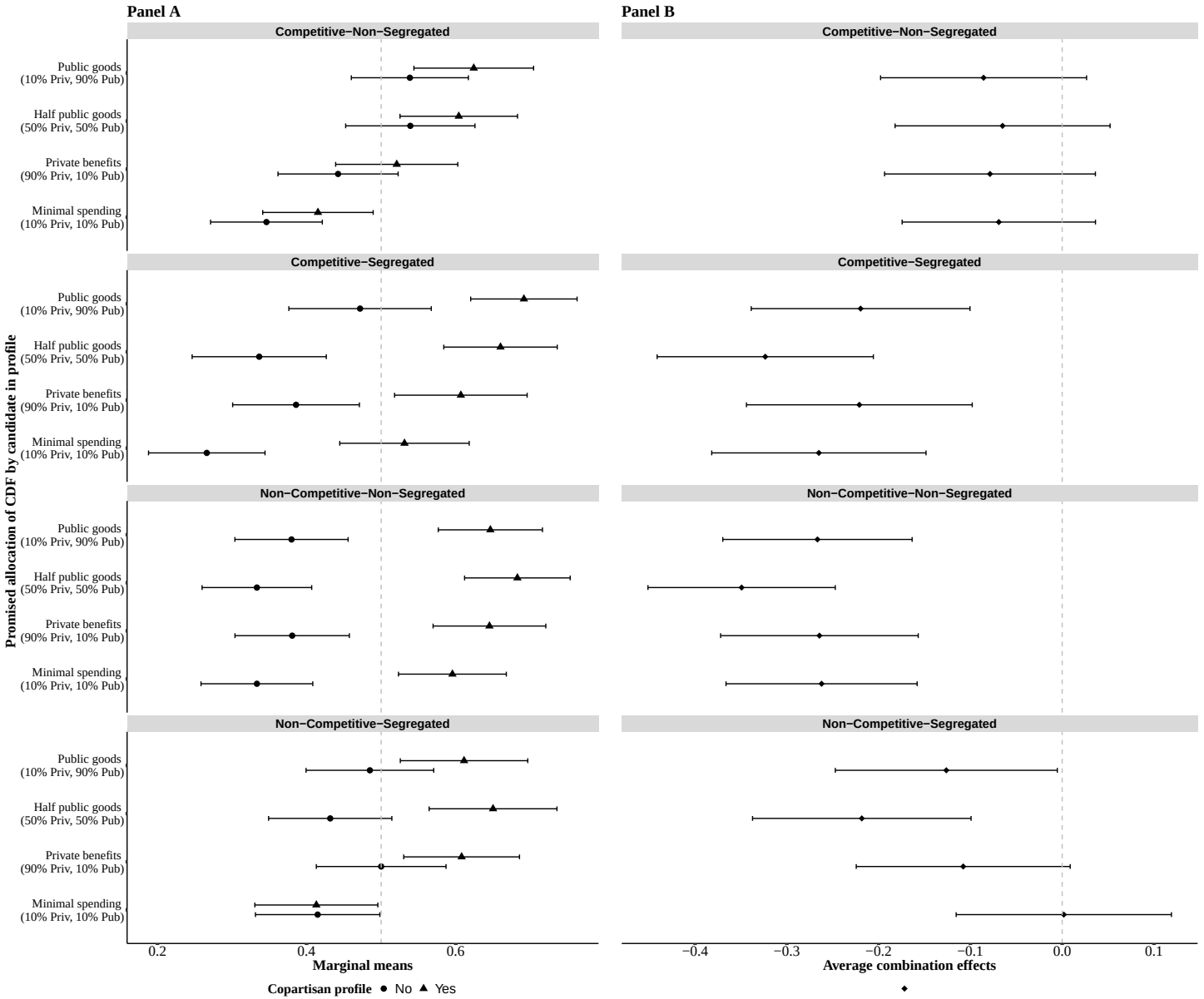


Figure D.2: Marginal means and ACE of choosing an opposition over a copartisan politician with the same amount of promised public goods in the full sample



Notes: Figure D.2 Panel A shows the means of selecting a profile with randomly assigned promised CDF allocations and party ID of hypothetical candidates. The means for copartisan aspirants are represented by triangle and that of non-copartisan candidates by the solid circles. The vertical bars represents 95% confidence intervals. Panel B shows the corresponding average combination effect with 95% confidence intervals.

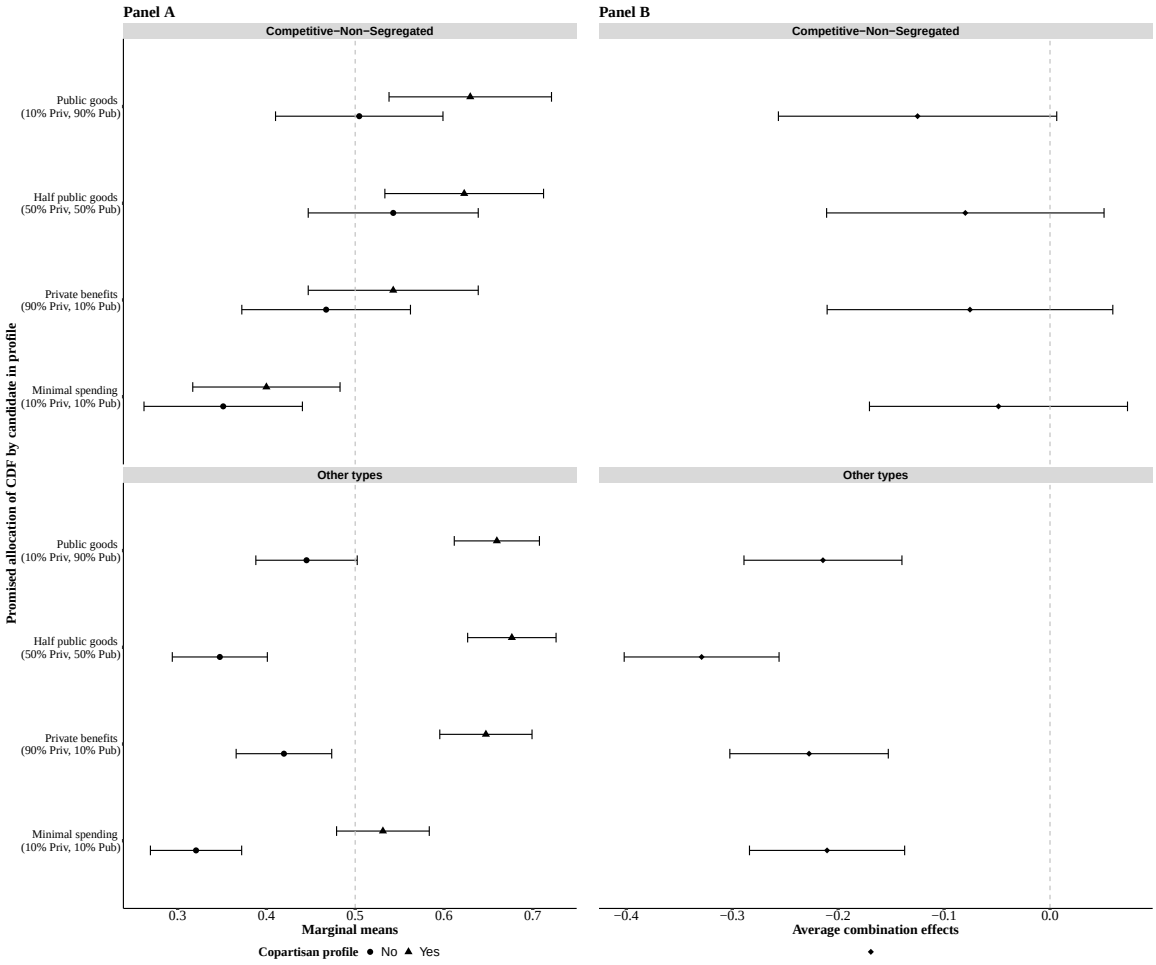
Figure D.3: Marginal means and ACE of choosing an opposition over a copartisan politician with the same amount of promised public goods by constituency type



Notes: Figure D.3 Panel A shows the means of selecting a profile with randomly assigned promised CDF allocations and party ID of hypothetical candidates. The means for copartisan aspirants are represented by triangle and that of non-copartisan candidates by the solid circles. The vertical bars represents 95% confidence intervals. Panel B shows the corresponding average combination effect with 95% confidence intervals.

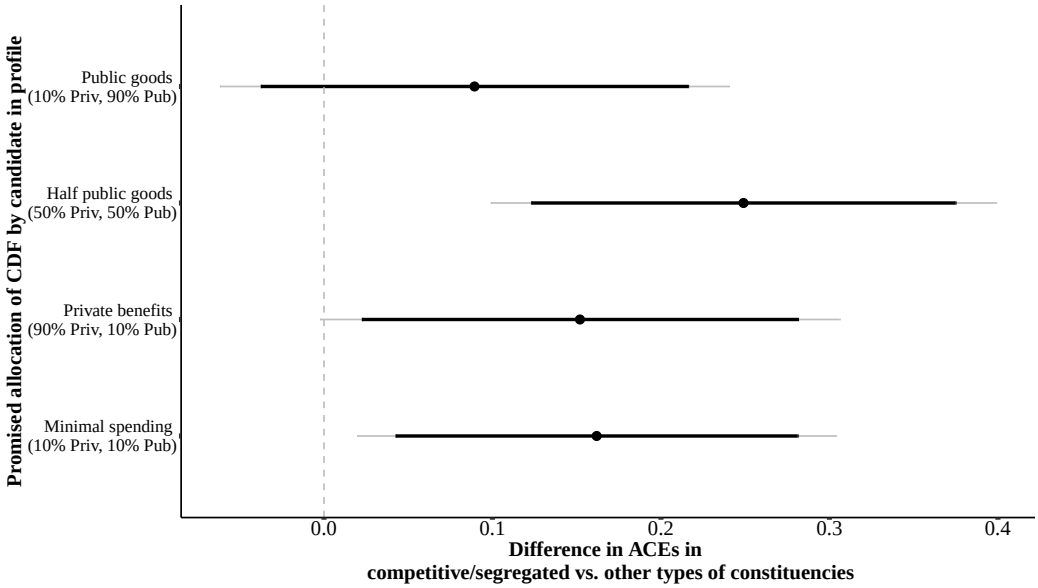
E Robustness check: alternative coding of partisanship with respondents scoring five and above on attachment scale in Figure 2

Figure E.1: Marginal means and ACEs of choosing an opposition over a copartisan politician pledging the same amount of public goods by constituency type



Notes: Figure E.1 Panel (A) shows the means of selecting a profile with randomly assigned promised CDF allocations and party IDs for hypothetical candidates. The means for copartisan (non-copartisan) aspirants are represented by triangles (solid circles). The horizontal bars represent 95% confidence intervals. Panel (B) shows the corresponding ACE with 95% confidence intervals.

Figure E.2: Difference in ACEs of choosing opposition over copartisan politicians promising the same amount of public goods in competitive/non-segregated relative to other constituency types



Notes: Figure E.2 shows the difference in the probability of choosing an opposition over a copartisan candidate who promises the same amount of benefits in competitive/non-segregated compared to other types of constituencies. The horizontal black and grey bars represent 90% and 95% confidence intervals for the estimated differences, respectively.

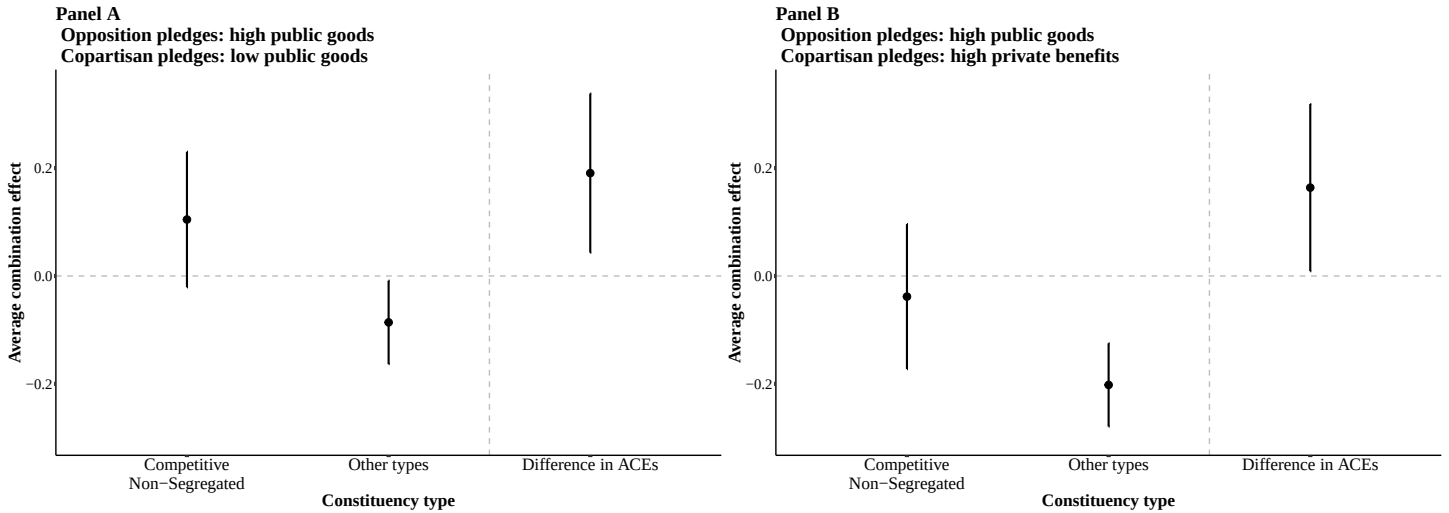


Figure E.3: ACEs of choosing an opposition candidate promising more public goods versus a copartisan pledging a minimal amount, by constituency type

F Mechanisms

Table F.1: Summary statistics of polling station characteristics by constituency types

	Competitive		Non-competitive		
	Non-segregated	Segregated	Non-segregated	Segregated	P-value (F-statistics)
Electricity	0.867	0.833	0.893	0.933	0.683
	(0.346)	(0.379)	(0.315)	(0.254)	
Pipe water	0.667	0.433	0.308	0.414	0.047
	(0.479)	(0.504)	(0.471)	(0.501)	
Mobile service	1	0.867	0.857	0.900	0.218
	(0)	(0.346)	(0.356)	(0.305)	
Post office	0.133	0.143	0	0.069	0.199
	(0.346)	(0.356)	(0)	(0.258)	
School	0.967	0.833	0.964	0.967	0.102
	(0.183)	(0.379)	(0.189)	(0.183)	
Police station	0.233	0.133	0.214	0.267	0.639
	(0.430)	(0.346)	(0.418)	(0.450)	
Clinic	0.500	0.517	0.607	0.667	0.535
	(0.509)	(0.509)	(0.497)	(0.479)	
Bank	0.233	0.167	0.037	0.333	0.039
	(0.430)	(0.379)	(0.192)	(0.479)	
Paved road in village	0	0.067	0.071	0.367	0.00004
	(0)	(0.254)	(0.262)	(0.490)	
Paved roads 5km to village	0	0.200	0.143	0.367	0.002
	(0)	(0.407)	(0.356)	(0.490)	
Road condition in village (very)good	0.267	0.433	0.393	0.300	0.504
	(0.450)	(0.504)	(0.497)	(0.466)	

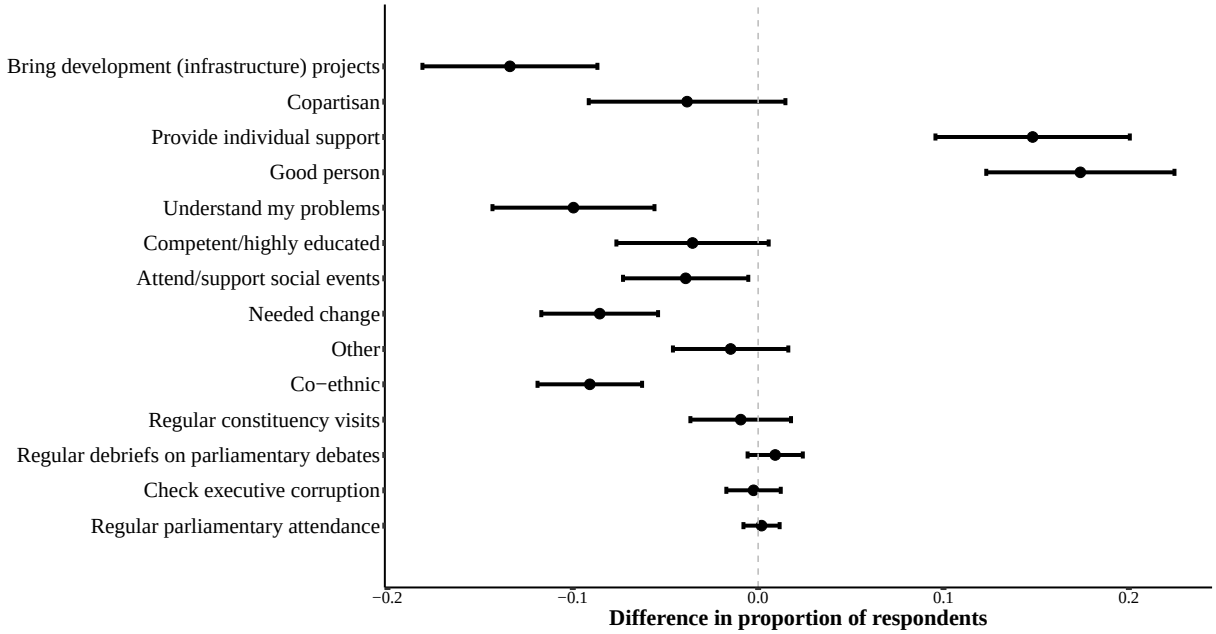


Figure F.1: Differences in the top three reasons why partisans chose their preferred candidate in the 2016 parliamentary race in nonsegregated/competitive versus other constituency types

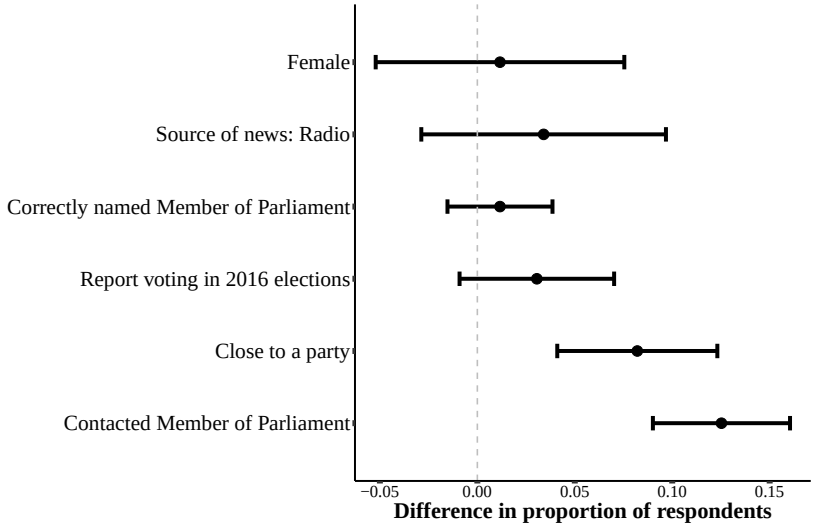


Figure F.2: Differences in reported characteristics and political behavior of partisans in nonsegregated/competitive versus other constituency types

Table F.2: Difference in ACEs of choosing an opposition over a copartisan politician with the same amount of promised public goods with controls

	Dependent variable			
	Select profile containing promised (1/0)			
	Public goods (10% Priv, 90% Pub)	Public/private (50% Priv, 50% Pub)	Private benefit (90% Priv, 10% Pub)	Minimal spending (10% Priv, 10% Pub)
	(1)	(2)	(3)	(4)
Opposition profile	−0.211***	−0.307***	−0.228***	−0.209***
	(0.037)	(0.038)	(0.038)	(0.037)
Competitive Nonsegregated (CNS)	−0.031	0.003	−0.107*	−0.137***
	(0.057)	(0.053)	(0.058)	(0.052)
Opposition profile : CNS	0.119*	0.177**	0.167**	0.143**
	(0.070)	(0.071)	(0.072)	(0.067)
Individual Characteristics				
Contacted MP	−0.116**	−0.030	0.092*	0.016
	(0.058)	(0.056)	(0.055)	(0.053)
Close to a party	0.039	0.058	0.008	−0.073
	(0.053)	(0.052)	(0.053)	(0.053)
Education	0.005	0.004	−0.008	−0.012
	(0.009)	(0.009)	(0.009)	(0.008)
Rationale for MP choice in previous election				
Good person	0.054	0.018	0.045	−0.052
	(0.038)	(0.038)	(0.038)	(0.037)
Copartisan	0.024	0.023	−0.016	−0.074**
	(0.037)	(0.036)	(0.038)	(0.036)
Competent/highly educated	0.073	0.035	0.006	−0.036
	(0.047)	(0.047)	(0.048)	(0.047)
Understand my problems	−0.021	0.055	0.018	−0.049
	(0.047)	(0.046)	(0.047)	(0.044)
Regular constituency visits	−0.005	−0.020	0.030	−0.108*
	(0.068)	(0.070)	(0.065)	(0.062)
Regular parliamentary attendance	0.137	−0.139	−0.246	0.006
	(0.249)	(0.226)	(0.207)	(0.140)
Regular debriefs on parliamentary debates	−0.094	−0.057	−0.024	0.043
	(0.123)	(0.108)	(0.143)	(0.103)
Check executive corruption	0.016	0.128	0.041	−0.058
	(0.146)	(0.159)	(0.122)	(0.106)
Attend/support social events	−0.0002	−0.003	−0.041	−0.017
	(0.058)	(0.054)	(0.058)	(0.052)
Coethnic	−0.007	0.019	−0.010	0.030
	(0.068)	(0.075)	(0.068)	(0.070)
Needed a change	−0.011	0.027	0.098	−0.093
	(0.058)	(0.061)	(0.065)	(0.064)
Bring development projects	−0.031	0.102**	−0.032	−0.024
	(0.043)	(0.041)	(0.043)	(0.040)
Provide individual support	0.005	0.047	0.019	−0.022
	(0.038)	(0.038)	(0.038)	(0.037)
Other factor	−0.021	0.031	−0.086	−0.055
	(0.064)	(0.073)	(0.074)	(0.065)
Community characteristics				
Bank	0.058	−0.037	−0.016	−0.036
	(0.051)	(0.051)	(0.051)	(0.051)
School	−0.001	−0.089	0.028	0.070
	(0.060)	(0.069)	(0.065)	(0.064)
Pipe water	−0.020	−0.047	−0.007	−0.020
	(0.041)	(0.041)	(0.040)	(0.039)
Paved road/tarred to village	−0.030	0.095	0.109	0.052
	(0.089)	(0.087)	(0.086)	(0.082)
Road to village (yes)	−0.014	−0.048	−0.042	−0.041
	(0.084)	(0.084)	(0.084)	(0.079)
Condition of road in village (very) good	−0.020	−0.001	−0.003	0.077*
	(0.039)	(0.042)	(0.042)	(0.041)
Constant	0.622***	0.561***	0.614***	0.678***
	(0.104)	(0.107)	(0.110)	(0.100)
Observations	985	953	965	1,024
R^2	0.050	0.088	0.052	0.057
Adjusted R^2	0.024	0.063	0.026	0.032

Note: *p<0.1; **p<0.05; ***p<0.01

Table F.3: Association between copartisanship with incumbent MP and expectation that your community will receive local public infrastructure

	Dependent variable:				
	Expect community to receive public infrastructure				
		Segregated		Non-Segregated	
	Full sample	Competitive	Non-Competitive	Competitive	Non-Competitive
	(1)	(2)	(3)	(4)	(5)
Binary					
Copartisan with incumbent MP	0.317***	0.699***	0.314***	0.169***	0.153*
	(0.081)	(0.114)	(0.073)	(0.012)	(0.087)
Constant	0.110***	−0.102**	0.079	0.179***	0.085
	(0.037)	(0.044)	(0.049)	(0.006)	(0.070)
Observations	1,017	216	256	262	283
R^2	0.382	0.614	0.186	0.540	0.149
Adjusted R^2	0.375	0.608	0.176	0.535	0.140
Likert scale (0-10)					
Copartisan with incumbent MP	3.093***	6.393***	3.094***	1.754***	1.715***
	(0.674)	(0.888)	(0.844)	(0.189)	(0.295)
Constant	1.649***	−0.470	1.615***	2.267***	1.048***
	(0.311)	(0.346)	(0.563)	(0.087)	(0.239)
Observations	1,017	216	256	262	283
R^2	0.429	0.716	0.273	0.536	0.253
Adjusted R^2	0.422	0.712	0.265	0.530	0.245
Note:					*p<0.1; **p<0.05; ***p<0.01

Table F.4: Association between copartisanship with incumbent MP and report that your community has received local public infrastructure

	Dependent variable:				
	Community has received public infrastructure				
		Segregated		Non-Segregated	
	Full sample	Competitive	Non-Competitive	Competitive	Non-Competitive
	(1)	(2)	(3)	(4)	(5)
Copartisan with incumbent MP	0.186***	0.399**	0.208*	0.150***	0.037
	(0.063)	(0.194)	(0.117)	(0.035)	(0.052)
Constant	0.141***	−0.101	−0.005	0.159***	0.021
	(0.030)	(0.084)	(0.078)	(0.017)	(0.042)
Observations	1,096	228	254	302	312
R^2	0.349	0.380	0.094	0.370	0.331
Adjusted R^2	0.342	0.372	0.083	0.363	0.324
Note:					*p<0.1; **p<0.05; ***p<0.01

Table F.5: Who Should Make[ing] sure that, once elected, Members of Parliament do their jobs?

	Competitive		Non-competitive	
Who?	Non-segregated	Segregated	Non-segregated	Segregated
The president	0.35	0.24	0.36	0.38
Parliament	0.09	0.06	0.14	0.17
Political party	0.05	0.15	0.06	0.07
Voters	0.49	0.47	0.40	0.36
No one	0.00	0.03	0.00	0.00
Don't know	0.02	0.06	0.03	0.02
N	214	34	843	100

Notes: Source: Afrobaromter R7. Sample is restricted to respondents who say they are close to a political party.