

GETTING A SEAT AT THE TABLE: PARTISAN POLL WORKERS AND ELECTORAL BIAS*

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October 2025

Does poll workers' partisanship affect electoral outcomes? Many countries use partisan and adversarial vote-counting systems where poll workers are party representatives and mutual control is expected to provide fairness. Yet in countries with established party regimes, parties often have *de facto* unequal capacities to send representatives to all booths. Exploiting quasi-random assignment of voters to booths in Paraguay's 2018 general elections, we estimate that partisan poll workers decrease an opposing party's vote share by up to 1.1 percentage points (pp) and increase theirs by up to 0.7 pp. Our analyses also expose differential effects according to the electoral system. In proportional representation races, established parties have more opportunities to increase their support at the expense of smaller parties. In contrast, single-winner plurality races dampen this effect due to the winner-take-all aspect of these races. Our results have practical implications for politicians and policymakers, and theoretical implications for elections in developing democracies.

Keywords: Quasi-natural experiment, Party capacity, Electoral irregularities

*We are grateful to Francisco Cantú, whose insights, generosity, and pioneering work in electoral forensics influenced this project and whose untimely passing is a profound loss to the field. We benefited from thoughtful comments by William Clark, Claudio Ferraz, J. Andrew Harris, F. Daniel Hidalgo, Frances Hagopian, Alisha Holland, Torben Iversen, Jonathan N. Katz, Horacio Larreguy, Steven Levitsky, Andrew O'Donohue, Vincent Pons, Pia Raffler, Reed Rasband, Jonathan Weigel, panel participants at APSA 2022 and APSA 2023, and workshop participants at LACEA/RIDGE 2024, Instituto Desarrollo and multiple Harvard workshops (Political Economy, Comparative Politics, Political Economy of Development, and the Latin American Discussion group). We also thank José Tomás Sánchez for earlier contributions to this project. We thank the Harvard Kennedy School and the Institute for Humane Studies for research funding towards this project. All errors are our own.

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“... it does not matter how many votes a candidate gets, but how many the poll workers record on the vote tallies.”

– Carlos María Ljubetic, electoral justice adviser quoted in ABC Color (2018a)

“Indeed, you won the elections, but I won the count.”

– Anastasio Somoza, Nicaraguan dictator quoted in Gott (1977)

In developing democracies, ensuring the integrity of the vote count is an ongoing process. Authoritarian successor parties may “inherit” the machinery from their authoritarian past (Loxton and Mainwaring 2018), and this may allow them to tilt the playing field against free and fair elections. Such “competitive authoritarian” or “hybrid” regimes entail systems where elections are often competitive, but where certain political actors are favored over others (Diamond 2002; Levitsky and Way 2010). Transitioning democracies therefore often struggle to adopt, and successfully implement, electoral systems where competition is truly free and fair.

One approach adopted by several countries to ensure the quality of elections has been the use of adversarial controls. In these systems, *political parties* are given roles in polling stations, and through mutual controls between the competing parties, fair electoral results are expected to be registered on election day. Partisan poll watchers who observe the vote count process are found in countries throughout the globe, including Argentina (Casas, Díaz and Trindade 2017), Mexico (Ascencio and Rueda 2019), Turkey (Duvar 2021), and the United States (Brennan Center 2021). Countries where explicitly partisan representatives can be polling station administrators or poll workers (i.e., those counting votes) include Nicaragua, Honduras, Paraguay, Armenia, Yemen, Ukraine, Kosovo, El Salvador, Costa Rica, and Colombia (Pomares et al. 2015; Sjoberg 2016).

However, a potential vulnerability of adversarial control systems is that their fairness depends on the operational capacities of different political parties. In particular, larger parties with stronger operational capacities are better able to ensure that their votes are correctly counted and protected, while smaller parties are left more vulnerable to distortions if they cannot cover all voting booths. This unequal capacity to control votes could be a mechanism through which hybrid regimes skew

the playing field in their favor. This paper explores whether unequal party capacities to allocate poll workers affect the fairness of adversarial, partisan vote-counting systems. That is, do adversarial vote control systems work to create free and fair elections in contexts where parties differ in their capacity to send poll workers?

Identifying the effect that partisan poll workers have on electoral outcomes has been difficult to measure for several reasons. First, democratic voting is often protected by the secret ballot. Although the secret ballot is useful in protecting voters from undue coercion (Baland and Robinson 2008), it also makes it more difficult to determine whether each vote counted represents a voter's stated preference, or whether some intermediate factor distorted voters' preferences during the counting process. Second, the operational capacity of a political party is not necessarily independent from the popularity of that party, which makes it difficult to discern what factor causes revealed favorable electoral results for a given party.

We explore how party capacity affects the fairness of adversarial control systems by studying the 2018 Paraguayan General Elections. Paraguay provides a great testing ground for examining adversarial control systems for four reasons. First, although Paraguay transitioned to democracy in 1989, political parties in Paraguay diverge substantially in terms of their operational capacity. The Colorado party supported Alfredo Stroessner's dictatorship for 35 years. Yet even after the transition to democracy the Colorado party won all presidential elections to date except for one—when Fernando Lugo won a presidential term in 2008, only to be later impeached. The Colorado party continues to be the largest, most well-funded political party in Paraguay today. The second largest party is the Authentic Radical Liberal Party (also known as the *Liberal* party). Both the Colorado and Liberal parties were founded in 1887, so they have a long history in Paraguay, and the Liberal Party served as the primary opposition (mostly in exile) to Stroessner's dictatorship (Carrizosa 2023). Since 1989, political parties proliferated in Paraguay's democratic system, but questions remain as to why the Colorado and Liberal party persist as dominant forces. Therefore, Paraguay is an interesting case for exploring how partisan operational capacity affects electoral

fairness and whether this is a mechanism through which established parties perpetuate themselves.

Second, we assembled fine-grained election data on the explicit partisanship of poll workers, which allows us to test our expectations in a rigorous manner. Through a combination of soliciting public records from the electoral administration, and hand-coding thousands of scans of election-day vote tallies, we assembled a painstakingly detailed database of all 21,211 voting booths. Importantly, these vote tallies contain information about who the poll workers were on election day—poll workers signed and included their ID numbers on the tallies—which we match to partisan affiliation data to uncover the partisan composition of poll workers at each booth.

Third, within polling stations there are multiple voting booths and voters are assigned to booths alphabetically. We show that voters' names are largely orthogonal to their political preferences. This quasi-random assignment of voters to booths implies that on average, voters across booths within a given polling station should have similar political preferences. By exploiting this aspect of the data generating process we are able to isolate how characteristics of booths—namely poll workers' partisanship—affect electoral outcomes independent of the preferences of voters.

Finally, the 2018 Paraguayan elections are interesting due to the structure of the ballots used for all six elections. The president and governors are elected by single-member district plurality (SMDP) voting, while the remaining races (for the Senate, Chamber of Deputies, Departmental Councils, and MERCOSUR parliament) have a proportional representation (PR) system. For each electoral race a single ballot contains all available party options, and Paraguay uses separate ballots for each race.¹ Given that within each booth the *same* voters and the *same* poll workers are counting *different* ballots with races that use *different* electoral rules, this gives us an unprecedented opportunity to explore how different electoral systems affect incentives for partisan poll workers.

Our results show it is always beneficial for a political party to be represented at a voting booth, meaning that parties with higher operational capacity to send poll workers systematically benefit. In terms of how electoral systems affect the relationship between partisan poll workers and elec-

¹See Online Appendix (OA) Figure A1 for an image of the ballot used for the Senate election.

toral outcomes, we find that the effects of partisan poll workers are stronger in PR races rather than SMDP races. We posit this can be explained by elite strategic behavior and strategic voting. SMDP elections promote strategic behavior from parties, which results in fewer vote-choice options for voters (Cox 1997). Thus, voters often have no choice but to vote for a high-capacity party candidate (or a candidate that is allied with a high-capacity party). In contrast, because PR allows for a higher number of parties to credibly compete (Cox 1997), voters have more opportunities to vote for low-capacity parties. Therefore, all else equal, PR will promote more votes for low-capacity parties than SMDP would (Cox 1997). In terms of electoral unfairness, this difference implies PR creates a wider scope for partisan poll workers from high-capacity parties to undermine votes for low-capacity parties—as there will be more votes for low-capacity parties in PR races than in SMDP.

Our findings, in line with Duarte et al. (Forthcoming) and Finan and Schechter (2012), show how historically dominant parties maintain leverage even amid democratization. Consistent with research on clientelism and machine politics, our results suggest that dominant parties leverage organizational and institutional advantages to blunt democratization's effects (Duarte et al. Forthcoming; Finan and Schechter 2012; Stokes et al. 2013). Democratization does not reshape party systems uniformly: while many established parties have eroded as countries undergo this process (Lupu 2016), authoritarian-successor parties often retain built-in advantages in new democracies (Loxton and Mainwaring 2018). More broadly, and hybrid and competitive authoritarian regimes preserve uneven playing fields that systematically favor certain actors (Diamond 2002; Levitsky and Way 2010). Our findings point to some mechanisms through which established, high-operational-capacity parties can tilt the playing field through alternative means, such as using their operational capacities to provide better protections for their votes, and fewer protections for the votes of others. In other words, we find that electoral irregularities can be a mechanism through which high-capacity parties skew the field in their favor.

A broad literature analyzes election irregularities at different stages (Birch 2011; Lehoucq

2003; Simpson 2013). A closely related literature studies the role of partisan poll watchers who oversee the vote count and may indirectly influence electoral results (Ascencio and Rueda 2019; Casas, Díaz and Trindade 2017). These papers highlight how parties spend resources to have more poll watchers, how this advantages parties with greater capacity, and how parties may allocate poll watchers to booths strategically. In contrast, our work focuses on poll *workers*— those actually counting votes and thus more able to influence election results. Up to this point findings on the effects of poll workers on electoral outcomes has been mixed. For example, Challú, Seira and Simpson (2020) show that nonpartisan benign errors are made by Mexican poll workers with lower education and higher workload. Similarly, Warner et al. (2021) find that vote tally irregularities in Kenya’s 2013 presidential election do not correlate with election outcomes.

However, given our novel approach, our paper is able to find evidence that partisan poll workers, and party capacity, affect electoral outcomes through electoral irregularities— independent of voter preferences. In practical terms, our results suggest to parties in adversarial systems that ensuring their parties’ poll worker representation is advisable. This has been commented on intuitively in Paraguayan political circles and the media before (ABC Color 2018a; Colmán Gutiérrez 2018; Ferrara 2016), yet our study provides the first empirical analysis that the composition of partisan poll workers counting votes significantly affects electoral outcomes.

1 Hypotheses

Before reviewing our hypotheses, we briefly describe how elections work in Paraguay. In Paraguay, voting is carried out in polling stations, which are called “voting localities” (*local de votación*) in Spanish, and they tend to be public schools. Within these public schools there are often multiple voting booths, which in Paraguay are called “voting tables” (*mesa de votación*). Throughout this paper we use the terms “voting booth,” “voting table”, and “electoral table” interchangeably. Any political party can send people to watch the vote count (*veedores de mesa*)² to any voting table,

²Poll watchers can observe and file complaints, but have no formal powers in the count. Unlike the poll worker data, available information on poll watchers is more limited. The election authority

but the vote count itself is only carried out by three, partisan poll workers called “table members” (*miembros de mesa*). The Electoral Code establishes that *only the three largest parties*—in terms of their representation in the legislature—are each entitled to one poll worker seat in each electoral table.³ As the Colorado and Liberal party have always had the most or second most seats in Congress since democratization, in practice this rule implies that these parties are *always* entitled to at least one seat in every electoral table. The third spot has been assigned to different parties throughout Paraguay’s democratic period, but in the 2018 elections, this spot was reserved for the left-wing *Frente Guasu* (FG) party which had the third most seats in Congress at the time.⁴ Thus, all other political parties are excluded from having poll workers unless the top three parties do not pre-register for all the spots they are entitled to.⁵ We are able to observe poll workers through two data sources: 1) party *pre-registrations*, which gives us information on the volunteers parties intended to send to each booth on election day, and 2) we have election quick-count vote tallies—which are signed by poll workers and includes their ID number—which allows us to observe who *de facto* took up poll worker duties on election day.

Weeks before the election, political parties pre-register their poll workers. For each table, one of the three pre-registered poll workers is randomly selected to be the “president” of the table, while the two others are called *vocal 1* and *2*.⁶ Despite the nominal hierarchy, all three poll workers are only pre-registered poll watcher data, but poll watchers do not sign vote tallies. Hence, we are not able to determine the *de facto* poll watchers at each voting booth. Still, OA Tables E1 and E2 confirm the robustness of our main results after controlling for pre-registered poll watchers.

³The framing of the Electoral Code was dominated by the Colorado, Liberal, and PEN parties, at the time, and the three-member electoral table rule has remained.

⁴Technically, the FG is an electoral alliance of smaller left-wing political parties which sometimes run together (PPS, PFA, PPC, PPT, PCP, PCPS, PMPP, and PUP). Party acronyms are described in the Online Appendix (OA) Section B.1.

⁵Limiting the number of poll workers is common in Latin America (Pomares et al. 2015).

⁶See OA Figure A2 for a picture of a typical electoral table setup. OA Table E3 tested whether

mostly equal in terms of attributions, and conflicts are decided by a simple (two-thirds) majority decision. At the end of the election day, all three poll workers count the votes together and each writes up a vote tally (called *acta electoral*) for each race of the table. All three are required to sign each vote tally, acknowledging that they agree with the counted and registered results. Importantly, in 2018 the Electoral Code stipulated that after the elections take place the actual paper ballots are discarded, leaving the table-level tally as the lowest-level electoral document which can be inspected by parties and electoral administrators after the election day (Última Hora 2018a).

Despite this formal structure created to protect votes, there are several ways in which this setup can be subverted to benefit certain political parties through informal institutions (Helmke and Levitsky 2004). For example, although the electoral code stipulates that each party with reserved seats should have at most one poll worker at each table, in practice this is not always followed as vacancies on the day of the election often occur. These vacancies are most often filled by the Colorado and Liberal parties through election-day replacements of poll workers.⁷ Through our own conversations with political party activists and through focus groups done with political brokers by a local political scientist (Lachi 2009), we learned how poll worker representation is “fundamental” for parties and how some poll workers are bribed to skew results or not show up (Lachi 2009; Paraguay.com 2018).⁸ Although these quotes may be hyperbole, they indicate a possible scope for malfeasance and that parties care about having poll workers present. While poll workers are not paid by the election authority, established parties often pay poll workers to show up—as well as providing other benefits such as transportation and meals as this is not covered by the partisanship of the poll worker president has an independent effect on electoral results. The results do not show a clear pattern, which could be explained by the fact that ultimately the official result that counts within the tables is that of the majority (a minimum of 2 out of 3 poll workers).

⁷When a vacancy occurs, any voter at the present can become a poll worker if they are available.

⁸The article from Paraguay.com (2018) shows an anonymous political broker interviewed by journalists claiming that booths can be “bought” by bribing poll workers to distort the results.

election authority (Lachi 2009). Finally, party activists revealed to us that some parties encourage their voters to show up to polling stations early in case the pre-registered poll workers do not show up. Given that by law each electoral table has to have three members, if the pre-registered poll workers do not show up they can be replaced by any voter present in the polling station. We expect that this practice also tends to favor the established parties which have more affiliated voters.

Given that poll workers can be replaced from “fair allocations” (poll worker party distributions where no party has more than one poll worker) to “unfair” allocations where some party or coalition has a majority, our first two hypotheses concern the partisan allocations of electoral tables:

Hypothesis 1: All else equal, a established party that has a majority of poll workers in an electoral table (that is, either two or three out of three) will have higher vote shares in those tables, or the parties opposing that party with a majority will have lower vote shares in those tables.

Hypothesis 2: All else equal, parties completely lacking poll workers at an electoral table will tend to receive a lower vote share in those tables.

Our third hypothesis is concerned with the potential for differential opportunities for collusion under different electoral institutions. What is anecdotally said to occur is that Colorado and Liberal poll workers may collude to distribute among themselves the votes for remaining parties that do not have a representative at the voting booth (ABC Color 2018a; Lachi 2009).⁹ Allegations like this also emerged after the 2018 elections. A Paraguayan columnist remarked that his vote for a small party representing indigenous peoples was stolen (Colmán Gutiérrez 2018) as he observed *zero* votes for his party on the electoral table result published by the election authority. A similar allegation was made by another voter who voted for another small party (ABC Color 2018b). Further reports can be found in the OA. Results at the voting booth level can only be challenged during the counting process among poll workers, poll watchers, and party officers that are present,

⁹See OA Figure B3 for a newspaper infographic from ABC Color (2018a) alluding to how colluding coalitions of poll workers could alter the count.

which limits the ability of smaller parties to protect their votes.

If this is the case, we may expect collusion among Colorado and Liberal poll workers to take place more often under PR races than under SMDP races. To understand why we have to understand party-elite strategic behavior and strategic voting. According to Cox (1997), electoral systems provide a lower “upper limit” on the number of parties that can credibly compete for an electoral position which is equivalent to “ $m+1$ ” where m equals the district size. SMDP elections thus only allow for two credible options, but PR allows for more credible options depending on the district size. In Paraguay, the largest district corresponds to the Senate which has a single national district to select its 45 members, and deputy elections range from the largest district selecting 20 members (Central) to the smallest districts selecting only one member (Boquerón and Alto Paraguay), with an average district size of 4.44 across all 17 departments plus the electoral district of Asunción. Therefore, all else equal, voters will have fewer vote choices under SMDP than under PR. And given that the Colorado and Liberal parties (or parties in coalition with the Liberal party) are more likely to make it to the “top two” in SMDP races, there will be less of a scope for Colorado and Liberal parties to collude under SMDP. After all, when they are the only two options there will be no other parties for them to collude to take votes from. In contrast, given that in PR races more parties can credibly compete for a seat, then there is more scope for Liberal and Colorado poll workers to collude to undermine those other party votes. We thus predict:

Hypothesis 3: All else equal, PR races provide more scope for collusion among the Liberal and Colorado parties against other parties. Hence, a majority of Colorado and Liberal party poll workers will have a stronger negative effect on the proportion of votes cast for small, non-established parties under PR than under SMDP.

2 Data

We assembled a highly disaggregated database for the 2018 Paraguayan general election. These elections had around 1,100 polling stations with approximately 21,000 electoral tables nested within them. The median and mean number of tables within a polling station are 16 and 19 respec-

tively. Again, within each electoral table, paper ballots are given for each of six individual races and thus six table-level vote tallies exist.¹⁰ To explore our research questions we rely on three kinds of data: (1) the electoral results, (2) data on the characteristics of voters, and (3) data on the characteristics of electoral tables—including the partisan support of the poll workers.

The most straightforward data we obtained were the electoral results. The electoral court (the Supreme Tribunal for Electoral Justice or TSJE for its acronym in Spanish), published the electoral results at the booth level online for this election and we downloaded it. Second, we obtained data on the characteristics of voters from a variety of sources. First, we relied on the 2018 electoral registry from the TSJE. This dataset gives us information about all registered voters in the country, including their national identification number, and information about which polling station and electoral table each voter was assigned to by the TSJE. In addition, because the TSJE assists political parties with organizing their party primaries, it collects data on the partisan affiliation of each registered voter from political parties. We match the 2018 electoral registry to the partisan support data through voters' ID numbers, which allows us to identify the proportion of partisan support for each party at each electoral table in the 2018 general election.

Finally, we obtained data on the partisanship of poll workers from two different sources. First, before each election, political parties pre-register their volunteer partisan poll workers with the TSJE. These data from the TSJE gives us the “planned” allocation of poll workers to electoral tables and the party they support. However, one limitation of these data is that on election day only some of the pre-registered poll workers make it to their electoral tables, thus some electoral tables experience election-day absences. Simply looking at the pre-registered allocation of poll workers to tables is insufficient, because we need to observe the *de facto* allocation of poll workers to electoral tables—that is, those that actually showed up on election day.

To acquire information on the *de facto* allocation of poll workers to electoral tables we scraped the TSJE's website for scans of quick count vote tallies of each electoral table for each electoral

¹⁰Residents of the capital and abroad do not vote for governors nor departmental legislators.

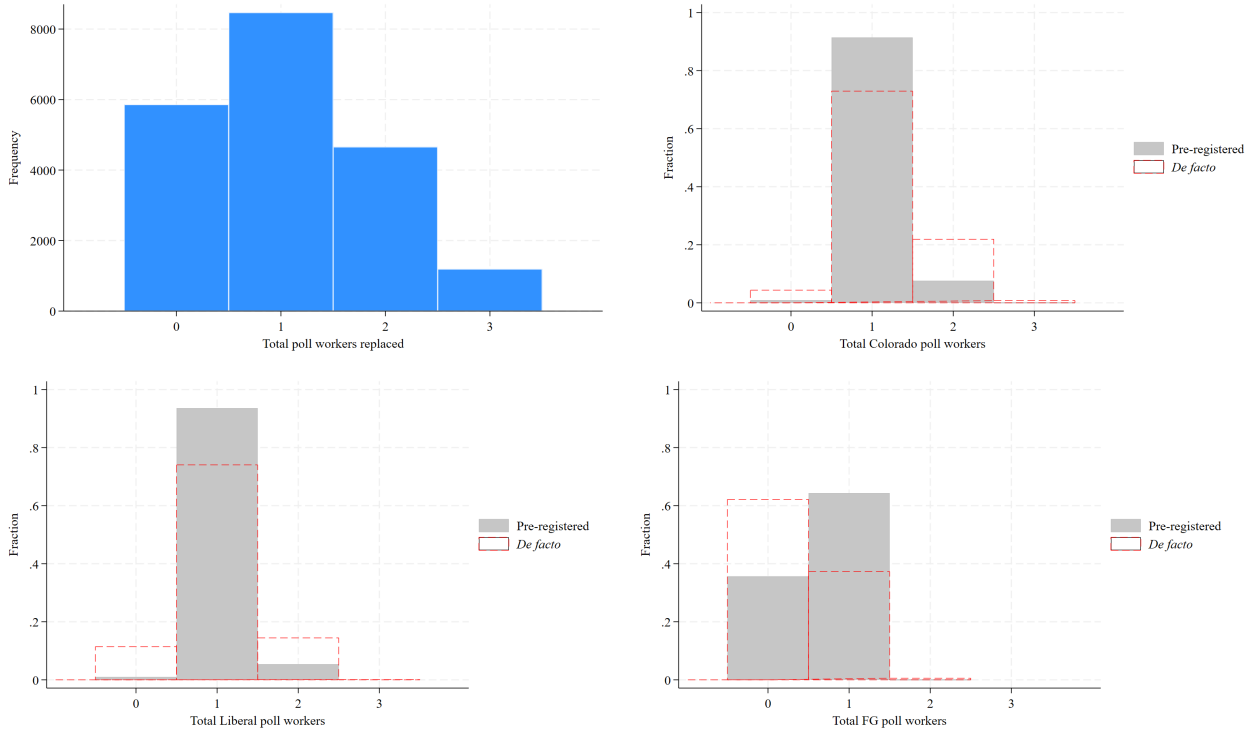
race. This gave us around 120,000 quick count vote tallies for all electoral tables.¹¹ Interestingly, these vote tallies required poll workers to sign them and write their national ID numbers at the bottom of the tallies.¹² We then digitized the national ID numbers written by poll workers on their vote tallies, and checked whether these corresponded to the pre-registered poll workers or whether a poll worker was replaced by merging our datasets at the national ID level. To obtain the partisan support of replacement poll workers we merge in the partisan support datasets mentioned above.

In the first panel of Figure 1 we find that most tables had one or more poll workers replaced, as we graph the frequency of tables that had a certain number of poll workers replaced. In fact, more than 21,000 poll workers (more than a third of pre-registered poll workers) were replaced. In panels 2-4 of Figure 1, we show these replacements favored some parties at the expense of other parties, as we show the proportion of tables with a certain number of Colorado, Liberal, and FG poll workers. The histograms in gray show how the pre-registered allocation of poll workers is relatively balanced as the main parties have only one poll worker per electoral table at most tables. In contrast, the election-day *de facto* allocation of poll workers outlined with dashed lines is skewed towards the two main parties (Colorado and Liberal), particularly the Colorado party. Instead, the FG and other parties more generally lose a substantial portion of poll workers on election

¹¹OA Figure C1 shows all the quick count tallies from one electoral table.

¹²Although some poll workers could have forged the signature and ID number of pre-registered poll workers we find this unlikely for several reasons. The first panel of Figure 1 shows more than a third of all pre-registered poll workers get replaced, showing that a substantial number of replacement poll workers acknowledge they are not the pre-registered ones. It was also not expected that the quick count vote tallies would be made available to the wider public, because these elections were the first ones where this occurred. Third, working as a poll worker is anecdotally a task that ambitious members of the established parties (Colorado and Liberal) perform to climb up their parties' political ladder. Recording their names and ID numbers honestly allows party officials to know who supported the party as poll workers during the elections.

Figure 1: Pre-registered and *de facto* allocation of partisan poll workers



day. Further details on the data construction, descriptive statistics, and comparisons between pre-registered and *de facto* poll workers are in OA Section C.

3 Empirical Strategy

The difficulty with disentangling the effect of partisan poll workers on electoral results is the secret ballot. Although beneficial as it allows voters to express themselves honestly (Baland and Robinson 2008), the secret ballot makes it difficult to identify irregularities as we cannot observe whether the final votes were accurately registered at a booth or not, as we never see individual votes. What is interesting about the Paraguayan case is the quasi-random allocation of voters to booths. In Paraguay, citizens vote at polling stations which tend to be close to their homes and are usually schools. Within polling stations, voters are assigned to booths alphabetically—according to the first letters of their surnames. Voters are ordered alphabetically among those from their polling

station and every group of 200 voters gets their own voting booth.¹³ Similarly to Casas, Díaz and Trindade (2017), we test whether surnames' first letters are uncorrelated with political preferences and electoral results. If names are unrelated to political preferences, we have a quasi-random assignment of voters to booths which allows us to credibly assume that similar electoral outcomes should be recorded across booths within the same polling station. Hence, any strong deviance in electoral results within stations suggests that differences across tables are due to qualities of the tables themselves (particularly the partisan poll workers) and not the preferences of voters.

We run tests to test whether the alphabetical assignment of voters to voting booths within polling stations can be considered quasi-random. We do this by testing directly for the association between voters' partisan support and their surname initials, and also confirming whether our results are robust to controlling for the proportion of voter surnames' initials. To our knowledge, we run the most direct test of this identification strategy thus far in the literature. Other papers that rely on this identification strategy have used proxies for the political preferences of voters instead of their partisan affiliation and support according to the election authority. Cantú (2014) tests whether voters' surname initials correlate with TV viewership or being an *Oportunidades* (conditional cash transfer) recipient. Casas, Díaz and Trindade (2017) test whether surname initials correlate with congressional candidates' parties and whether surname initials correlate with employee wages from a specific municipality. Our more detailed analyses on the relationship between voters' political preferences and their names can be found in OA Section D.

Our results provide a rationale for our assumption that the assignment of voters to booths is a quasi-random assignment. Thus, any strong deviance in results recorded across booths within a polling station are likely due to the partisan representation of poll workers in booths after we control for polling station fixed effects. Then by focusing on differing allocations of partisan poll workers in booths and using polling station fixed effects, we explore variation *within* polling

¹³Given that most polling stations do not have an exact multiple of 200 voters, the last booth in each station often does not have exactly 200 voters.

stations *between* booths. There is a large literature on the determinants of election irregularities that highlights variables such as socioeconomic inequality (Ziblatt 2009), political competitiveness (Lehoucq 2003), community social networks (Duarte et al. Forthcoming; Ravanilla, Haim and Hicken 2022), among others. This design controls for these variables and others such as local state capacity, partisan control of the municipal or state government, urban vs. rural districts, among others. Still, one caveat from our empirical strategy is that we do not capture variation in electoral malfeasance across polling stations, as we net these out with polling station fixed effects.

To operationalize the allocation of partisan poll workers, we developed several different indicator categories. When all three poll workers at an electoral table support the same party, we have what we call a “trifecta.” In our most common regression specifications, we then include dummy variables for Colorado and Liberal party trifectas separately. We also generate additional variables for when two out of the three poll workers at an electoral table support the same party, which we refer to as an “advantage.” For the “advantage” indicator variables we separate these into four types: “Colorado advantage + Liberal,” “Colorado advantage + Other,” “Liberal advantage + Colorado,” and “Liberal advantage + Other.” For these variables, “other” refers to a poll worker that is not registered as supporting either the Colorado or Liberal party. Our excluded category corresponds to voting booths with “fair allocations” having only one Colorado poll worker and one Liberal poll worker. Finally, we have an indicator variable for “other poll worker allocations”, which refer to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced above. For example, a voting booth with two FG poll workers or a voting booth with two poll workers not registered as supporting any party would correspond to this “other poll worker allocation” category. Given the way these indicator variables are defined, they are all mutually exclusive and together cover all voting booths in our data.

If we treated our data as resulting from a natural experiment, we would include polling station-level fixed effects and model several sets of dependent variables of interest, such as vote shares at

the booth level for (1) the Colorado party, (2) the Liberal party or GANAR Alliance,¹⁴ and (3) all other parties. Hence, we would run regression specifications with the following format:

$$\begin{aligned}
 Y_{ab} = & \beta_0 + \beta_1 \text{Colorado_Trif}_{ab} + \beta_2 \text{Colorado_Adv_Oth}_{ab} + \beta_3 \text{Colorado_Adv_Liberal}_{ab} \\
 & + \beta_4 \text{Liberal_Adv_Colorado}_{ab} + \beta_5 \text{Liberal_Adv_Oth}_{ab} + \beta_6 \text{Liberal_Trif}_{ab} + \beta_7 \text{Other_pw_alloc}_{ab} \\
 & + \theta_a + \varepsilon_{ab},
 \end{aligned}$$

where Y is some electoral outcome for voting booth b belonging to polling station a , and θ is a polling station fixed effect. Our coefficients of interest are the β 's which capture the potential effect of different partisan poll worker allocations on electoral results.

Still, we address two potential selection issues. First, given that party leaders are aware that poll workers matter for elections, prior to the elections they may prioritize pre-registering their poll workers at certain electoral tables over others. Second, because political parties have different operational capacities and party membership at certain localities, locally high-operational capacity parties are more capable of filling poll worker vacancies. To make sure our causal inference design is sound, we explore these two potential selection problems in the following section.

3.1 Exploring Selection

Parties can use several strategies to assign poll workers to polling stations and voting booths to skew elections in their favor. Through the use of polling station-level fixed effects, the remaining selection problems we must deal with relate to within-station selection strategies that parties may pursue. We posit that there are two main selection strategies, and we will call them *central strategies* and *capacity-based network strategies*. Neither of these are necessarily “better” or “worse” in terms of electoral fairness, but they do present potential threats to our identification strategy.

Central strategies deal with the role that centralized party organizations play months before the

¹⁴For several races, the Liberal party and several smaller parties banded together to present a single “GANAR” alliance (Liberal party, PRF, PDP, PEN, AP, PMAS, and FG). Yet in practice, the Liberal party mainly ran its own candidates through it, with FG running separately.

elections. Parties can use information that they have at hand about their electorate to strategically pre-register copartisans at electoral tables. One key piece of information that we expect party organizations to have is the proportion of voters affiliated to their parties assigned to each electoral table. With this information parties may: (1) place copartisan poll workers in tables with higher proportions of *their own* voters to protect the votes for their own party, or (2) place copartisan poll workers in tables with higher proportions of *opposing party affiliates* to dampen the votes of the opposition. The key idea here is that these party strategies are centralized and premeditated actions taken to protect (or undermine) votes. Because this behavior may be systematic, it can create selection problems that undermine our identification strategy if not controlled for.

Next, *capacity-based network strategies* allow parties to achieve a copartisan poll worker replacement at tables where they have more affiliated copartisans. This selection issue may be systematically related to outcomes recorded at tables because: (1) tables with more copartisans are more likely to have favorable outcomes for that party, and (2) a party's ability to place copartisan poll workers after a vacancy should be more likely with higher levels of registered copartisans. Hence, this mechanism results from copartisan networks acting in a decentralized manner.

To explore these two selection mechanisms we run three different regression models on Table 1. For both strategies we expect that the probability of a political party assigning a poll worker to an electoral table to correlate with the proportion of party affiliates at said table. Therefore, our three dependent variables are the proportion of: (1) Colorado party affiliates at a given table, (2) Liberal party affiliates at a given table, and (3) affiliates to any other political party at a given table. We include two groups of independent variables: (1) the centrally-planned *pre-registered* partisan allocation of poll workers to tables, and (2) the decentralized *de facto* partisan allocation of poll workers to tables. These groups of independent variables get at our two selection mechanisms mentioned above, and the partisan allocations of poll workers are operationalized using the indicator variable combinations of partisan poll workers previously discussed.

The main take-away from Table 1 is that the aforementioned strategies seem to be executed,

Table 1: Exploring party allocation strategies according to the proportion of affiliated voters

	% of Colorado voters (1)	% of Liberal voters (2)	% of other party voters (3)
Prereg. Colorado trifecta	1.5656 (1.9736)	-0.8783 (1.2282)	-1.3278** (0.6598)
Prereg. Colorado advantage + Other	-2.4710* (1.2812)	-0.3698 (1.0738)	-0.1382 (0.4615)
Prereg. Colorado advantage + Liberal	0.0903 (0.2092)	-0.1924 (0.1768)	0.0870 (0.0638)
Prereg. Liberal advantage + Colorado	0.0156 (0.2296)	0.1055 (0.2105)	0.0388 (0.0703)
Prereg. Liberal advantage + Other	-5.9477** (3.0004)	4.2494 (6.0294)	0.2792 (0.2751)
Prereg. other poll worker allocation	-5.8645** (2.6991)	3.4061 (2.5910)	-0.3407 (0.4298)
<i>De facto</i> Colorado trifecta	0.3145 (0.4248)	-0.0798 (0.3145)	-0.0640 (0.1851)
<i>De facto</i> Colorado advantage + Other	0.0704 (0.2201)	-0.1808 (0.1773)	0.0263 (0.1009)
<i>De facto</i> Colorado advantage + Liberal	0.0852 (0.1605)	-0.0987 (0.1334)	-0.0356 (0.0595)
<i>De facto</i> Liberal advantage + Colorado	-0.0340 (0.1718)	0.0701 (0.1505)	-0.0230 (0.0658)
<i>De facto</i> Liberal advantage + Other	-0.1820 (0.3648)	0.6906** (0.3390)	-0.0661 (0.1299)
<i>De facto</i> Liberal trifecta	2.1087 (1.4418)	0.0757 (1.2114)	-0.4266 (0.4629)
<i>De facto</i> fair allocation	0.1349 (0.1352)	-0.1771 (0.1116)	-0.0144 (0.0523)
Mean of Dependent Variable	34.1749	17.3445	17.3445
Polling station FE	✓	✓	✓
Observations	20,354	20,354	20,354
R^2	0.7523	0.7930	0.4503

Note: A unit of observation is a voting booth. Standard errors are robust. The regressors correspond to either pre-registered or election-day (*de facto*) partisan poll worker allocations. A trifecta indicates all three poll workers from the same party work at the voting booth. There is no pre-registered Liberal trifecta in our data so we do not include it as a regressor. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with a pre-registered “fair allocation” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The *de facto* “other poll worker allocation” variable is collinear with the remaining regressors and is thus omitted from the output.

even after controlling for polling station fixed effects. The first column shows that the Colorado party uses a more centralized approach. Also, the Colorado party appears less concerned with gaining a majority of poll workers where it has fewer Colorado supporters, given the negative correlation between the proportion of Colorado voters at tables with two Liberal poll workers and one poll worker from another party. The second column shows that the Liberal party's behavior seems related to election-day replacements (through the *capacity-based network* mechanism). It shows that a *de facto* allocation with two Liberal poll workers and a poll worker from another party is more likely at tables with more Liberal voters. Finally, the third column shows that a pre-registered Colorado party trifecta is less likely at tables with a high proportion of voters supporting other political parties (i.e., neither the Colorado nor Liberal party).¹⁵

Several of these findings make intuitive sense. The Colorado party, Paraguay's largest party and the party of the 1954-1989 dictatorship, seems to take a more centralized approach with the pre-registered poll workers. Media reports (Última Hora 2022, 2023) suggest that the Colorado party, long in power and dominant of the central bureaucracy through political patronage, pressures civil servants to "volunteer" on election day. This may explain why the Colorado party is better at centralized strategies, as it can use its resources to ensure those assigned to a particular voting booth actually make it to that booth on election day. Evidence of Colorado influence on public servants was widespread in 2018 (Última Hora 2018b). In contrast, the Liberal party is less centralized in this respect. Although the Liberal party does control certain bureaucracies, most of this party's strength has usually been at the municipal or departmental level (BTI 2024), which may explain its more decentralized approach. Furthermore, the Liberal party is different than the Colorado party in that it has more intra-party factions, and different intra-party factions tend to have different regional strengths (Carrizosa 2018), which may also explain its decentralized approach.

While understanding the full causes of these strategies is beyond the scope of this paper, we

¹⁵In subsequent tables the trifecta coefficients are usually not significant, and this is most likely because trifectas are so infrequent that the statistical power for this dummy variable is low.

foresee several avenues for future work to analyze the strategic placement of poll workers. For example, questions remain about centralized assignments. If by law all pre-registrations should be “fair,” why do we find some partisan majorities at the pre-registration stage? It is likely the case that some parties do not have the capacity to pre-register poll workers for all tables, and this is taken advantage by the dominant parties (especially the Colorado party), but this appears to be an informal practice for which there is no published evidence. Furthermore, how do capacity-based network strategies counteract strategies made at the centralized level (which is transparently laid out for all to see)? Do capacity-based network strategies seek to strengthen weaknesses a party displayed at the centralized stage? Or do parties reallocate their resources strategically to competitive districts? Questions about this process provide fertile ground for further research.

The evidence above indicates partisan selection strategies constitute a potential confounder in our estimation of poll worker effects on electoral outcomes. Political parties in Paraguay are strategic in terms of how they allocate poll workers to electoral tables, even after controlling for polling station-level fixed effects. These selection issues are important to take into account when we focus on the effects that poll workers have on electoral outcomes in Section 5. We thus control for the proportion of voters supporting the Colorado, Liberal, and other political parties at the electoral tables to control for the possibility of strategic allocations by parties.¹⁶ This allows us to further isolate how the partisan allocation of poll workers affects electoral outcomes independent of the preferences of voters and political parties’ allocation strategies.

In addition, given that in Section 5 we emphasize analyses pooling all electoral races together, we add fixed effects for every combination of polling station and electoral race. This allows us to only compare across voting booths from the same polling station and electoral race. This way we can account for differences between electoral races within each particular polling station—differences such as candidate characteristics and party options. We do not control for pre-registered allocations since this would be collinear with the *de facto* allocations and these are less relevant

¹⁶This covariate is informative as $\sim 77\%$ of the electorate had a partisan affiliation.

compared to the true poll worker representation during the election. Thus, our main regression specification has the following format:

$$\begin{aligned}
Y_{abc} = & \beta_0 + \beta_1 \text{Colorado_Trif}_{ab} + \beta_2 \text{Colorado_Adv_Oth}_{ab} + \beta_3 \text{Colorado_Adv_Liberal}_{ab} \\
& + \beta_4 \text{Liberal_Adv_Colorado}_{ab} + \beta_5 \text{Liberal_Adv_Oth}_{ab} + \beta_6 \text{Liberal_Trif}_{ab} + \beta_7 \text{Other_pw_alloc}_{ab} \\
& + \delta_1 \text{voter_prop_Colorado}_{ab} + \delta_2 \text{voter_prop_Liberal}_{ab} + \delta_3 \text{voter_prop_Other}_{ab} + \eta_{ac} + \varepsilon_{abc}.
\end{aligned} \tag{1}$$

where Y is an outcome for race c at voting booth b belonging to station a , and η is a fixed effect for each combination of electoral race and polling station. Our coefficients of interest are still the β 's which capture the potential effect of different partisan poll worker allocations on electoral results, after further controlling for voters' preferences and political parties' allocation strategies.¹⁷

4 Modeling Electoral System Effects

We next leverage our data to identify differential incentives for partisan poll workers by electoral system. As there are separate ballots for separate races, poll workers have independent opportunities to change their behavior when registering votes for one race and another.

To test for differential incentives, we generate an indicator variable for PR races (i.e., the senatorial, MERCOSUR parliament, deputies', and departmental council races). In regressions including observations from all electoral races, we interact the PR race indicator variable with each of the indicator variables for different allocations of partisan poll workers. That is:

$$\begin{aligned}
Y_{acb} = & \beta_0 + \alpha_1 \text{Colorado_Trif}_{ab} \times PR_c + \alpha_2 \text{Colorado_Adv_Oth}_{ab} \times PR_c + \alpha_3 \text{Colorado_Adv_Liberal}_{ab} \times PR_c \\
& + \alpha_4 \text{Liberal_Adv_Colorado}_{ab} \times PR_c + \alpha_5 \text{Liberal_Adv_Oth}_{ab} \times PR_c + \alpha_6 \text{Liberal_Trif}_{ab} \times PR_c \\
& + \alpha_7 \text{Other_pw_alloc}_{ab} \times PR_c + \beta_1 \text{Colorado_Trif}_{ab} + \beta_2 \text{Colorado_Adv_Oth}_{ab} + \beta_3 \text{Colorado_Adv_Liberal}_{ab} \\
& + \beta_4 \text{Liberal_Adv_Colorado}_{ab} + \beta_5 \text{Liberal_Adv_Oth}_{ab} + \beta_6 \text{Liberal_Trif}_{ab} + \beta_7 \text{Other_pw_alloc}_{ab} \\
& + \delta_1 \text{voter_prop_Colorado}_{ab} + \delta_2 \text{voter_prop_Liberal}_{ab} + \delta_3 \text{voter_prop_Other}_{ab} + \eta_{ac} + \varepsilon_{abc},
\end{aligned} \tag{2}$$

¹⁷Throughout our analyses we use robust standard errors, given that our polling station fixed effects are nested within other clusters we could potentially use (e.g., municipality).

where Y is some electoral outcome for electoral race c at voting booth b belonging to polling station a , and η is a fixed effect for each combination of electoral race and polling station. The coefficient for PR race is omitted because it is collinear once we control for polling station-electoral race fixed effects. Our coefficients of interest are the α 's which capture the differential effect of partisan poll worker allocations on electoral results from PR races.

5 Main Results

We now turn to our main dependent variables of interest, the vote shares each political party receives.¹⁸ We explore whether the allocation of partisan poll workers affects registered electoral results *independent of voters' preferences* by relying on the as-if random assignment of voters to tables, focusing on variation within polling stations, and controlling for selection effects using the proportion of partisan voters at each booth. Overall, our results show a small but consistently significant effect of partisan poll workers on electoral outcomes. Having more Colorado poll workers is advantageous to the Colorado party and detrimental to the Liberal party, and having more Liberal poll workers is advantageous to the Liberal party and detrimental to the Colorado party.

To test hypotheses (1) and (2) from Section 1, Table 2 examines the effect of poll workers on parties' vote share by pooling together observations from all elections and running equation (1). The dependent variables are the vote shares for the Colorado party, the Liberal party or GANAR alliance (which primarily ran Liberal party candidates), and other parties. In Column (1) we can observe that the Colorado party vote share increases significantly by around 0.43 and 0.51 pp, when the Colorado party has two poll workers counting votes. We also observe that if only the Liberal party is counting votes through a trifecta, the Colorado party vote share decreases significantly by

¹⁸The vote shares have valid votes (turnout minus null and blank votes) as the denominator as only valid votes are taken into account when calculating the congressional seat shares in PR races and determining the winner in plurality races. We focus on vote shares instead of absolute votes as vote shares do not confound the results with differences in turnout. In OA Section F we estimate the total number of votes affected by partisan poll workers through a simulation exercise.

1.95 pp. Yet we take these trifecta results with a grain of salt because only 17 electoral tables have a Liberal trifecta, whereas the Colorado party has a trifecta at 157 electoral tables.

In Column (2) we notice that the Liberal/GANAR vote share increases significantly by around 0.21 pp when there are two Liberal poll workers and a poll worker registered to the Colorado party counting votes. We also observe how the Liberal/GANAR vote share decreases significantly whenever the Colorado party has two or three poll workers counting votes. This result is robust to controlling for the proportion of partisan voters at each booth and it is interesting how this result varies symmetrically depending on which party has a poll worker majority at the table. In particular, the average decrease in the Liberal/GANAR vote share is 0.38 when there are two Colorado party poll workers and one Liberal poll worker, around 0.5 when there is a Colorado poll worker and a poll worker not registered to the Colorado or Liberal party, and 0.51 if only the Colorado party is counting votes with a trifecta. We can also notice that “other poll worker allocations” lead to a significant decrease of approximately 0.16 pp. This is plausible as these other poll worker allocations (which occur at 2,563 electoral tables in total, around 12% of our sample of tables) include poll worker allocations where other parties have a majority of poll workers.

In Column (3) we can observe that if other parties lack representation at an electoral table and only the Colorado and Liberal party are counting votes, then other parties experience a significant decrease in their vote share. In particular, they experience a decrease of around 0.13 pp and 0.17 pp if either the Colorado or Liberal party have two poll workers and the remaining party poll worker also belongs to the Liberal party or Colorado party. We also observe a positive and significant increase in other parties’ vote share whenever the Liberal party has a trifecta counting votes. This result may be due to the Liberal party supporting other parties in the vote count, because often the Liberal party and other parties find themselves in the opposition to the Colorado party, yet it might also be idiosyncratic because there are only 17 electoral tables with Liberal trifectas. Lastly, we find that other poll worker allocations lead to a significant increase of approximately 0.13 pp in other parties’ vote share. This is again plausible because other poll worker allocations include the

cases where other parties have a majority of poll workers counting votes. In short, having a poll worker majority tends to be beneficial for parties' vote share while lacking a majority or having no representation tends to reduce parties' vote share, as posited in Hypotheses (1) and (2).¹⁹

In OA Section E we present additional regression specifications and robustness checks that we performed on our main findings. In results available upon request, we examined whether the presence of any partisan poll worker (regardless of the number) can explain the electoral results on the electoral races. To do so, we generate indicator variables for whether there is at least one of the following types of poll workers in an electoral table: Colorado supporter, Liberal supporter, other party supporter, and so on. Although we obtain some similar results to the ones we show on the main text, these regressions are less informative because the official results for each voting booth are decided by what the majority of poll workers choose at an electoral table. That is, it seems that our effects are significant when a party has a majority at a voting booth, which makes intuitive sense since legally only a majority of poll workers is required to officialize results within each booth.

5.1 Heterogeneity by Electoral System

Next, to test Hypothesis (3) we explore the heterogeneous effect of partisan poll workers by electoral system. Two electoral races in 2018 were defined by SMDP voting (president and governor), whereas the remaining four were defined by a PR system (senator, MERCOSUR parliament, deputies, and departmental council). Hypothesis (3) suggests that electoral systems create different opportunities for dominant-party collusion. SMDP often results in the presence of fewer candidates from smaller non-established parties, limiting the scope for established parties to collude against smaller rivals. In contrast, PR enables more small parties to compete, expanding the opportunities for dominant parties to influence outcomes to their advantage against smaller parties.

Table 3 pools observations from all elections together and runs equation (2) to examine the

¹⁹In results available upon request due to page constraints, we find our results hold for each race separately.

Table 2: Effect of partisan poll worker composition on election results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Colorado trifecta	0.2820 (0.2029)	-0.5121*** (0.1847)	0.2301 (0.1752)
Colorado advantage + Other	0.4318*** (0.0954)	-0.4969*** (0.0790)	0.0651 (0.0820)
Colorado advantage + Liberal	0.5125*** (0.0493)	-0.3800*** (0.0455)	-0.1325*** (0.0433)
Liberal advantage + Colorado	-0.0328 (0.0525)	0.2063*** (0.0505)	-0.1735*** (0.0483)
Liberal advantage + Other	-0.2126 (0.1611)	-0.0035 (0.1406)	0.2161 (0.1442)
Liberal trifecta	-1.9481*** (0.5951)	0.4756 (0.5947)	1.4724*** (0.4649)
Other poll worker allocation	0.0246 (0.0646)	-0.1593*** (0.0597)	0.1347** (0.0578)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	117,229	117,229	117,229
R^2	0.8425	0.8869	0.9308

Note: A unit of observation is a voting booth–electoral race combination. Standard errors are robust. The Liberal always ran separately or through the GANAR alliance, hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated relative to valid votes. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker and one Liberal poll worker.

differential effect of partisan poll workers by electoral system. With the Colorado party vote share we find no differential effect of partisan poll worker allocations by electoral system because none of the coefficients from the interaction terms are significant. With the Liberal/GANAR vote shares we find that the interaction coefficient of PR race and having two Colorado party poll workers and one Liberal poll worker is *positive* and significant at the 10 percent level, with a coefficient of around 0.17 pp for the Liberal/GANAR vote share. With Other party vote share we find that the interaction between a PR election and either a Colorado majority with one Liberal worker or a Liberal majority with one Colorado worker both reduce the vote share for other parties.

We believe this table displays evidence of collusion in PR elections for two reasons. First, column 3 shows that having three established party members—regardless of whether the Colorado or Liberal party has a majority—is detrimental to other parties in PR races. This is what we would expect with Hypothesis (3). Secondly, we also observe differential effects on the Liberal party vote share, where a Colorado majority with one Liberal party poll worker increases the vote share for the Liberal party in PR races relative to SMDP races.

In SMDP races, strategic coordination favors the largest opposition party: smaller parties either yield the candidacy to the Liberals or ally with them (as in the GANAR alliance, which had a Liberal presidential and FG vice-presidential candidate). In contrast, the Colorado party does not enter in alliances with other parties—while they are allowed to by the Electoral Code, their internal party rules forbid alliances with other parties. The scope for collusion is thus broader for Liberal poll workers. To see why, consider a voter that votes for GANAR in the presidency because of the FG vice-president, and then votes for FG in the Senate PR election. Given that separate ballots exist for separate races, a Liberal party poll worker might decide to protect that voter's ballot in the presidential election, but undermine that same voter's ballot in the Senate race. The combination of findings from Columns 2 and 3 above seem to suggest that these differential incentives for Liberal party poll workers exist and affect their behavior. They also suggest that the behavior found on the vote tally from OA Figure B1 with two Colorado poll workers and one Liberal poll worker might

be more systematic than anecdotal media reports (ABC Color 2018a; Colmán Gutiérrez 2018).

5.2 Mechanisms

In the two previous sections we have shown evidence that partisan poll workers are important. Parties that lack poll-worker majorities in a given table tend to be disadvantaged. We also found that the extent of this disadvantage varies by electoral system, likely because PR races provide greater scope for collusion among established parties. However, it is unclear exactly what poll workers do to provide this systematic advantage to their political parties. Below we explore several potential mechanisms for how exactly poll workers benefit their parties.

First, there is a possibility that partisan poll workers are better at *monitoring* whether voters make good on their turnout-buying agreements, or that voter suppression leads to lower levels of turnout. Otherwise, there may be real differences in votes counted across tables. Either way, we may expect either higher levels of turnout or lower levels of turnout where a given party had a majority of table members. Second, we explored whether poll workers affected blank votes—because partisan poll worker majorities could decide to fill-in blank votes with votes for their parties. If this were the case we would expect fewer blank votes in tables where a party held a majority of poll workers. Finally, we also explored whether poll workers affected null votes—as partisan poll worker majorities could unfairly annul opposition votes or unfairly count null votes as valid votes for themselves. If this were the case, we would expect deviations in null votes in tables where a party held the majority of poll workers. By treating turnout, null and blank votes as dependent variables, we attempt to disentangle how partisan poll workers benefit their parties. OA Table E4 examines the effect of poll workers on turnout, null votes, and blank votes.

In terms of turnout, we find some evidence that one table composition might have an effect. Specifically, tables where there is a Liberal advantage + Other composition tend to have a slightly higher turnout on average (1 additional vote). This result is ambiguous however, as an increase in turnout could potentially indicate real votes being counted or boosting turnout through monitoring turnout buying. In addition, with the remaining poll worker allocations there could be a mix

Table 3: Effect of partisan poll worker composition on election results by electoral system

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Colorado trifecta × PR race	-0.5625 (0.4166)	0.1364 (0.3948)	0.4261 (0.3124)
Colorado advantage + Other × PR race	0.0317 (0.1976)	0.0117 (0.1750)	-0.0434 (0.1440)
Colorado advantage + Liberal × PR race	0.1232 (0.1032)	0.1718* (0.0982)	-0.2949*** (0.0754)
Liberal advantage + Colorado × PR race	0.0514 (0.1097)	0.0887 (0.1072)	-0.1401* (0.0848)
Liberal advantage + Other × PR race	0.1243 (0.3316)	-0.1741 (0.3116)	0.0498 (0.2596)
Liberal trifecta × PR race	0.0301 (1.1852)	-0.6823 (1.2005)	0.6522 (0.8066)
Other poll worker allocation × PR race	0.1203 (0.1356)	-0.1856 (0.1292)	0.0653 (0.1024)
Colorado trifecta	0.6614** (0.3292)	-0.6040* (0.3248)	-0.0574 (0.1983)
Colorado advantage + Other	0.4104*** (0.1575)	-0.5047*** (0.1485)	0.0943 (0.0877)
Colorado advantage + Liberal	0.4295*** (0.0831)	-0.4957*** (0.0816)	0.0663 (0.0449)
Liberal advantage + Colorado	-0.0673 (0.0883)	0.1469* (0.0874)	-0.0796 (0.0511)
Liberal advantage + Other	-0.2959 (0.2627)	0.1130 (0.2648)	0.1830 (0.1667)
Liberal trifecta	-1.9683** (0.9019)	0.9328 (0.9306)	1.0355** (0.4775)
Other poll worker allocation	-0.0564 (0.1096)	-0.0345 (0.1075)	0.0909 (0.0635)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	117,229	117,229	117,229
R^2	0.8425	0.8869	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker and one Liberal poll worker.

of strategies including truly counting all votes, or results being manipulated by either stuffing ballot boxes or discarding opposition votes, which might also explain why other coefficients are not significant. Thus, the table-level effects of partisan poll workers on turnout cannot be fully discerned.

In terms of blank votes, it is conceivable that Liberal and Colorado majority poll workers could use their positions to fill in blank votes in support for their parties, thus increasing votes for their parties. Hence, we would expect tables with Liberal or Colorado majorities to have fewer blank votes on average. Yet we do not find evidence for this behavior in our regressions in OA Table E4.

In terms of null votes, we may have expected that when either the Colorado or Liberal party has a majority, then there might be *more* null votes, as these majorities could discard opposition votes. Instead, we find evidence of significantly *fewer* null votes on average in tables where either the Colorado or the Liberal party hold majorities. This result suggests that perhaps established party poll workers could be putting in an extra effort to “protect” votes that would otherwise have been discarded as null votes. That being said, the size of these coefficients is an order of magnitude lower than the effects we observe on party vote shares. While this may be one channel through which irregularities take place, it is unlikely to fully account for our partisan poll-worker effects.

Hence, while we are confident that partisan poll workers provide a small yet significant benefit for high-capacity parties, there is no single mechanism through which these advantages seem to be produced. This may be due to different tables using different strategies, which cumulatively produce an effect, but separately are too small to be identified. We found some evidence that certain table compositions affect turnout, but there is mixed evidence about exactly how the turnout effect is taking place—whether through turnout buying or voter suppression. Furthermore we find some evidence that table compositions affect null votes, where established parties seem to “protect” votes from being annulled. However, there may be further mechanisms through which electoral irregularities take place which we may have been unable to identify. In short, while we observe partisan poll workers provide advantages to their parties, our findings are mixed about the exact

strategies they use to produce these advantageous results.

6 Discussion

Substantively, our empirical results show four things. First, we show that having more poll workers benefits political parties. On average, having one more partisan poll worker compared to a “fair allocation” of poll workers (one Colorado, one Liberal, and one non-Colorado/Liberal) yields about a 0.5 pp (0.2 pp) vote share increase for the Colorado party (Liberal party) at each voting booth.

Second, our identification strategy focuses on analyzing variance *within* polling stations, and effectively discards variance *between* stations. This means we are able to rigorously identify how the partisanship of poll workers affects electoral outcomes independent of the preferences of voters *within* polling stations, but we cannot measure differences *between* stations. This implies that we cannot measure the effect on electoral outcomes that arises in polling stations with the same partisan poll worker allocation at all booths, as there would be no variation in partisan allocation among booths within the station. Notwithstanding, in OA Section F we find that one departmental council seat would have been won by the Liberal party instead of the Colorado party if we simulate the electoral results with each electoral table as having a “fair” poll worker allocation (one Colorado, one Liberal, and one poll worker that is neither Colorado nor Liberal). Although the average effects we estimate are small, this exercise highlights their potential to be pivotal: in close races, small margins can decide representation. This underscores that even modest partisan-poll worker effects can carry real political consequences, particularly in fragmented party systems or tightly contested districts.

Third, we also found effects for smaller political parties. In short, these parties often lost out because of their inadequate capacity to deploy poll workers. When all three poll workers at an electoral table belonged to the Colorado and Liberal parties, then other parties tended to lose votes—regardless of which of the two parties held a poll worker majority. This finding shows that those parties that lack poll worker representation at voting booths are harmed by the adversarial system which relies on explicit interests being represented.

Perhaps it is not a coincidence that most of the countries where explicitly partisan representatives can be poll workers or polling station administrators correspond to flawed democracies and hybrid regimes (Economist Intelligence Unit 2022). For example, *The Economist* (*The Economist* 2017) revealed recordings of training sessions for partisan poll workers from Honduras’s incumbent party in 2017 that included advocating for electoral irregularities. Among the main methods mentioned was obtaining poll workers’ credentials from smaller parties (in an effort similar to the replacements we document in our context). The 2017 Honduran elections, which were narrowly won by the incumbent amid numerous irregularities (*New York Times* 2017), could have been determined by partisan poll workers. Consistent with this, if we follow the definition of established parties from Lupu (2016) and use data on 111 Latin American presidential elections going from 1990 to 2018, we find a positive relationship between partisan poll workers and established party support. That is, established parties in Latin America receive higher vote shares in countries with partisan poll workers (see OA Section G).

Finally, given the independent paper ballots used in Paraguay for each electoral race, we explored whether partisan poll workers behave strategically. Cox (1997) has previously argued that voters act strategically to minimize “wasted votes.” We argue that poll workers also face strategic choices when deciding when to count votes accurately—and maybe when not to. Specifically, in SMDP races, established party poll workers may have less scope to collude against smaller parties because elite-level strategic coordination likely reduces the number of parties competing in those races to candidates that are members of established parties or are allied with established parties. In contrast, as strategic coordination under PR allows for more candidates from smaller parties to compete, then established parties will have a larger scope to collude against smaller parties in PR races than under SMDP races. Our findings support this reading as we found that having two Colorados and one Liberal or having two Liberals and one Colorado both reduced the vote shares for other parties further in PR races than in SMDP races. In other words, even though strategic voting under PR enhances the prospects of smaller parties relative to SMDP, strategic behavior

from established party poll workers can counteract this gained openness to an extent.

7 Conclusion

Elections are designed for representing voters' political preferences and subsequently affecting political outcomes. The ideal of free and fair elections is that voters can freely choose among political parties that compete on equal footing. The contrast to free and fair elections is “hybrid” or “competitive authoritarian” regimes where competition exists, but it is skewed in one party's favor (Diamond 2002; Levitsky and Way 2010).

In Paraguayan elections, the system for counting votes is partisan and adversarial. In theory this is a neutral system which protects votes because parties mutually control results, leading to an accurate count. Yet we have shown that in Paraguayan elections political parties have unequal poll worker representation across voting booths and that this affects how their votes are counted. In other words, parties' operational capacity has an electoral effect which is independent from the choices of voters.

Our models showed that parties able to have a majority of poll workers in a single booth receive a systematic advantage in the electoral results registered in those same booths—independent of voter preferences.²⁰ We also uncover how incentives for partisan poll workers vary by electoral system in the type of contest we study. Our findings also suggest that party capacity matters *more* in PR elections. This is because alliances between established parties and smaller parties in SMDP races benefit these SMDP candidates, whereas PR races promote more small-party candidates—which do not enjoy the protections of established parties' capacity.

In sum, our paper shows another reason why political parties are important to the functioning of democratic political systems. If “ambition must be made to counteract ambition” as James Madi-

²⁰While our statistical findings point to an average effect from partisan poll worker majorities, this does not mean all voting booths with this configuration had biased vote counts. Our results do not allow us to uncover the individual voting booths driving our results.

son famously stated in Federalist No. 51, then it is important that the different parties or factions are of somewhat equal capacity, so that none may fully dominate. The comparable capacity of parties to access, defend, and lobby for their rights is not a given throughout the world. As Lehoucq (2002) argues, electoral systems where non-partisan officials are responsible for organizing and certifying election results tend to fare better in terms of electoral integrity than those where partisan officials are in charge. Our study points to the conclusion that capacity-matched parties may produce fair results through adversarial electoral systems as much as it provides evidence that varying-capacity parties may produce unfair results. Though not the only mechanism through which hybrid regimes persist, we show that exploiting election-day institutions through party-based operational capacity is one playing field through which these regimes can seek to perpetuate themselves.

As a whole, we have shown that party capacity matters for elections. One could replicate our methodology for measuring the difference between parties' aspirations and actual capacity by comparing pre-registered and *de facto* poll workers on other elections.²¹ In the future, reformers and academics should pay attention not only to the electoral institutions that structure how elections work, but also to the party system with similar-capacity or varying-capacity political parties. Overall, having fewer parties which are similar in operational capacity is likely to produce fairer electoral results—particularly with adversarial control systems.

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²¹Although Paraguay has had general elections in 2023, we are unable to replicate our methodology since the election authority no longer required poll workers to include their ID numbers on the quick-count vote tallies (a reduction in transparency).

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Getting a seat at the table: Partisan poll workers and electoral bias

Online Appendix

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A Online Appendix Figures

Figure A1: Image of the paper ballot for the senatorial election

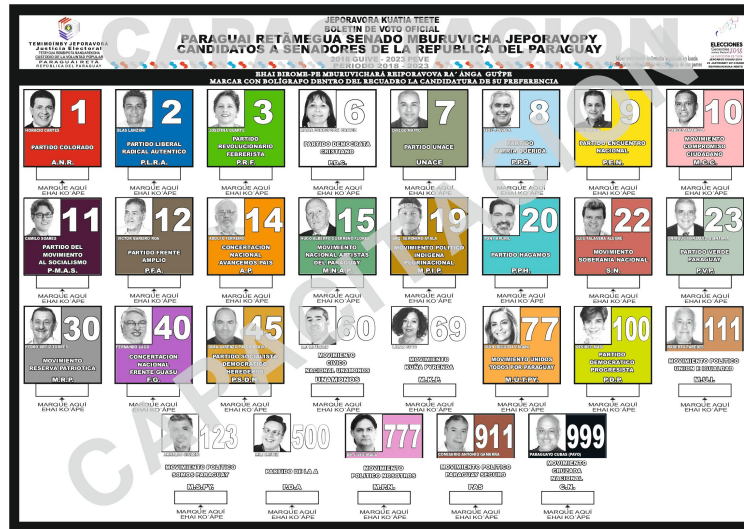


Figure A2: Image of an electoral table with voting booth and poll workers



Note: this figure shows a common setup for electoral tables in Paraguayan elections. Polling stations tend to be in public schools and voting booths tend to be installed in classrooms. The three poll workers set up a table for checking voters' ID cards outside a classroom before allowing them to vote. The picture is from: <https://es-us.finanzas.yahoo.com/noticias/paraguay-celebrar%C3%A1-11-elecciones-municipales-10-204613200.html>.

B Additional Background Information and Context

As a motivating example of what is mentioned in Section 1, we describe an example of a table where the official results were challenged because the quick count tally had visible modifications to its counts. Figure B1 shows the senatorial race quick count tally for an electoral table with visible modifications. After reviewing the final outcomes for this table, we were able to verify that these changes *were* incorporated into the final count, which implies the following changes to the original tally: Colorado party +15, Liberal party +15, PPQ -20, PPH (*Hagamos*) party -10.

This electoral table that had its official results challenged had two poll workers from the Colorado party and one from the Liberal party. Neither PPQ nor PPH had poll worker representation at this electoral table. Thus, with this electoral table we observe a presumptive case of collusive irregularities benefiting the established parties present, at the expense of smaller parties.¹ We expect this type of collusive irregularities to be more common with the PR races for legislative positions compared to the executive elections (president and governor) which are determined by SMDP.

The main irregularities that colluding coalitions can perform with paper ballots include miscounting and tampering with the paper ballots (see Figure B3 for a newspaper infographic from ABC Color (2018a) alluding to how colluding coalitions of poll workers could alter the count). ABC Color (2018a) also indicates how vote monitoring (violations of voting secrecy) could occur with paper ballots (Rueda 2017). Carlos María Ljubetic, a previous director of the TSJE, acknowledged this can occur as follows. Political brokers buying votes tell voters to write in particular marks on their paper ballots that the partisan poll workers could tally to confirm the vote buying

¹The case with this electoral table is particularly flagrant given the visible modifications to the tally. There are other cases where the counts were presumably modified from the start, so there are no visible modifications. For example, the cases mentioned by Colmán Gutiérrez (2018) and ABC Color (2018b) show that the parties they voted for received 0 votes according to the quick count tallies of their voting booths.

Figure B1: Quick count tally of voting booth whose official results were challenged, with visible modifications

No. Linea	Partido/Movimiento/Alianza/Concertación	Votos en blanco	Votos en letras
1	PARTIDO COLORADO	150	Arzobispo y arco Casaventa
2	PARTIDO LIBERAL RADICAL AUTENTICO	430	(de 30) Treinta y tres
3	PARTIDO REVOLUCIONARIO FIEBRESISTA	1	uno
6	PARTIDO DEMOCRATA CRISTIANO	0	cero
7	PARTIDO UNACE	2	dos
8	PARTIDO PATRIA QUERIDA	205	(veinticinco) Cero
9	PARTIDO ENCUENTRO NACIONAL	1	uno
10	MOVIMIENTO COMPROMISO CIUDADANO	2	dos
11	PARTIDO DEL MOVIMIENTO AL SOCIALISMO	3	tres
12	PARTIDO FRENTE AMPLIO	0	cero
14	CONCERTACION NACIONAL AVANCEMOS PAIS	0	cero
15	MOVIMIENTO NACIONAL ARTISTAS DEL PARAGUAY	0	cero
19	MOVIMIENTO POLITICO INDIGENA PLURINACIONAL	1	uno
20	PARTIDO HAGAMOS	10	diez
22	MOVIMIENTO POLITICO SOBERANIA NACIONAL	1	uno
23	PARTIDO VERDE PARAGUAY	2	dos
30	MOVIMIENTO RESERVA PATRIOTICA	3	tres
40	CONCERTACION NACIONAL FRENTE GUARU	6	seis
46	PARTIDO SOCIALISTA DEMOCRATICO HERREREROS	0	cero
80	MOVIMIENTO CIVICO NACIONAL UNIMUNDOS	0	cero
89	MOVIMIENTO NUEVA FRENDA	2	dos
77	MOVIMIENTO UNIDOS TODOS POR PARAGUAY	0	cero
100	PARTIDO DEMOCRATICO PROGRESISTA	7	siete
111	MOVIMIENTO POLITICO UNIDOS E IGUALDAD	0	cero
123	MOVIMIENTO POLITICO SOMOS PARAGUAY	3	tres
500	PARTIDO DE LA A	1	uno
777	MOVIMIENTO POLITICO NOSOTROS	0	cero
911	MOVIMIENTO POLITICO PARAGUAY SEGURO	1	uno
999	MOVIMIENTO CRUZADA NACIONAL	7	siete
VOTOS NULOS		6	seis
VOTOS EN BLANCO		2	dos
SUMA TOTAL DE VOTOS		138	cento treinta y ocho

Note: the picture above shows the senate race quick count tally for a voting booth whose official results were challenged with visible modifications. The modifications to the results are as follows: Colorado party +15, Liberal party +15, PPQ -20, PPH (Hagamos) party -10.

Figure B2: Stata output showing the partisan support and ID numbers of poll workers from a voting booth that had its official results challenged

mesaid	f_v1_part	f_p_part	f_v2_part	f_v1_cedula	f_p_cedula	f_v2_cedula
11_3_0_1_66	PLRA	ANR	ANR	3653742	1540605	4177951

Note: the picture above shows Stata output of the partisan support and the ID numbers of the poll workers from an electoral table that had its official results challenged. The data on partisan support and registration come from the election authority (the TSJE) and the political parties themselves. Two of the poll workers belong to the Colorado party and one belongs to the Liberal party. Neither the PPQ nor PPH had poll worker representation at this electoral table.

agreements were followed through on. Another vote-monitoring method that Ljubetic indicated during a lecture to DENDE (a civil society NGO) that one of us attended was that partisan poll workers could mark ballots given to certain voters such that when they count the votes for these voters they can determine who they voted for. In particular, because the poll workers have to sign the paper ballots given to voters before the voters submit their paper ballot, these poll workers can modify their signatures to later on recognize these ballots during the vote count. Finally, poll workers could become more or less careful when counting votes depending on the presence of poll workers from other parties.

These sorts of irregularities have been an open secret even among the diplomatic community in Paraguay. A leaked diplomatic cable due to Wikileaks coming from the U.S. Embassy of Asunción (2008) remarked the following a few weeks before the 2008 Paraguayan general elections:

In coming weeks before the elections, all sides will engage in vote-buying, as well as buying (or attempted buying) of the political party representatives who will sit at each polling station on election day. No one does this better than the Colorados. Castiglioni supporters predict the Colorados will steal around 100,000 votes at roughly 700 polling stations (where they already dominate) by altering the electoral tally sheets (“Actas”). Most agree (and history proves) that this is easy to do and difficult to prove, because the ballots are destroyed once voting ceases and the Actas are signed.

The previous quote highlights how diplomats from the U.S. Embassy in Paraguay were convinced that political parties would bribe poll workers sitting at the electoral tables. It also highlights their belief that the hegemonic Colorado party does this better than other political parties. Castiglioni was Paraguay’s vice president from 2003-2008 and a Colorado presidential candidate who lost the party’s 2008 primaries. Finally, the cable also claims that vote counting irregularities are “easy to do and difficult to prove” given that the paper ballots are destroyed.

Figure B3: Newspaper infographic describing collusion at electoral tables for tabulation irregularities



Note: the text above states: “Vote tallies ‘kill’ votes: Carlos María Ljubetic, former electoral justice adviser considers that one of the great weaknesses of the Paraguayan electoral system is in the composition of electoral tables. This mechanism allows for the modification of the vote tallies, which are ultimately the ones that define the candidacies. Small parties can receive a certain number of votes. However, the poll workers of the table, who generally represent the two major parties, can agree and share the votes of those who do not have their own poll watchers or empowered party officers. In this way, regardless of what is expressed at the polls, their votes can go to the traditional parties.”

B.1 Political party name acronyms

In this subsection we list out all the political party name acronyms we mentioned in the main text:

- **AP:** *Avanza Pais*
- **PCP:** *Partido Comunista Paraguayo*
- **PCPS:** *Partido Convergencia Popular Socialista*
- **PDP:** *Partido Democratico Progresista*
- **PEN:** *Partido Encuentro Nacional*
- **PFA:** *Partido Frente Amplio*
- **PMAS:** *Partido del Movimiento al Socialismo*
- **PMPP:** *Partido del Movimiento Patriótico Popular*
- **PPC:** *Partido de Participacion Ciudadana*
- **PPS:** *Partido Pais Solidario*
- **PPT:** *Partido Popular Tekojoja*
- **PRF:** *Partido Revolucionario Febrerista*
- **PUP:** *Partido de la Unidad Popular*

C Data Construction and Description

The pre-registered poll worker allocation data comes from a spreadsheet obtained from the election authority (the TSJE), which indicates the partisan poll worker representation that was officially approved two weeks in advance of the elections. It notes all the pre-registered electoral agents, that is, poll workers, poll watchers (*veedores*), and empowered party officers (*apoderados*). Most importantly, this data has the political party these pre-registered electoral agents will work for during the election and their national ID numbers.

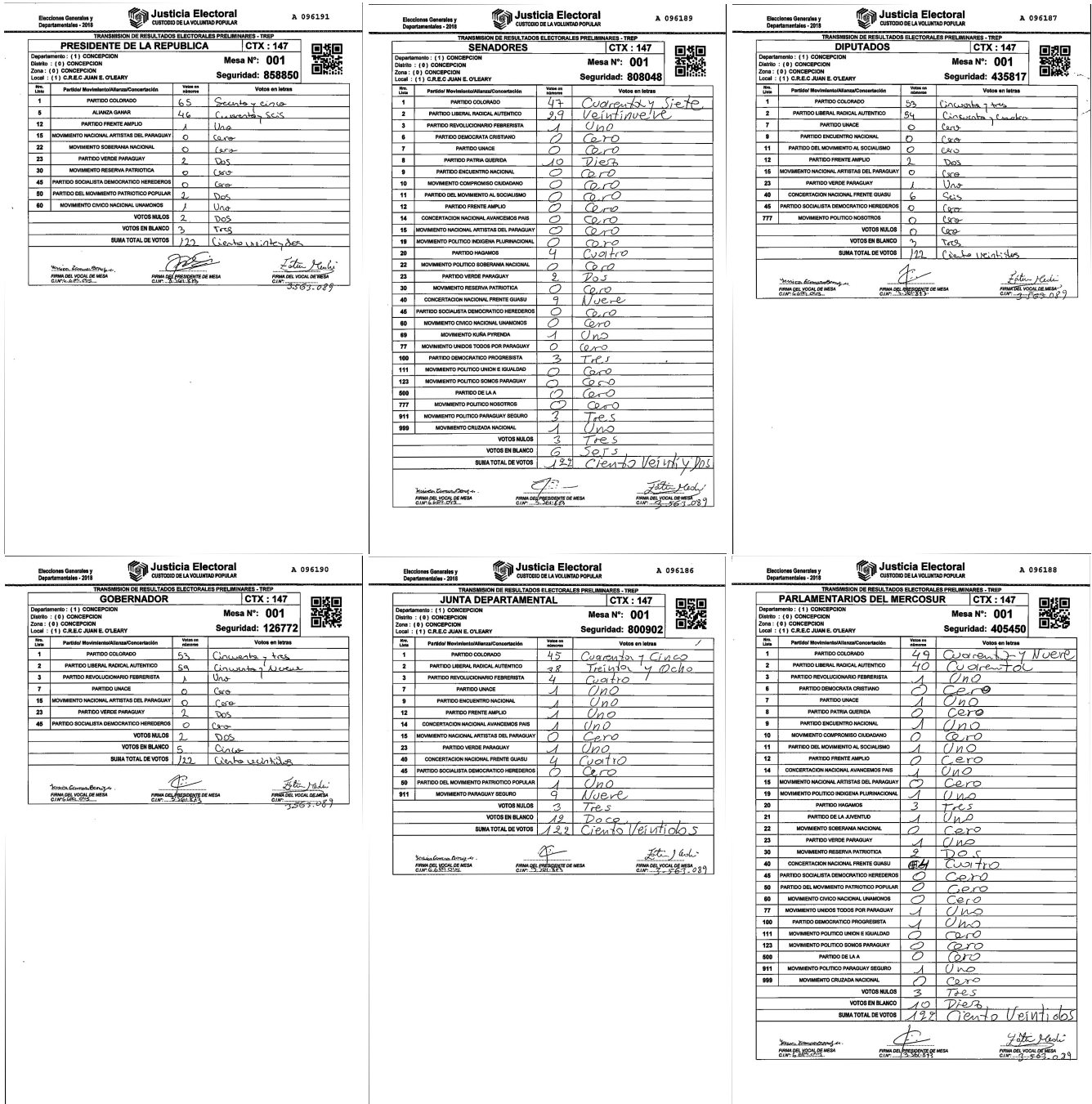
In addition, the TSJE uploaded scans of all single quick count tallies for all electoral races at each table. The data on *de facto* poll workers was compiled by us on the basis of scans of these

approximately 120,000 hand-written election-day quick count tallies written by the poll workers themselves. These were briefly published by the election authority on their website, which we were able to scrape from before they took these results down. As the TSJE already shared the electoral results at the voting booth-level, the key additional piece of information that the tally scans provide are the ID numbers of the poll workers at the bottom of each tally (see Figure C1). Using data from the election authority and political parties, we can match the IDs of the poll workers to the parties they work for (if they are a pre-registered electoral agent) and the parties they are registered to. For example, Figure C2 shows the pre-registered poll workers for the electoral table from Figure C1. In this example, comparing the pre-registered poll workers with those on the tallies shown, we can observe that the Colorado and Liberal pre-registered poll workers showed up on election day, while the FG one was replaced. This shows an example of the difference between pre-registered and *de facto* allocations which we carry out in the main paper.

As mentioned above, to find the *de facto* poll workers we rely on the quick count vote tallies that the TSJE scanned and uploaded to its website after the elections. From the tallies we digitized the ID numbers of those poll workers who were actually present at the electoral table on election day. We merge these ID numbers with nation-wide party registration data sets we obtained from the TSJE (because the election authority collects this data from individual parties) and from individual parties themselves. By merging these data sets we can uncover who the poll workers support even if they are not on our pre-registered electoral agents data. By merging these data, we find some cases of poll workers registered to multiple parties. Among all *de facto* poll workers, less than 4% of them (2,514 out of 63,633) are multi-party poll workers and we consider them as a separate category because they are not “pure” partisans.² We also find 5,166 poll workers (around 8% of all poll workers) that are not registered to any political party. Although these poll workers may be working for some party and we cannot determine this, it is also possible they are truly independent voters who replaced pre-registered poll workers that did not show up on election day.

²In Paraguay registering to multiple parties is not regulated.

Figure C1: Example quick count vote tallies from a single voting booth



Note: This figure shows scans of all the quick count vote tallies from a single electoral table.

Figure C2: Pre-registered poll workers from example quick count tally shown

0	CONCEPCION	0	CONCEPCION	1	C.R.E.C JUAN E. O'LEARY	1	3561873	F	9/16/1980	PRESIDENTE	TITULAR	1	ANR
0	CONCEPCION	0	CONCEPCION	1	C.R.E.C JUAN E. O'LEARY	1	3563089	F	9/13/1980	VOCAL	TITULAR	2	PLRA
0	CONCEPCION	0	CONCEPCION	1	C.R.E.C JUAN E. O'LEARY	1	5587364	F	12/24/1989	VOCAL	TITULAR	40	FG

Note: This figure shows the pre-registered poll workers from the quick count vote tally shown on Figure C1. Comparing the pre-registered poll workers with those on the tally, the Colorado and Liberal pre-registered poll workers showed up on election day, while the FG one was replaced.

Figure C3: Example vote tallies transmitted via voice for remote polling stations

The figure displays three separate vote tally forms for the 2018 Paraguayan elections, transmitted via voice. Each form includes a header with the election type, department (Alto Paraguay), district (Carmelo Peralta), and local area (Lic. Nac. La Esperanza). The forms are for the positions of GOBERNADOR, PRESIDENTE DE LA REPUBLICA, and SENADORES. Each form contains a table with columns for 'Partido/ Movimiento/ Alianza/ Concertación', 'Votos en blanco', and 'Votos en letras'. The results are handwritten in blue ink. For example, in the GOBERNADOR tally, the Colorado Party received 58 votes (written as 'Cincuenta y siete') and the Alliance to Win received 42 votes (written as 'Cuarenta y dos'). The total votes are 135. The forms also include fields for the name and ID of the receiving official (Miguel Zucate) and the line number (6180154).

Note: This figure shows a picture of a quick count vote tally for remote polling stations where electoral results were transmitted to the election authority through a call (via voice) instead of a scan of the vote tally. The vote tally is for a booth in a polling station in the Carmelo Peralta district from the Alto Paraguay department in the Chaco region. Instead of showing the ID numbers of the poll workers at the bottom, it has the name of the election authority employee who received the results via a call.

Figure 1 shows how the allocation of partisan poll workers changes for the main parties due to replacements of pre-registered poll workers.

We next discuss poll workers' partisanship by role. Focusing on the pre-registered, Table C1 shows the table "president" is the most equally distributed among parties (as presidents are randomly assigned among the three members of each table). Yet we can notice how the FG and other parties have less booth presidents than the Colorado and Liberal parties (although the Colorado party still has approximately 500 more booth presidents than the Liberal party). With the *de facto* poll workers the Colorado and Liberal party have an increase of 758 and 147 table presidents respectively. On the other hand, the FG and other parties lose 2,210 and 644 table presidents respectively. Given that the *vocal* 1 and 2 share the same role and are interchangeable, we can just consider the sum of the two. The Colorado and Liberal party have roughly the same number of *vocal* poll workers at around 15,050. On the other hand, the FG and other parties have 8,743 and 3,084 respectively. With the replacements we can observe that the Colorado party gains 1,046 more *vocal* poll workers, whereas the other parties lose poll workers. The Liberal party loses 1,137, the FG loses 3,555, and the other parties lose 1,350. Finally, we can observe that the replacements vis-à-vis the pre-registered poll worker allocations only fully benefit the Colorado party, as only the Colorado party obtains more poll workers than its pre-registered amount.

D Tests for Correlation Between Voter Preferences and Names

Figure D1 plots the distribution of Colorado and Liberal party support among registered voters of the 2018 election for each of the indicated initials of voters' surnames. The horizontal line plots the overall average of Colorado and Liberal party support. If surnames are independent of party identification, we expect a flat distribution of partisan support among the surname initials. We see that voters support these two parties at around the same overall rate across almost all surname initials. Thus, we have an overall flat distribution of Colorado and Liberal party support among most surname initials. Although there are a few outliers (h, k, w, x, and y), they are

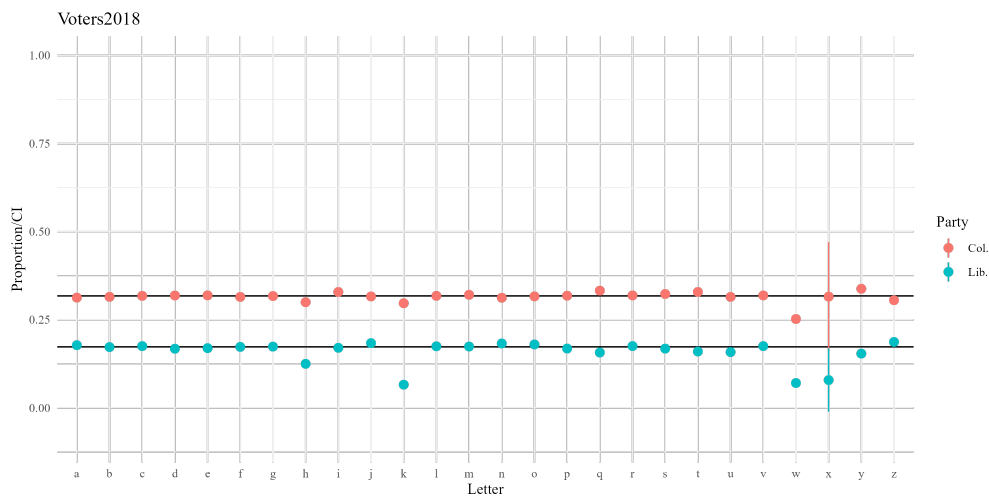
Table C1: Partisan representation of pre-registered and *de facto* poll workers by poll worker function

	President	Vocal 1 + Vocal 2	Vocal 1	Vocal 2
Pre-registered poll workers				
Colorado	7,523	15,048	13,901	1,147
Liberal	7,060	15,053	7,066	7,987
FG	4,877	8,743	1	8,742
Other party	1,508	3,086	2	3,084
De facto poll workers				
Colorado	8,281	16,094	9,550	6,544
Liberal	7,207	13,916	6,800	7,116
FG	2,667	5,188	1,939	3,249
Other party	864	1,736	629	1,107
Multi-party	732	1,782	754	1,028
Unaffiliated	1,460	3,706	1,539	2,167
Difference between number of <i>de facto</i> and pre-registered poll workers				
Colorado	758	1,046	-4,351	5,397
Liberal	147	-1,137	-266	-871
FG	-2,210	-3,555	1,938	-5,493
Other party	-644	-1,350	627	-1,977

Note: This table indicates the partisan support of the pre-registered and *de facto* poll workers and their difference by poll worker function.

spread around different letters and these are letters which have comparatively fewer voters. OA Figure D2 shows that the few surname initials that are farther away from the overall means all have substantially lower frequencies. This can explain why the proportions for these letters do not approach the overall mean as much as other surname initials. Also, neither Colorado nor Liberal party supporters have surnames concentrated towards the end of the alphabet or vice versa. Hence, voters' first letter of their last name does not correlate with their political preferences.

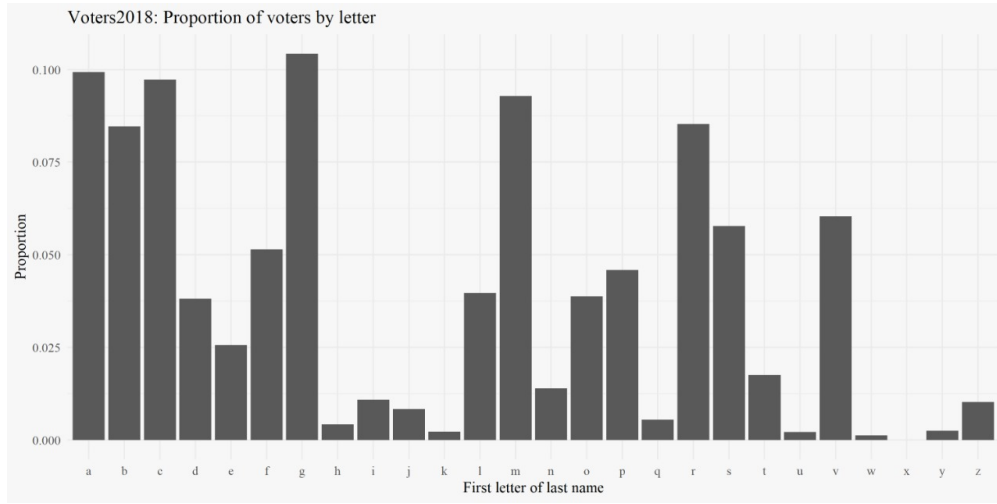
Figure D1: Distribution of Party Support by Voter Initials



Note: This figure plots the distribution of Colorado and Liberal party support among registered voters of the 2018 election for each of the indicated initials of voters' surnames. The horizontal line plots the overall average of Colorado and Liberal party support. OA Figure D2 shows that the surname initials that are farther away from the overall means (h, k, w, x, and y) have substantially lower frequencies. This can explain why the proportions for these letters do not approach the overall mean as much as other surname initials.

Additionally, as we have the names of all voters and the voting booth they are assigned to, we can, as a robustness check, include the proportion of voters by booth whose surnames begin with a particular initial as a control variable in our specifications. Table D1 includes these alphabetic proportion control variables—with "A" being the excluded category. We find that our main estimates are robust to the inclusion of these control variables.

Figure D2: Proportion of voters' surname initials by letter



Note: This figure plots the proportion of voters' surname initials by letter. This figure shows how the surname initials that are farthest away from the overall means (h, k, w, x, and y) in Figure D1 have substantially lower frequencies.

We carried out additional robustness checks including controlling for the proportion of the 100 most common surnames in the country at each voting booth, and the proportion of voters whose surnames match those of candidates. Our coefficients of interest were significant and robust throughout. We had also tested whether the alphabetical ranking of voters' surnames (which determines the booth where they vote) is uncorrelated with electoral results. Due to page constraints we are unable to include them here, but we would be happy to provide these upon request.

E Additional Results

Tables E1 and E2 below confirm the robustness of our main results after controlling for pre-registered poll watchers. The coefficients for the Colorado and other party poll watchers align with what we would have expected. While the direction of the coefficients for Liberal poll watchers might not be intuitive, this could be due to two main reasons we can think of: (1) there is measurement error given that we only have data on the pre-registered poll watchers and not the *de*

Table D1: Effect of partisan poll worker composition on election results controlling for surname initial proportions at voting booths

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Colorado trifecta	0.3642* (0.2025)	-0.5501*** (0.1843)	0.1858 (0.1754)
Colorado advantage + Other	0.4606*** (0.0951)	-0.4853*** (0.0788)	0.0246 (0.0823)
Colorado advantage + Liberal	0.5284*** (0.0497)	-0.3680*** (0.0457)	-0.1604*** (0.0437)
Liberal advantage + Colorado	-0.0349 (0.0524)	0.2253*** (0.0505)	-0.1904*** (0.0484)
Liberal advantage + Other	-0.2381 (0.1588)	0.0314 (0.1397)	0.2067 (0.1444)
Liberal trifecta	-2.0625*** (0.5968)	0.5901 (0.5918)	1.4724*** (0.4577)
Other poll worker allocation	0.0456 (0.0644)	-0.1691*** (0.0597)	0.1236** (0.0579)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Surname initials prop.	✓	✓	✓
Observations	117,229	117,229	117,229
R^2	0.8435	0.8876	0.9309

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker, one Liberal poll worker, and one “other” poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. “Surname initials prop.” denotes the inclusion of separate indicator variables for the proportion of voters having a surname initial at each booth, with one indicator variable per initial.

facto ones; (2) perhaps Liberal poll watchers are strategically sent by the Liberal party to voting booths where the Colorados are expected to perform particularly well.

Table E1: Effect of partisan poll worker composition on election results, controlling for pre-registered poll watcher presence

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Colorado trifecta	0.2865 (0.2029)	-0.5233*** (0.1847)	0.2368 (0.1754)
Colorado advantage + Other	0.4358*** (0.0954)	-0.5043*** (0.0790)	0.0685 (0.0820)
Colorado advantage + Liberal	0.5175*** (0.0494)	-0.3865*** (0.0455)	-0.1310*** (0.0433)
Liberal advantage + Colorado	-0.0269 (0.0525)	0.1988*** (0.0506)	-0.1719*** (0.0483)
Liberal advantage + Other	-0.2032 (0.1610)	-0.0099 (0.1406)	0.2131 (0.1442)
Liberal trifecta	-1.9268*** (0.5972)	0.4565 (0.5953)	1.4702*** (0.4658)
Other poll worker allocation	0.0279 (0.0646)	-0.1633*** (0.0597)	0.1354** (0.0579)
Colorado poll watcher	0.1551* (0.0929)	-0.2489*** (0.0877)	0.0938 (0.0866)
Liberal poll watcher	0.8295*** (0.1547)	-0.5486*** (0.1520)	-0.2809** (0.1234)
Other poll watcher	-0.0880 (0.0786)	-0.0714 (0.0737)	0.1594** (0.0730)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	117,229	117,229	117,229
R^2	0.8425	0.8869	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker and one Liberal poll worker.

Table E2: Effect of partisan poll worker composition on election results by electoral system, controlling for pre-registered poll watcher presence

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Colorado trifecta × PR race	-0.5626 (0.4164)	0.1363 (0.3948)	0.4263 (0.3126)
Colorado advantage + Other × PR race	0.0319 (0.1975)	0.0112 (0.1749)	-0.0431 (0.1440)
Colorado advantage + Liberal × PR race	0.1232 (0.1032)	0.1715* (0.0982)	-0.2948*** (0.0754)
Liberal advantage + Colorado × PR race	0.0514 (0.1098)	0.0886 (0.1071)	-0.1400* (0.0848)
Liberal advantage + Other × PR race	0.1244 (0.3315)	-0.1742 (0.3116)	0.0498 (0.2596)
Liberal trifecta × PR race	0.0288 (1.1897)	-0.6830 (1.2019)	0.6541 (0.8081)
Other poll worker allocation × PR race	0.1204 (0.1356)	-0.1859 (0.1292)	0.0655 (0.1024)
Colorado trifecta	0.6659** (0.3291)	-0.6151* (0.3248)	-0.0509 (0.1986)
Colorado advantage + Other	0.4143*** (0.1574)	-0.5118*** (0.1484)	0.0975 (0.0877)
Colorado advantage + Liberal	0.4345*** (0.0831)	-0.5021*** (0.0816)	0.0676 (0.0449)
Liberal advantage + Colorado	-0.0614 (0.0884)	0.1395 (0.0875)	-0.0780 (0.0511)
Liberal advantage + Other	-0.2866 (0.2626)	0.1067 (0.2648)	0.1799 (0.1668)
Liberal trifecta	-1.9461** (0.9057)	0.9141 (0.9319)	1.0320** (0.4785)
Other poll worker allocation	-0.0531 (0.1096)	-0.0383 (0.1075)	0.0914 (0.0636)
Colorado poll watcher	0.1553* (0.0929)	-0.2488*** (0.0877)	0.0935 (0.0866)
Liberal poll watcher	0.8294*** (0.1548)	-0.5487*** (0.1520)	-0.2807** (0.1234)
Other poll watcher	-0.0880 (0.0786)	-0.0715 (0.0737)	0.1595** (0.0730)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	117,229	117,229	117,229
R ²	0.8425	0.8869	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker and one Liberal poll worker.

On Table E3 we tested whether the partisanship of the poll worker president has an independent effect on electoral results. The results do not show a clear pattern, which could be explained by the fact that ultimately the official result that counts within the tables is that of the majority (a minimum of 2 out of 3 poll workers). Hence, even if the poll worker president tallies results a certain way but the two vocals indicate something else (and the vocals' results agree with each other), the official result for that table is what the vocals indicated.

Table E3: Effect of poll worker president's party on election results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Colorado poll worker president	0.1320 (0.0977)	-0.3191*** (0.0897)	0.1871** (0.0863)	-0.0048 (0.0444)	-0.0733* (0.0383)	-1.1173*** (0.1849)
Liberal poll worker president	0.0910 (0.0983)	-0.2154** (0.0903)	0.1243 (0.0868)	-0.0190 (0.0446)	-0.0891** (0.0385)	-1.1555*** (0.1853)
Other party poll worker president	0.0024 (0.1027)	-0.3195*** (0.0948)	0.3171*** (0.0906)	-0.0253 (0.0470)	-0.0080 (0.0403)	-0.7478*** (0.1923)
Multi-party poll worker president	-0.1127 (0.1275)	-0.1843 (0.1202)	0.2970** (0.1179)	-0.0972 (0.0591)	-0.0893* (0.0518)	-1.7160*** (0.2640)
Mean of Dependent Variable	41.5808	34.4445	23.9746	34.4445	23.9746	24.0171
Polling station-elect. race FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	117,229	117,229	117,229	117,229	117,229	111,890
R^2	0.8423	0.8868	0.9308	0.6147	0.2120	0.5782

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares for the first three columns are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares for columns (4) and (5) are calculated by dividing by turnout (total votes including null and blank votes) and multiplying by 100. "X poll worker president" is an indicator variable for whether the poll worker president at the voting booth supports the X (where X can be Colorado, Liberal, Other party, or multiple parties). The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths). The number of observations on Column (6) is smaller as we restrict our sample to booths with exactly 200 registered voters.

Table E4 examines the effect of poll workers on voting process outcomes (blank votes, null votes, and turnout) by pooling together observations from all elections and running equation (1) on its even columns. The dependent variables are blank vote shares, null (invalid) vote shares, and turnout recorded at each voting booth. Some of the results from Table E4 also show up on the results for the individual races, though because the number of observations is more limited, we might not have enough statistical power to observe as many statistically significant results. In Column (1) we can observe that poll workers do not have a significant effect on blank votes. In contrast, in Column (2) we find that electoral tables with just Colorado and Liberal poll workers significantly decrease the null vote share by around 0.08 pp. We can also notice that Colorado trifectas decrease the null vote share by approximately 0.19 pp. This result suggests that perhaps established party poll workers engage in electoral irregularities partly by awarding themselves null votes instead of discarding these. Still, the magnitude of these coefficients is an order of magnitude lower than the effects we observe on party vote shares, hence some of the results we observe on vote shares should be due to poll workers awarding some votes for other parties to their own party as well. Finally, on Column (3) we only one potential effect from partisan poll worker allocations. Electoral tables with two Liberal poll workers and one poll worker from neither the Colorado nor Liberal party lead to a significant increase of around 1.02 votes, compared to a mean of around 122.1 turnout per booth. This result is more ambiguous as an increase or decrease in turnout could potentially indicate real votes being counted, and there could be a mix of strategies with results being manipulated by either stuffing ballot boxes or discarding opposition votes.

Table E4: Effect of partisan poll worker composition on election process results

	Blank vote share (1)	Null vote share (2)	Turnout (3)
Colorado trifecta	-0.0268 (0.0901)	-0.1517** (0.0727)	-0.7325 (0.4789)
Colorado advantage + Other	0.0161 (0.0439)	-0.0285 (0.0346)	-0.2861 (0.2046)
Colorado advantage + Liberal	0.0105 (0.0236)	-0.0705*** (0.0196)	-0.0774 (0.1034)
Liberal advantage + Colorado	0.0024 (0.0250)	-0.0749*** (0.0209)	0.1675 (0.1075)
Liberal advantage + Other	-0.1114 (0.0734)	-0.0787 (0.0695)	1.0118*** (0.2729)
Liberal trifecta	0.1815 (0.2397)	-0.6656*** (0.1818)	0.6260 (0.7854)
Other poll worker allocation	-0.0251 (0.0316)	0.0143 (0.0255)	-0.0127 (0.1346)
Mean of Dependent Variable	5.2904	3.2375	122.1061
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	111,494	111,494	111,889
R^2	0.6150	0.2132	0.5780

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares are calculated by dividing by turnout (i.e., all votes including null and blank votes) and multiplying by 100. The number of observations on Column (3) is smaller because we restrict our sample to booths with exactly 200 registered voters. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

F Simulation Exercise

To estimate the substantive effects of poll workers' partisanship on electoral outcomes, we carried out simulations that sought to answer the following question:

If all electoral tables had a “fair” allocation of partisan poll workers in the 2018 Paraguayan general elections, how much would have electoral results changed?

To answer this question we compared two different data sets. First, we have the actual electoral outcomes recorded in the 2018 General Elections. Second, using our regression models for separate elections (which are available upon request) we generated a data set of predicted *turnout* for each electoral table assuming a “fair” allocation. Hence, for example, if a given table had a Colorado party trifecta, we would replace that table's turnout with what our models predict would have been the turnout for that table if it had a “fair” allocation instead, and we do this replacement for all tables that had any poll worker allocation other than the “fair” allocation. Third, we repeated this exercise with vote outcomes. Using our regression models for separate elections we predicted what the electoral outcomes would have been for each voting booth assuming a “fair” allocation. Fourth, we take these vote share predictions and we multiply them by the turnout predictions to arrive at our predicted number of votes that each party should have received if there was a “fair” allocation in that table.³ Specifically, we took *all tables with non-fair allocations* recorded in our data, and we replaced these cases with *predicted outcomes of our models had a given table instead had a “fair” allocation*. Then, with our true vote outcomes and our predicted vote outcomes, we simply take a difference between (1) true and predicted vote shares, and (2) true and predicted seat distributions for different parties. These exercises give us an idea of, substantively, how important the role of partisan poll workers is for electoral outcomes in Paraguay.

Table F1 shows the results of this exercise for the presidential results. As can be seen, all else equal, if all tables had a fair allocation of partisan poll workers the ANR (Colorados) would have

³However, rather than joining smaller parties into a single “other” category, for the exercises shown in this section our models treated each party separately.

had 3,052 fewer votes and the Liberal/GANAR alliance would have received 931 more votes. This is not enough to change the presidential result, but it is still a sizeable amount of vote changes.

Table F1: Comparison between true and predicted presidential race results

Party	Pred. Vote	True Vote	Vote Diff.
ANR	1,159,013	1,162,065	-3,052
GANAR	1,068,792	1,067,861	931
PVP	80,365	80,554	-189
MNAP	15,064	15,064	-0
PMPP	9,464	9,478	-14
MRP	9,017	9,097	-80
PFA	8,408	8,293	115
SN	6,972	7,018	-46

Table F2 shows the results of this exercise for senatorial results. As can be seen, although some differences in votes are considerable in size—the ANR for example would have received 2,575 fewer votes if all tables had fair allocations of poll workers—this effect is not large enough to change any seat allocations in favor of one party or another.

Given that the MERCOSUR parliament is elected using a national district we may expect simulations to behave in a similar manner, which Table F3 confirms. Although predicted differences seem to be *slightly* larger in the MERCOSUR races than in the Senate races in absolute terms, these differences are still not large enough to change any outcomes at the seat-distribution level.

Table F4 contains the results of the simulation exercise for the Chamber of Deputies in Paraguay. Again, we can see that there are comparable vote changes to what we have seen previously, but

Table F2: Comparison between true and predicted senate race results

Party	Pred. Vote	True Vote	Vote Diff.	Pred. Seats	True Seats	Seat Diff.
ANR	733,089	735,664	-2,575	17	17	0
PLRA	549,968	549,032	936	13	13	0
FG	265,723	265,392	331	6	6	0
PPQ	155,693	155,671	22	3	3	0
PPH	103,475	103,526	-51	2	2	0
PDP	84,216	84,192	24	2	2	0
UNACE	48,438	48,131	307	1	1	0
CN	57,302	56,927	375	1	1	0

Table F3: Comparison between true and predicted MERCOSUR parliament race results

Party	Pred. Vote	True Vote	Vote Diff.	Pred. Seats	True Seats	Seat Diff.
ANR	914,662	917,471	-2,809	23	23	0
PLRA	661,207	660,090	1,117	16	16	0
PPQ	84,366	84,478	-112	2	2	0
FG	100,764	100,051	713	2	2	0
UNACE	45,873	45,577	296	1	1	0
PPH	39,324	39,584	-260	1	1	0
PFA	4,512	4,413	99	0	0	0
MNAP	10,874	10,943	-69	0	0	0

Table F4: Comparison between true and predicted deputy race results

Party	Pred. Vote	True Vote	Vote Diff.	Pred. Seats	True Seats	Seat Diff.
ANR	887,847	890,412	-2,565	42	42	0
PLRA	410,254	409,632	622	17	17	0
GANAR	274,395	273,892	503	13	13	0
PPQ	103,588	103,676	-88	3	3	0
PEN	74,335	74,118	217	2	2	0
PPH	74,403	74,415	-12	2	2	0
CN	32,968	32,675	293	1	1	0
PFA	20,350	20,213	137	0	0	0

these predicted changes in votes are not sufficient to change the electoral results. Similarly in gubernatorial elections the true results showed 13 Colorado winners 1 GANAR winner and 3 Liberal winners, and predicted results show no differences in allocations. Therefore, no governor races were impacted by the effects of poll worker allocations either.

Finally, Table F5 shows one seat changes among Colorado (ANR) and Liberal (PLRA) outcomes in these elections. Again, the change in votes received by each party seems comparable to what we have seen in other models, but in this case, because of the lower-level of Departmental Council elections, these vote differences were sufficient to change one seat allocation.

Table F5: Comparison between true and predicted departmental council race results

Party	Pred. Vote	True Vote	Vote Diff.	Pred. Seats	True Seats	Seat Diff
ANR	802,041	804,736	-2,695	130	131	-1
PLRA	444,336	442,825	1,511	56	55	1
GANAR	241,506	241,173	333	48	48	0
PVP	41,614	42,000	-386	3	3	0
PPQ	46,879	46,950	-71	2	2	0
UNACE	51,243	50,837	406	1	1	0
PEN	27,541	27,407	134	1	1	0
AP	15,374	15,514	-140	1	1	0

G Establishment party support and partisan poll workers

Perhaps it is not a coincidence that most countries where explicitly partisan representatives can be poll workers or polling station administrators correspond to flawed democracies and hybrid regimes (Economist Intelligence Unit 2022), which are: Honduras, Armenia, Paraguay, Ukraine, Kosovo, El Salvador, and Colombia. All these countries have a history of established parties and their elites could have strategically set up these adversarial electoral institutions to help keep themselves in power. Albertus and Menaldo (2018) study how outgoing authoritarian elites constitutionalize protections for their interests and vote-counting institutions play a fundamental role in this aspect. Consistent with this, if we follow the definition of established parties from Lupu (2016) and use data on 111 Latin American presidential elections going from 1990 to 2018, we find a positive relationship between partisan poll workers and established party support. That is, established parties in Latin America receive higher vote shares in countries with partisan poll workers.

We examined the relationship between establishment party support and partisan poll workers. Established parties according to Lupu (2016) are those “parties that in two consecutive elections either receive a plurality of the vote, winning the first round, or attract no less than one-third of the winning vote share.” To make this claim we updated data on 111 Latin American presidential elections going from 1990 to 2018, we can also examine the relationship between partisan poll workers and establishment party support.⁴ Hence, using the same definition of established parties

⁴The Latin American elections data compiled by Baker and Greene (2011) can

for the 18 Latin American countries considered by Lupu (2016) for the time period of the Latin American elections dataset we end up with the following established parties:

- **Argentina:** Partido Justicialista (PJ), Unión Cívica Radical (UCR)
- **Bolivia:** Acción Democrática y Nacionalista (ADN), Conciencia de Patria (CONDEPA), Movimiento al Socialismo (MAS), Movimiento de Izquierda Revolucionario (MIR), Movimiento Nacionalista Revolucionario (MNR)
- **Brazil:** Partido da Social Democracia Brasileira (PSDB), Partido dos Trabalhadores (PT)
- **Chile:**⁵ Alianza por Chile, Concertación
- **Colombia:** Centro Democrático (CD), Partido Conservador Colombiano (PCC), Partido Liberal Colombiano (PLC), Partido de la U
- **Costa Rica:** Partido Liberación Nacional (PLN), Partido Unidad Social Cristiana (PUSC)
- **Dominican Republic:** Partido de la Liberación Dominicana (PLD), Partido Reformista Social Cristiano (PRSC), Partido Revolucionario Dominicano (PRD)
- **Ecuador:** Alianza Patria Altiva i Soberana (Alianza PAIS), Izquierda Democrática (ID), Partido Roldosista Ecuatoriano (PRE), Partido Social Cristiano (PSC)
- **El Salvador:** Alianza Republicana Nacional (ARENA), Frente Farabundo Martí para la Liberación Nacional (FMLN)
- **Guatemala:** Frente Republicano Guatemalteco (FRG), Partido de Avanzada Nacional (PAN)
- **Honduras:** Partido Liberal de Honduras (PLH), Partido Nacional de Honduras (PNH)
- **Mexico:** Partido Acción Nacional (PAN), Partido de la Revolución Democrática (PRD), Partido Revolucionario Institucional (PRI)
- **Nicaragua:** Frente Sandinista de Liberación Nacional (FSLN), Partido Liberal Constitucionalista (PLC)
- **Panama:** Partido Arnulfista (renamed Partido Panameñista), Partido Revolucionario Democrático (PRD)
- **Paraguay:** Asociación Nacional Republicana—Partido Colorado (ANR-PC), Partido Liberal Radical Auténtico (PLRA)
- **Peru:** Alianza Popular Revolucionaria Americana (APRA), Cambio 90, Partido Nacionalista Peruano, Perú Posible
- **Uruguay:** Frente Amplio, Partido Colorado, Partido Nacional

be found here: <https://web.archive.org/web/20230330055805/https://www.colorado.edu/faculty/baker/latin-american-elections-and-ideology>

⁵Following Lupu (2016), for Chile we code coalitions instead of individual parties given the “uniquely institutionalized and stable nature of electoral coalitions.”

- **Venezuela:** Acción Democrática (AD), Movimiento V República (MVR) [which later became the Partido Socialista Unido de Venezuela (PSUV)], Partido Social Cristiano (COPEI)

OA Table G1 shows that established parties receive higher vote shares in Latin American countries with partisan poll workers. The average (76.8% vs. 66.5%), minimum (34.6% vs. 2.8%), median (83.7% vs. 67.2%), and maximum (100% vs. 99.9%) vote share of established parties in these countries is higher. These results are thus consistent with the importance of partisan poll workers for established parties' electoral success. In addition, in OA Table G2 we run a cross-country regression, which suggests that established parties have around a 10 percentage point boost in their vote share in countries where partisan poll workers are present.

Table G1: Established party vote share summary statistics

	Observations	Mean	Standard Deviation	Minimum	Median	Maximum
Without partisan poll workers:						
Established party vote share	73	66.47	26.16	2.76	67.23	99.87
With partisan poll workers:						
Established party vote share	38	76.79	20.00	34.63	83.69	100.00

Note: Each observation corresponds to the vote share for established parties in a Latin American presidential election from 1990-2018. All statistics are rounded up to the second digit after the decimal.

Table G2: Established party vote share and partisan poll workers

	Established party vote share	
	(1)	(2)
Has partisan poll workers	10.324** (4.456)	10.765** (4.371)
Mean of Dependent Variable	70.000	69.899
Year FE		✓
Observations	111	109
R^2	0.0399	0.4838

Note: Each observation corresponds to the vote share for established parties in a Latin American presidential election from 1990-2018. Standard errors are robust. “Has partisan poll workers” refers to a country where explicitly partisan representatives can be polling station administrators or poll workers. “Observations” refers to the number of non-singleton shipment observations, so the number of observations slightly decreases when we include year fixed effects on the regression of Column (2).

H Available upon request due to page constraints

Table H1: Effect of partisan poll worker composition on election results - showing all covariates

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Colorado trifecta	0.2820 (0.2029)	-0.5121*** (0.1847)	0.2301 (0.1752)
Colorado advantage + Other	0.4318*** (0.0954)	-0.4969*** (0.0790)	0.0651 (0.0820)
Colorado advantage + Liberal	0.5125*** (0.0493)	-0.3800*** (0.0455)	-0.1325*** (0.0433)
Liberal advantage + Colorado	-0.0328 (0.0525)	0.2063*** (0.0505)	-0.1735*** (0.0483)
Liberal advantage + Other	-0.2126 (0.1611)	-0.0035 (0.1406)	0.2161 (0.1442)
Liberal trifecta	-1.9481*** (0.5951)	0.4756 (0.5947)	1.4724*** (0.4649)
Other poll worker allocation	0.0246 (0.0646)	-0.1593*** (0.0597)	0.1347** (0.0578)
Colorado voter prop.	0.3802*** (0.0049)	-0.2898*** (0.0043)	-0.0904*** (0.0040)
Liberal voter prop.	-0.5370*** (0.0052)	0.6334*** (0.0049)	-0.0963*** (0.0046)
Other party voter prop.	-0.1242*** (0.0115)	-0.0220** (0.0094)	0.1461*** (0.0090)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Observations	117,229	117,229	117,229
R ²	0.8425	0.8869	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. All regressions control for the percent of Colorado, Liberal, and other party voters registered to vote at each booth. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker, one Liberal poll worker, and one “other” poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables.

Table H2: Effect of partisan poll worker composition on election results by electoral system - showing all covariates

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Colorado trifecta × PR race	-0.5625 (0.4166)	0.1364 (0.3948)	0.4261 (0.3124)
Colorado advantage + Other × PR race	0.0317 (0.1976)	0.0117 (0.1750)	-0.0434 (0.1440)
Colorado advantage + Liberal × PR race	0.1232 (0.1032)	0.1718* (0.0982)	-0.2949*** (0.0754)
Liberal advantage + Colorado × PR race	0.0514 (0.1097)	0.0887 (0.1072)	-0.1401* (0.0848)
Liberal advantage + Other × PR race	0.1243 (0.3316)	-0.1741 (0.3116)	0.0498 (0.2596)
Liberal trifecta × PR race	0.0301 (1.1852)	-0.6823 (1.2005)	0.6522 (0.8066)
Other poll worker allocation × PR race	0.1203 (0.1356)	-0.1856 (0.1292)	0.0653 (0.1024)
Colorado trifecta	0.6614** (0.3292)	-0.6040* (0.3248)	-0.0574 (0.1983)
Colorado advantage + Other	0.4104*** (0.1575)	-0.5047*** (0.1485)	0.0943 (0.0877)
Colorado advantage + Liberal	0.4295*** (0.0831)	-0.4957*** (0.0816)	0.0663 (0.0449)
Liberal advantage + Colorado	-0.0673 (0.0883)	0.1469* (0.0874)	-0.0796 (0.0511)
Liberal advantage + Other	-0.2959 (0.2627)	0.1130 (0.2648)	0.1830 (0.1667)
Liberal trifecta	-1.9683** (0.9019)	0.9328 (0.9306)	1.0355** (0.4775)
Other poll worker allocation	-0.0564 (0.1096)	-0.0345 (0.1075)	0.0909 (0.0635)
Colorado voter prop.	0.3802*** (0.0049)	-0.2898*** (0.0043)	-0.0904*** (0.0040)
Liberal voter prop.	-0.5370*** (0.0052)	0.6333*** (0.0049)	-0.0963*** (0.0046)
Other party voter prop.	-0.1242*** (0.0115)	-0.0220** (0.0094)	0.1461*** (0.0090)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Observations	117,229	117,229	117,229
R ²	0.8425	0.8869	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. All regressions control for the percent of Colorado, Liberal, and other party voters registered to vote at each booth. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. “PR race” is an indicator variable for electoral races with a proportional representation (PR) system. The coefficient for PR race is omitted because it is collinear after controlling for polling station-electoral race fixed effects.

For a related follow-up test to the electoral system heterogeneity analysis, we generate new partisan allocation indicator variables by pooling together the Colorado and Liberal poll workers as “traditional party” poll workers, which we contrast with the remaining other party poll workers. We do this because we acknowledge that collusion between traditional party poll workers could even occur with a “fair allocation” having just one Colorado party and one Liberal poll worker, as they would constitute a majority of the poll worker team. We thus generate the following indicator variables: “traditional party trifecta,” “other party trifecta,” “traditional party advantage + other party,” and “other party advantage + traditional party.” Our excluded category then corresponds to voting booths with “fair allocations” having only one traditional party poll worker and one poll worker from another party. Thus, the indicator variable for “other poll worker allocations” here refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced above. These indicator variables are all mutually exclusive and together cover all electoral tables. We once again include the interactions between PR race and the indicator variables mentioned previously. This leads us to the following regression specification:

$$\begin{aligned}
Y_{abc} = & \beta_0 + \alpha_1 Tradpart_Trif_{ab} \times PR_c + \alpha_2 Tradpart_Adv_Othpart_{ab} \times PR_c \\
& + \alpha_3 Othpart_Adv_Tradpart_{ab} \times PR_c + \alpha_4 Othpart_Trif_{ab} \times PR_c + \alpha_5 Other_pw_alloc_{ab} \times PR_c \\
& + \beta_1 Tradpart_Trif_{ab} + \beta_2 Tradpart_Adv_Othpart_{ab} + \beta_3 Othpart_Adv_Tradpart_{ab} \\
& + \beta_4 Othpart_Trif_{ab} + \beta_5 Other_pw_alloc_{ab} \\
& + \delta_1 voter_prop_Colorado_{ab} + \delta_2 voter_prop_Liberal_{ab} + \delta_3 voter_prop_Other_{ab} + \eta_{ac} + \varepsilon_{abc}.
\end{aligned}
\tag{3}$$

As an additional test of Hypothesis (3), Table H3 explores the heterogeneous effects of partisan poll workers by electoral system and uses regression specification (3). The difference with Table 3 is that we pool the two traditional parties together and contrast them with poll workers from other parties. We find that a traditional party trifecta of poll workers counting votes increases

significantly the vote share of the Colorado party by 0.36 pp. The fact that a traditional party trifecta overall tends to increase the Colorado party vote share is likely because the Colorado party has a majority of poll workers represented more often than the Liberal party does. Next, we observe that a traditional party trifecta of poll workers counting votes leads to a significant rise in the Liberal/GANAR vote share in PR races by 0.35 pp. This result follows our expectations because a traditional party trifecta having a mix of Colorado and Liberal poll workers is more likely to collude in PR races. Hence, we observe a significant increase in the Liberal/GANAR vote share from traditional party trifectas in PR races.

Table H3: Effect of partisan poll worker composition on all election results by electoral system distinguishing traditional and other parties

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Trad. party trifecta	0.3636** (0.1485)	-0.1537 (0.1428)	-0.2099** (0.0870)
Trad. party adv. + Other party	0.2296 (0.1459)	-0.0456 (0.1394)	-0.1840** (0.0854)
Other party adv. + Trad. party	0.1328 (0.2716)	0.2013 (0.2715)	-0.3341** (0.1596)
Other party trifecta	-0.9501 (1.2369)	0.4189 (1.4207)	0.5312 (0.9772)
Other poll worker allocation	0.1047 (0.1531)	0.1197 (0.1474)	-0.2245** (0.0901)
Trad. party trifecta × PR race	-0.0343 (0.1837)	0.3534** (0.1726)	-0.3190** (0.1386)
Trad. party adv. + Other party × PR race	-0.1125 (0.1805)	0.2052 (0.1680)	-0.0927 (0.1353)
Other party adv. + Trad. party × PR race	-0.1342 (0.3366)	-0.3163 (0.3264)	0.4505* (0.2563)
Other party trifecta × PR race	-0.5722 (1.6076)	1.7118 (1.6334)	-1.1396 (1.6029)
Other poll worker allocation × PR race	-0.0745 (0.1892)	0.2489 (0.1776)	-0.1744 (0.1432)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	117,229	117,229	117,229
R^2	0.8423	0.8868	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The parties belonging to the GANAR alliance vary across Paraguayan departments for the governor, deputies, and departmental council elections, with FG running independently in some departments. however, the Liberal party always runs separately or through GANAR (and mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares for these races. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers at the voting booth either support the traditional parties (Colorado and Liberal) or some other party. Advantage indicates that two out three poll workers either support the traditional parties (Colorado and Liberal) or some other party. The excluded category corresponds to voting booths with “fair allocations” having one traditional party poll worker and one poll worker from another party. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. “PR race” is an indicator variable for electoral races with a proportional representation (PR) system. The coefficient for PR race is omitted because it is collinear once we control for polling station-electoral race fixed effects. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

In addition, we can observe how the vote share of other parties varies symmetrically with the number of traditional party and other party poll workers. Whenever the traditional parties have a trifecta counting votes, the vote share of other parties decreases significantly by 0.21 pp. This decrease from traditional party trifectas is compounded in PR races with an additional significant decrease of 0.32 pp. We can also notice how two traditional party poll workers and one other party poll worker counting votes leads to a significant decrease of 0.18 pp. If instead the other parties have two poll workers and the traditional parties have one we still observe a significant decrease of 0.33 pp, yet this is compensated in PR races because we find that this allocation leads to a significant (at the 10 percent level) increase of 0.45 pp. Overall, these results are consistent with Hypothesis (3). Lastly, we find that “other” poll worker allocations lead to a significant decline of 0.22 pp in the vote share of other parties. This result is also plausible because now the “other” poll worker allocations include, for example, electoral tables with two traditional party poll workers and one unaffiliated poll worker (i.e., a poll worker registered as not supporting any political party according to the electoral authority). This sort of partisan poll worker allocations should ultimately benefit the traditional parties more. Hence, the results from this table are suggestive that collusion between traditional party poll workers and greater electoral irregularities (to the detriment of other parties) are more likely with PR races.

Table H11 provides summary statistics for all the variables used in the main tables of the paper, except the voting outcome variables, which are on Table H12. These variables are defined in detail on Section 3. In contrast to the vote share variables, turnout is measured in terms of number of votes. Table H13 shows summary statistics for all the variables used in the OA tables and analyses available upon request.

To examine results for the presidential race, we use similar indicator variables to equation (1) except we consider GANAR alliance poll workers instead of just Liberal poll workers. GANAR alliance poll workers are those supporting either the Liberal party, the FG, or other smaller left-

Table H4: Effect of partisan poll worker composition on election results controlling for the proportion of voters at voting booths with top 100 most common surnames in the country

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)	Total votes (turnout) (4)
Colorado trifecta	0.3274 (0.2030)	-0.5213*** (0.1849)	0.1939 (0.1766)	0.0181 (0.4811)
Colorado advantage + Other	0.4540*** (0.0952)	-0.4698*** (0.0789)	0.0158 (0.0822)	0.0712 (0.2115)
Colorado advantage + Liberal	0.5180*** (0.0498)	-0.3578*** (0.0458)	-0.1602*** (0.0438)	-0.1468 (0.1063)
Liberal advantage + Colorado	-0.0439 (0.0527)	0.2323*** (0.0507)	-0.1884*** (0.0485)	-0.3832*** (0.1152)
Liberal advantage + Other	-0.1831 (0.1604)	-0.0078 (0.1406)	0.1909 (0.1445)	1.1366*** (0.3886)
Liberal trifecta	-1.9207*** (0.5893)	0.4524 (0.5994)	1.4683*** (0.4667)	-1.0129 (0.8733)
Other poll worker allocation	0.0430 (0.0644)	-0.1655*** (0.0596)	0.1225** (0.0579)	0.0264 (0.1370)
Mean of Dependent Variable	41.5808	34.4445	23.9746	23.9746
Polling station-elect. race FE	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓
Top 100 surnames prop.	✓	✓	✓	✓
Observations	117,229	117,229	117,229	117,229
R^2	0.8438	0.8878	0.9311	0.5613

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker, one Liberal poll worker, and one “other” poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. “Top 100 surnames prop.” denotes the inclusion of separate indicator variables for the proportion of voters having one of the 100 most common surnames in the country at each booth, with one indicator variable per surname.

Table H5: Correlation between pre-registered partisan poll worker composition on election results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Prereg. Colorado trifecta	-2.0554** (0.8382)	1.1301 (0.8333)	0.9253 (1.0322)
Prereg. Colorado advantage + Other	3.8046*** (0.8920)	-1.5612** (0.6749)	-2.2434*** (0.7105)
Prereg. Colorado advantage + Liberal	0.1294 (0.0838)	-0.2135*** (0.0767)	0.0842 (0.0697)
Prereg. Liberal advantage + Colorado	-0.2510*** (0.0904)	0.2553*** (0.0834)	-0.0043 (0.0747)
Prereg. Liberal advantage + Other	-3.6482** (1.5619)	-1.2102 (2.0915)	4.8584*** (1.5218)
Prereg. other poll worker allocation	2.9388*** (0.9025)	-0.4990 (0.6488)	-2.4397*** (0.8845)
Mean of Dependent Variable	41.5808	34.4443	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	117,229	117,230	117,229
R^2	0.8424	0.8868	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. The regressors correspond to pre-registered partisan poll worker allocations. A trifecta indicates all three poll workers from the same party work at the voting booth. There is no pre-registered Liberal trifecta in our data so we do not include it as a regressor. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker, one Liberal poll worker, and one “other” poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables.

Table H6: Effect of pre-registered and *de facto* partisan poll worker composition on election results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Prereg. Colorado trifecta	-2.3058*** (0.8318)	1.3626 (0.8352)	0.9432 (1.0305)
Prereg. Colorado advantage + Other	3.6100*** (0.8899)	-1.3175** (0.6703)	-2.2925*** (0.7120)
Prereg. Colorado advantage + Liberal	-0.1767** (0.0888)	0.0103 (0.0808)	0.1664** (0.0741)
Prereg. Liberal advantage + Colorado	-0.2137** (0.0945)	0.1345 (0.0871)	0.0792 (0.0790)
Prereg. Liberal advantage + Other	-3.4576** (1.5970)	-1.2296 (2.1109)	4.6873*** (1.5235)
Prereg. other poll worker allocation	2.8824*** (0.8960)	-0.4260 (0.6424)	-2.4564*** (0.8776)
<i>De facto</i> Colorado trifecta	0.2755 (0.2103)	-0.3519* (0.1918)	0.0764 (0.1819)
<i>De facto</i> Colorado advantage + Other	0.4047*** (0.1090)	-0.3337*** (0.0931)	-0.0711 (0.0951)
<i>De facto</i> Colorado advantage + Liberal	0.5127*** (0.0757)	-0.2176*** (0.0701)	-0.2950*** (0.0677)
<i>De facto</i> Liberal advantage + Colorado	-0.0258 (0.0776)	0.3407*** (0.0736)	-0.3149*** (0.0710)
<i>De facto</i> Liberal advantage + Other	-0.2219 (0.1698)	0.1524 (0.1493)	0.0695 (0.1519)
<i>De facto</i> Liberal trifecta	-1.9769*** (0.5968)	0.6295 (0.5978)	1.3474*** (0.4660)
<i>De facto</i> fair allocation	-0.0232 (0.0646)	0.1583*** (0.0597)	-0.1351** (0.0578)
Mean of Dependent Variable	41.5808	34.4443	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	117,229	117,230	117,229
R ²	0.8426	0.8869	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. The regressors correspond to either pre-registered or election-day (*de facto*) partisan poll worker allocations. A trifecta indicates all three poll workers from the same party work at the voting booth. There is no pre-registered Liberal trifecta in our data so we do not include it as a regressor. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker, one Liberal poll worker, and one “other” poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables.

Table H7: Effect of partisan poll worker composition on presidential election results, controlling for the proportion of voters sharing surnames with the candidates

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)
Colorado trifecta	0.6564 (0.4602)	-0.7651 (0.4660)	0.1087 (0.2548)
Colorado advantage + Other	0.4180 (0.2689)	-0.4828* (0.2609)	0.0648 (0.1373)
Colorado advantage + GANAR	0.4470*** (0.1237)	-0.4922*** (0.1224)	0.0452 (0.0607)
GANAR advantage + Colorado	-0.0836 (0.1055)	0.1425 (0.1053)	-0.0589 (0.0512)
GANAR advantage + Other	-0.3930 (0.2909)	0.4713* (0.2770)	-0.0783 (0.1439)
GANAR trifecta	0.3212 (0.5962)	-0.6507 (0.5784)	0.3295 (0.3169)
Other poll worker allocation	0.3188 (0.2256)	-0.1557 (0.2264)	-0.1632 (0.1098)
Mean of Dependent Variable	48.6944	45.3871	5.9185
Polling station FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
GANAR voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Prop. voters coincide w/ Colorado candidate surnames	✓	✓	✓
Prop. voters coincide w/ GANAR candidate surnames	✓	✓	✓
Prop. voters coincide w/ Other party candidate surnames	✓	✓	✓
Observations	20,287	20,287	20,287
R^2	0.8116	0.8205	0.7958

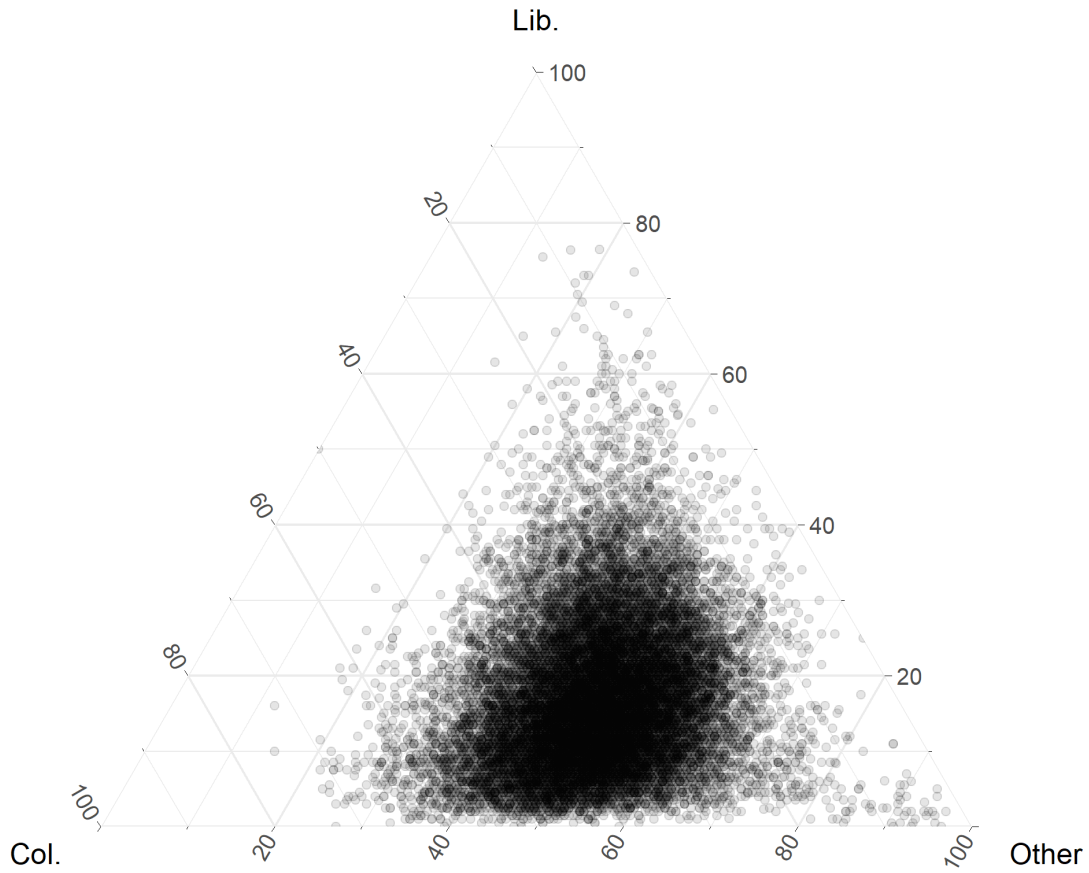
Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares on Columns (1) to (3) are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party or alliance (in the case of GANAR) work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one GANAR (alliance between the Liberal and FG parties, as well as other smaller left-wing parties) poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The regressions also control for the proportion of voters at each voting booth sharing surnames with the candidates for the Colorado party, the GANAR alliance, and the other party candidates. For example, to identify the proportion for the Colorado party we calculated the proportion of voters at each voting booth that had either of the surnames of the candidates for the presidency and vicepresidency for that ticket: Abdo, Benitez, Velazquez, and Moreno. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Table H8: Effect of partisan poll worker composition on governor election results, controlling for the proportion of voters sharing surnames with the candidates

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)
Colorado trifecta	0.7480 (0.4738)	-0.4299 (0.4603)	-0.3181 (0.3029)
Colorado advantage + Other	0.4169* (0.2281)	-0.4799** (0.2110)	0.0630 (0.1388)
Colorado advantage + Liberal	0.3907*** (0.1220)	-0.4686*** (0.1178)	0.0779 (0.0726)
Liberal advantage + Colorado	-0.0898 (0.1258)	0.1882 (0.1222)	-0.0984 (0.0803)
Liberal advantage + Other	-0.3737 (0.3618)	0.0437 (0.3957)	0.3300 (0.2688)
Liberal trifecta	-1.6285 (1.1044)	0.6524 (1.1095)	0.9761 (0.6793)
Other poll worker allocation	-0.1379 (0.1580)	-0.0954 (0.1533)	0.2333** (0.1052)
Mean of Dependent Variable	46.9013	42.3609	10.7379
Polling station FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Prop. voters coincide w/ Colorado candidate surnames	✓	✓	✓
Prop. voters coincide w/ Liberal/GANAR candidate surnames	✓	✓	✓
Prop. voters coincide w/ Other party candidate surnames	✓	✓	✓
Observations	18,144	18,144	18,144
R^2	0.8142	0.8563	0.9084

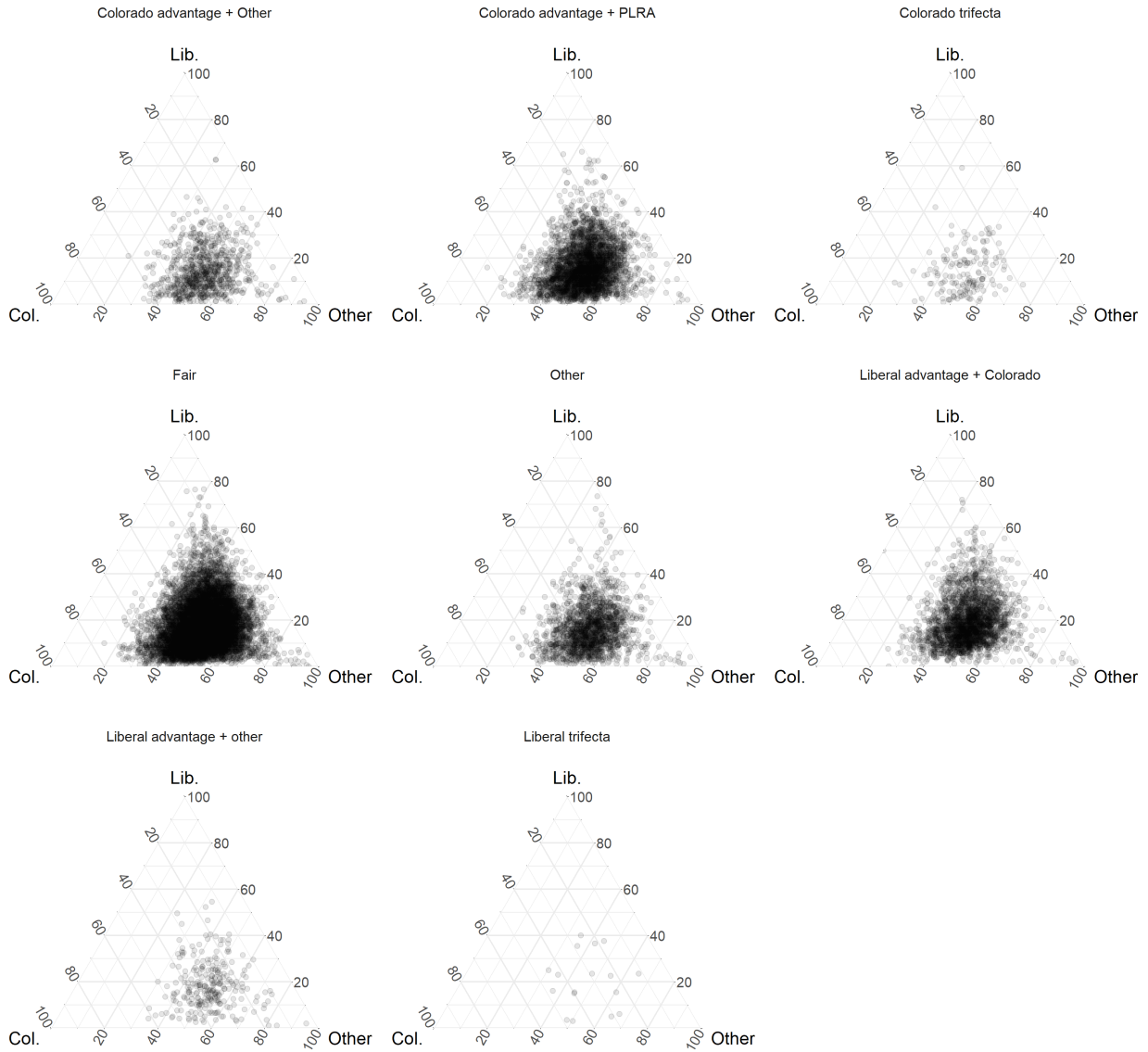
Note: A unit of observation is a voting booth. The parties belonging to the GANAR alliance vary across Paraguayan departments for the governor elections, with FG running independently in some departments. However, the Liberal party always runs separately or through GANAR (and mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Standard errors are robust. Vote shares on Columns (1) to (3) are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out of three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The regressions also control for the proportion of voters at each voting booth sharing surnames with the candidates for the Colorado party, the Liberal party or GANAR alliance, and the other party candidates. For example, to identify the proportion for the Colorado party we calculated the proportion of voters at each voting booth that had either of the surnames of the candidate for the governor in the voters’ relevant department (e.g., either Gonzalez or Vaesken for the Alto Parana department). The number of observations is lower for this electoral race as there is no governor election for Paraguayan voters abroad and those in the capital district. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Figure H1: Proportion of voters registered as ANR, PLRA or Other by table (Full sample)



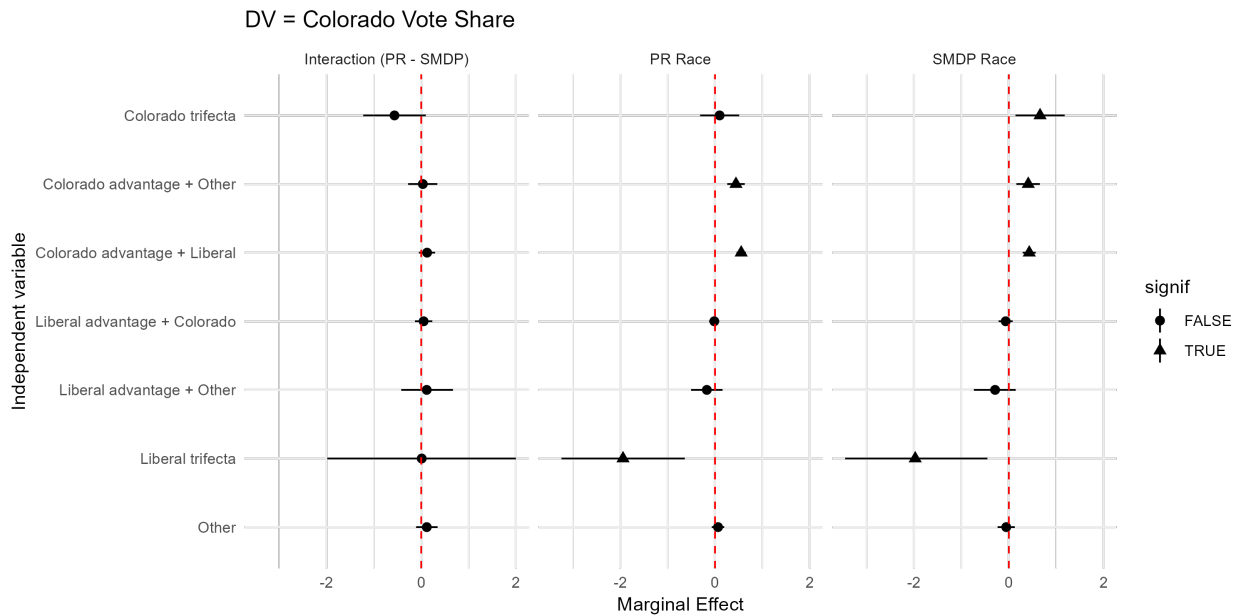
Note: This figure plots the proportion of registered voters assigned to each table that are either affiliated to the PLRA, to the ANR or an “Other” condition. “Other” includes those affiliated to any other party, or those not affiliated to any party, or those affiliated to multiple parties.

Figure H2: Proportion of voters registered as ANR, PLRA or Other by table (By table composition condition)



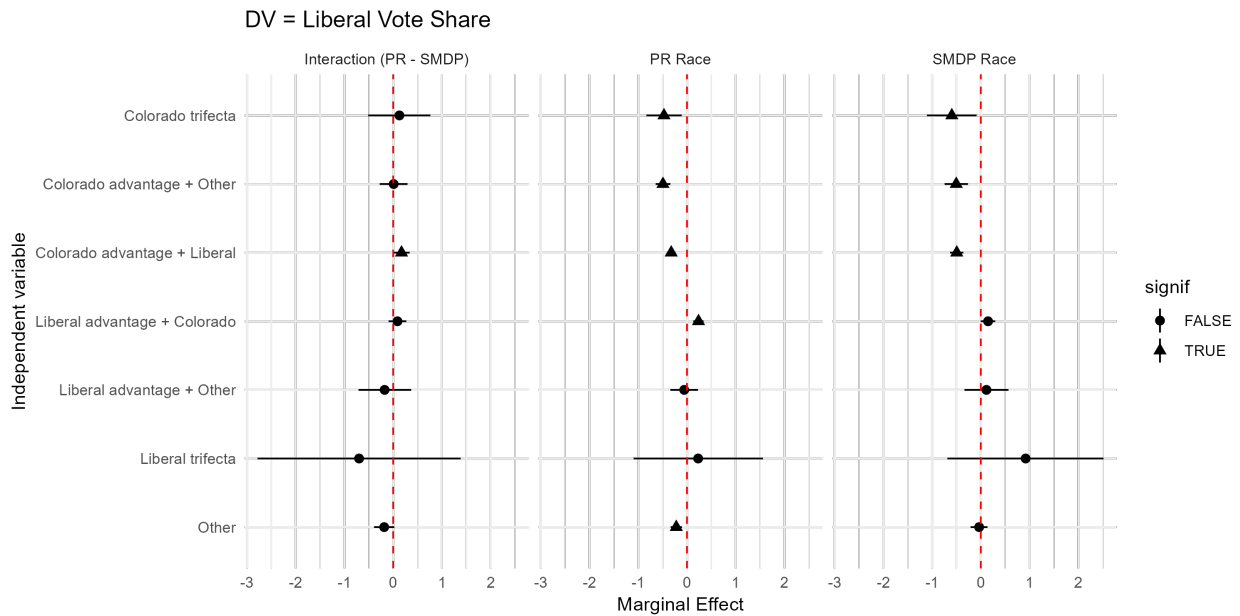
Note: This figure plots the proportion of registered voters assigned to each table that are either affiliated to the PLRA, to the ANR or an “Other” condition. “Other” includes those affiliated to any other party, or those not affiliated to any party, or those affiliated to multiple parties.

Figure H3: Marginal effects on specification from Table 3. Effects under PR and SMDP calculated separately, and then interacted



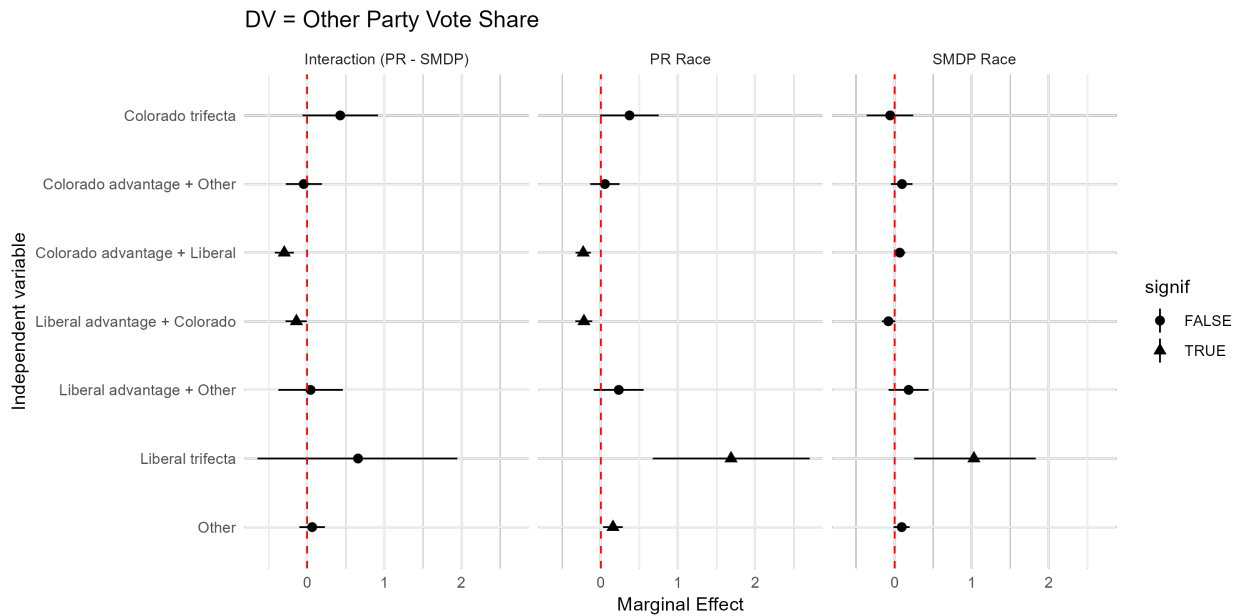
Note: Marginal effects were estimated using the *Clarify* package in R (King, Tomz and Wittenberg 2000). First, we held the race constant at PR=1, and estimated 10,000 iterations of the dependent variable holding each independent-variable dummy at 0 (PLRA_trifecta=0 for example), and then repeated the process holding PR=1 and varying each coefficient to 1 (PLRA_trifecta=1 for example). Then we took the difference between estimates for each independent variable at 0 and at 1, and this gave us the first difference estimate of the marginal effect of each independent variable (PLRA_trifecta for example) on the dependent variable when PR=1. We then repeated this process for each independent variable, but holding PR=0. This gave us the marginal effect of each independent variable (PLRA_trifecta for example) on the dependent variable when PR=0. We then carried out the second difference estimate, taking the first difference of each coefficient when PR=0 and subtracting that from the first difference of each coefficient when PR=1. This provided us with our marginal effects for the interaction terms.

Figure H4: Marginal effects on specification from Table 3. Effects under PR and SMDP calculated separately, and then interacted



Note: Marginal effects were estimated using the *Clarify* package in R (King, Tomz and Wittenberg 2000). First, we held the race constant at PR=1, and estimated 10,000 iterations of the dependent variable holding each independent-variable dummy at 0 (PLRA_trifecta=0 for example), and then repeated the process holding PR=1 and varying each coefficient to 1 (PLRA_trifecta=1 for example). Then we took the difference between estimates for each independent variable at 0 and at 1, and this gave us the first difference estimate of the marginal effect of each independent variable (PLRA_trifecta for example) on the dependent variable when PR=1. We then repeated this process for each independent variable, but holding PR=0. This gave us the marginal effect of each independent variable (PLRA_trifecta for example) on the dependent variable when PR=0. We then carried out the second difference estimate, taking the first difference of each coefficient when PR=0 and subtracting that from the first difference of each coefficient when PR=1. This provided us with our marginal effects for the interaction terms.

Figure H5: Marginal effects on specification from Table 3. Effects under PR and SMDP calculated separately, and then interacted



Note: Marginal effects were estimated using the *Clarify* package in R (King, Tomz and Wittenberg 2000). First, we held the race constant at PR=1, and estimated 10,000 iterations of the dependent variable holding each independent-variable dummy at 0 (PLRA_trifecta=0 for example), and then repeated the process holding PR=1 and varying each coefficient to 1 (PLRA_trifecta=1 for example). Then we took the difference between estimates for each independent variable at 0 and at 1, and this gave us the first difference estimate of the marginal effect of each independent variable (PLRA_trifecta for example) on the dependent variable when PR=1. We then repeated this process for each independent variable, but holding PR=0. This gave us the marginal effect of each independent variable (PLRA_trifecta for example) on the dependent variable when PR=0. We then carried out the second difference estimate, taking the first difference of each coefficient when PR=0 and subtracting that from the first difference of each coefficient when PR=1. This provided us with our marginal effects for the interaction terms.

Table H9: Exploring party allocation strategies according to the proportion of affiliated voters
(only *de facto* allocations)

	% of Colorado voters (1)	% of Liberal voters (2)	% of other party voters (3)
<i>De facto</i> Colorado trifecta	0.1912 (0.4094)	0.0689 (0.3019)	-0.0352 (0.1792)
<i>De facto</i> Colorado advantage + Other	-0.0732 (0.1957)	-0.0213 (0.1559)	0.0430 (0.0895)
<i>De facto</i> Colorado advantage + Liberal	-0.0360 (0.1100)	0.0380 (0.0944)	-0.0058 (0.0366)
<i>De facto</i> Liberal advantage + Colorado	-0.1724 (0.1271)	0.2761** (0.1160)	-0.0056 (0.0445)
<i>De facto</i> Liberal advantage + Other	-0.3594 (0.3510)	0.9053*** (0.3272)	-0.0513 (0.1228)
<i>De facto</i> Liberal trifecta	1.9653 (1.4403)	0.2693 (1.2104)	-0.4154 (0.4603)
<i>De facto</i> other poll worker allocation	-0.1450 (0.1351)	0.1824 (0.1116)	0.0144 (0.0522)
Mean of Dependent Variable	34.1749	17.3445	17.3445
Polling station FE	✓	✓	✓
Observations	20,354	20,354	20,354
R^2	0.7521	0.7929	0.4502

Note: A unit of observation is a voting booth. Standard errors are robust. The regressors correspond to election-day (*de facto*) partisan poll worker allocations. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with a *de facto* “fair allocation” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables.

Table H10: Exploring party allocation strategies according to the proportion of affiliated voters (only pre-registered allocations)

	% of Colorado voters (1)	% of Liberal voters (2)	% of other party voters (3)
Prereg. Colorado trifecta	1.5212 (1.9744)	-0.8962 (1.2317)	-1.3016** (0.6564)
Prereg. Colorado advantage + Other	-2.4901* (1.2719)	-0.3878 (1.0842)	-0.1192 (0.4547)
Prereg. Colorado advantage + Liberal	0.0833 (0.1986)	-0.1860 (0.1685)	0.0776 (0.0597)
Prereg. Liberal advantage + Colorado	-0.0586 (0.2216)	0.2204 (0.2022)	0.0339 (0.0660)
Prereg. Liberal advantage + Other	-6.1299** (3.0545)	4.6978 (5.7944)	0.2614 (0.2503)
Prereg. other poll worker allocation	-5.9130** (2.6968)	3.4874 (2.5692)	-0.3388 (0.4294)
Mean of Dependent Variable	34.1749	17.3445	17.3445
Polling station FE	✓	✓	✓
Observations	20,354	20,354	20,354
R^2	0.7523	0.7929	0.4503

Note: A unit of observation is a voting booth. Standard errors are robust. The regressors correspond to pre-registered partisan poll worker allocations. A trifecta indicates all three poll workers from the same party work at the voting booth. There is no pre-registered Liberal trifecta in our data so we do not include it as a regressor. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with a pre-registered “fair allocation” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables.

Table H11: Main summary statistics

	Observations	Mean	Standard Deviation
Total pre-registered poll workers replaced at voting booth	21,211	1.1371	0.9316
Percent of Colorado voters at voting booth	21,211	34.2220	10.4397
Percent of Liberal voters at voting booth	21,211	17.3346	9.8823
Percent of other party voters (excluding the Colorado and Liberal parties) at voting booth	21,211	4.0607	2.4103
Number of registered voters at voting booth	21,211	199.9673	14.4187
Equation (1) indicator variables:			
Colorado trifecta	21,211	0.0074	0.0857
Colorado advantage + Other	21,211	0.0415	0.1995
Colorado advantage + Liberal	21,211	0.1693	0.3751
Liberal advantage + Colorado	21,211	0.1259	0.3318
Liberal advantage + Other	21,211	0.0130	0.1133
Liberal trifecta	21,211	0.0008	0.0283
Other poll worker allocation	21,211	0.1208	0.3259
Fair poll worker allocation	21,211	0.5211	0.4996

Note: All the means and standard deviations are rounded up to the fourth digit after the decimal.

wing parties that form part of the alliance.⁶ This change also affects who we consider as “other” in the “GANAR advantage + Other” and “Colorado advantage + Other” variables, which now consists of those poll workers not registered as supporting either the Colorado party or the GANAR alliance. Our excluded category then corresponds to voting booths with “fair allocations” having one Colorado poll worker and one GANAR poll worker. Lastly, the indicator variable for “other poll worker allocations” here refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced above. These indicator variables are all mutually exclusive and together cover all voting booths. Our regression specification for presidential

⁶As mentioned previously, the full list of parties that were part of GANAR are: Liberal party, PRF, PDP, PEN, AP, PMAS, and the FG member parties. Virtually all GANAR poll workers support the Liberal party and FG (28,978 of the 29,294 GANAR poll workers). Only 316 poll workers support one of the other small left-wing parties that were part of GANAR.

Table H12: Vote share summary statistics

	Observations	Mean	Standard Deviation
Presidential election vote shares:			
Colorado vote share	21,139	48.625	12.311
GANAR vote share	21,139	45.439	12.564
Other party vote share	21,139	5.936	5.836
Blank vote share	21,139	2.435	2.333
Null vote share	21,139	2.751	1.984
Turnout	21,139	122.900	18.592
Senatorial election vote shares:			
Colorado vote share	21,107	32.765	12.558
Liberal vote share	21,107	24.484	12.643
Other party vote share	21,107	42.752	15.775
Blank vote share	21,107	5.366	4.069
Null vote share	21,107	3.621	2.660
Turnout	21,107	122.627	18.876
MERCOSUR parliament election vote shares:			
Colorado vote share	21,122	42.199	13.042
Liberal vote share	21,122	30.512	13.659
Other party vote share	21,122	27.289	14.068
Blank vote share	21,122	8.562	5.190
Null vote share	21,122	3.904	2.726
Turnout	21,122	122.630	18.744
Deputies election vote shares:			
Colorado vote share	20,932	39.295	14.101
Liberal/GANAR vote share	20,932	30.441	14.704
Other party vote share	20,932	30.264	19.012
Blank vote share	20,932	5.220	3.432
Null vote share	20,932	3.055	2.236
Turnout	20,932	123.369	17.111
Governor election vote shares:			
Colorado vote share	18,910	46.846	12.432
Liberal/GANAR vote share	18,910	42.390	13.713
Other party vote share	18,910	10.764	11.016
Blank vote share	18,910	3.727	2.641
Null vote share	18,910	2.585	1.895
Turnout	18,910	122.279	16.615
Departmental council election vote shares:			
Colorado vote share	18,893	40.423	12.872
Liberal/GANAR vote share	18,893	34.377	13.223
Other party vote share	18,893	25.200	13.246
Blank vote share	18,893	6.735	3.603
Null vote share	18,893	3.465	2.526
Turnout	18,893	122.079	16.661

Note: All means and standard deviations are rounded up to the fourth digit. Vote shares for parties are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares for blank and null votes are calculated by dividing by turnout (total votes including null and blank votes) and multiplying by 100. The number of observations for the deputies' vote shares is lower as there is no deputies' election for Paraguayan voters abroad. The number of observations is lower for the governor and departmental council vote shares as there is no governor or departmental council election for Paraguayan voters abroad and those in the capital district. There are still slight differences in observations across races due to electoral contestations annulling the vote counts for certain races at some voting booths and missing vote tallies that were not received by the election authority for certain electoral races.

Table H13: OA analysis summary statistics

	Observations	Mean	Standard Deviation
Equation (3) indicator variables:			
Traditional party trifecta	21,211	0.3035	0.4598
Traditional party advantage + Other party	21,211	0.4130	0.4924
Other party advantage + Traditional party	21,211	0.0136	0.1157
Other party trifecta	21,211	0.0002	0.0154
Other poll worker allocation	21,211	0.2227	0.4160
Fair poll worker allocation	21,211	0.0470	0.2117
Electoral contestation variables:			
Contested electoral result	122,595	0.0262	0.1598
Contested electoral result by a party that is not the Colorado party	122,595	0.0228	0.1493
Contested electoral result by a party that is not the Liberal party	122,595	0.0189	0.1360
Contestation of electoral result accepted	122,595	0.0060	0.0774
Electoral result annulled	122,595	0.0038	0.0615

Note: All the means and standard deviations are rounded up to the fourth digit after the decimal.

race analyses is then as follows:

$$\begin{aligned}
Y_{ab} = & \beta_0 + \beta_1 GANAR_Trif_{ab} + \beta_2 GANAR_Adv_Oth_{ab} + \beta_3 GANAR_Adv_Colorado_{ab} \\
& + \beta_4 Colorado_Adv_GANAR_{ab} + \beta_5 Colorado_Adv_Oth_{ab} + \beta_6 Colorado_Trif_{ab} + \beta_7 Other_pw_alloc_{ab} \\
& + \delta_1 voter_prop_Colorado_{ab} + \delta_2 voter_prop_GANAR_{ab} + \delta_3 voter_prop_Other_{ab} + \theta_a + \varepsilon_{ab}.
\end{aligned}
\tag{4}$$

Table H14 shows the effect of partisan poll workers on the presidential election by running equation (4). In Column (1) we can observe that the Colorado party vote share increases significantly by around 0.45 percentage points (pp) whenever it has two Colorado poll workers counting votes. This result is robust to controlling for the proportion of Colorado, GANAR, and other party voters at each voting booth. Similarly, in Column (2) we can notice that the GANAR vote share increases significantly at the 10 percent level by approximately 0.47 pp when there are two GANAR poll workers and a poll worker not registered to the Colorado party or the GANAR parties. We

can also notice how the GANAR vote share decreases by around 0.49 pp whenever the Colorado party has two poll workers counting votes. This result is robust to controlling for the proportion of partisan voters at each voting booth and it is interesting how this result varies symmetrically depending on which party/alliance has a poll worker majority at the electoral table. We do not observe any significant effects of these partisan poll worker allocations on the vote share of other parties. This might reflect the fact that in SMDP races (such as the presidential race) one objective of biased poll workers might be to take away votes from their main competition, while potentially ignoring the other smaller parties. Next, in Column (4) the blank vote share decreases significantly at the 10 percent level when the allocation is that of two GANAR poll workers and a poll worker not registered to the Colorado party or the GANAR parties. Finally, we do not observe any significant effects on the null vote share or turnout. We also do not find any significant coefficients for the “trifecta” dummies, which may be expected as we do not have many trifecta poll worker allocations for either party (just over 260 booths), leading to low statistical power.

Table H15 examines the effect of partisan poll workers on the senatorial election by running equation (1) (except we use polling station fixed effects instead of polling station-electoral race fixed effects), because for this electoral race the GANAR parties run under separate party lists. We observe a similar pattern for the Colorado and Liberal party vote shares as in Table H14. Whenever the Colorado party has two poll workers counting votes, its vote shares increases significantly by around 0.52/0.53 pp. On the other hand, the Liberal party vote share increases significantly at the 10 percent level by around 0.21 pp when there are two Liberal poll workers and one Colorado poll worker counting votes. In addition, when the Colorado party has two poll workers and there is one Liberal poll worker or one poll worker not registered to the Colorado or Liberal party, the Liberal party vote share decreases significantly by 0.25 pp and 0.34 pp respectively. Next, we observe that if the other parties have no poll worker present (particularly when a voting booth has 2 Colorado and 1 Liberal poll worker) the vote share for other parties goes down significantly by 0.27 pp. A Colorado party trifecta reduces the null vote share significantly (at the 10 percent level) by 0.31

Table H14: Effect of partisan poll worker composition on presidential election results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Colorado trifecta	0.6563 (0.4599)	-0.7630 (0.4658)	0.1068 (0.2545)	-0.0080 (0.1301)	0.0560 (0.1519)	-0.8245 (0.7845)
Colorado advantage + Other	0.4175 (0.2689)	-0.4820* (0.2609)	0.0644 (0.1373)	-0.0679 (0.0708)	-0.0228 (0.0877)	0.1396 (0.4190)
Colorado advantage + GANAR	0.4488*** (0.1236)	-0.4946*** (0.1224)	0.0458 (0.0607)	0.0260 (0.0389)	-0.0571 (0.0408)	0.0933 (0.2020)
GANAR advantage + Colorado	-0.0829 (0.1055)	0.1409 (0.1052)	-0.0580 (0.0512)	0.0204 (0.0317)	0.0319 (0.0333)	0.0115 (0.1694)
GANAR advantage + Other	-0.3968 (0.2909)	0.4742* (0.2771)	-0.0774 (0.1438)	-0.1392* (0.0827)	-0.0379 (0.0932)	0.0740 (0.4439)
GANAR trifecta	0.3197 (0.5953)	-0.6510 (0.5773)	0.3312 (0.3167)	-0.2267 (0.1756)	0.0274 (0.2457)	0.4049 (0.8039)
Other poll worker allocation	0.3176 (0.2255)	-0.1554 (0.2264)	-0.1622 (0.1098)	-0.0507 (0.0619)	-0.0286 (0.0703)	0.2621 (0.3503)
Mean of Dependent Variable	48.6944	45.3871	5.9185	2.3829	2.7564	122.8357
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
GANAR voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	20,287	20,287	20,287	20,287	20,287	19,281
R^2	0.8116	0.8205	0.7958	0.4630	0.2462	0.7312

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares on Columns (1) to (3) are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares on Columns (4) to (5) are calculated by dividing by turnout (i.e., all votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. A trifecta indicates all three poll workers from the same party or alliance (in the case of GANAR) work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one GANAR (alliance between the Liberal and FG parties, as well as other smaller left-wing parties) poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

pp. If the Liberal party has two poll workers and there is one Colorado poll worker or one poll worker not registered to the Colorado or Liberal party, the null vote share decreases by 0.10 pp and 0.42 pp respectively. Finally, we do not observe any significant effects on the blank vote share or turnout.

Table H16 explores the effect of partisan poll workers on the MERCOSUR parliament election by running equation (1), because for this electoral race the GANAR parties also run under separate party lists. We observe a very similar pattern for the Colorado and Liberal party vote shares as in Table H15. If the Colorado party has two poll workers and the Liberal party has one counting votes, the Colorado party's vote share increases significantly by 0.59 pp. If instead the Liberal party has two poll workers and the Colorado party has one counting votes, the Liberal party's vote share rises significantly at the 10 percent level by 0.21 pp. Once again, when the Colorado party has two poll workers and there is one Liberal poll worker or one poll worker not registered to the Colorado or Liberal party, the Liberal party vote share decreases significantly by 0.3 pp and 0.52 pp respectively. Next, we continue finding that if the other parties have no poll worker representation (particularly when a voting booth has 2 Colorado and 1 Liberal poll worker) the vote share for other parties go down significantly by 0.29 pp. If there is a Liberal trifecta the blank vote share increases significantly by 1.23 pp. On the other hand, if there is Colorado trifecta the null vote share declines significantly by 0.4 pp. When the Liberal party has two poll workers and there is one Colorado poll worker, the null vote share decreases significantly by 0.15 pp. In contrast, with other poll worker allocations the null vote share rises significantly by 0.15 pp. Finally, we do not observe any significant effects on turnout.

With Table H17 we analyze the effect of partisan poll workers on the deputies election by running equation (1). For this electoral race, there are some departments where the GANAR alliance runs together and some where it does not. Also, the parties belonging to GANAR vary across departments for this race, with FG running independently in some departments. However, the Liberal party always runs separately or through GANAR (and mainly proposes its own candidates if it runs

Table H15: Effect of partisan poll worker composition on senatorial election results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Colorado trifecta	-0.4535 (0.5754)	-0.2174 (0.4556)	0.6709 (0.5015)	-0.1953 (0.2276)	-0.3109* (0.1818)	-0.6024 (0.7970)
Colorado advantage + Other	0.5302** (0.2357)	-0.3406** (0.1720)	-0.1896 (0.2543)	0.1645 (0.1079)	-0.0565 (0.0891)	-0.0077 (0.3507)
Colorado advantage + Liberal	0.5185*** (0.1194)	-0.2472** (0.1018)	-0.2713** (0.1326)	0.0099 (0.0545)	-0.0469 (0.0536)	-0.0449 (0.1940)
Liberal advantage + Colorado	-0.0618 (0.1272)	0.2154* (0.1167)	-0.1535 (0.1469)	0.0372 (0.0613)	-0.1044* (0.0564)	0.0854 (0.2146)
Liberal advantage + Other	-0.2183 (0.3735)	0.0088 (0.3259)	0.2095 (0.4385)	-0.0248 (0.1605)	-0.4170*** (0.1552)	0.6086 (0.6438)
Liberal trifecta	-1.7440 (1.2990)	0.4261 (1.5652)	1.3179 (1.3759)	0.0910 (0.6409)	-0.6166 (0.5995)	-0.2237 (1.8600)
Other poll worker allocation	0.1012 (0.1507)	-0.1956 (0.1312)	0.0944 (0.1714)	0.0196 (0.0743)	0.0563 (0.0665)	-0.0627 (0.2653)
Mean of Dependent Variable	32.6369	24.4988	42.8642	5.2841	3.6022	122.5547
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	20,257	20,257	20,257	20,257	20,257	19,249
R ²	0.8030	0.8597	0.8476	0.5612	0.1456	0.7075

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares on Columns (1) to (3) are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares on Columns (4) to (5) are calculated by dividing by turnout (i.e., all votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Table H16: Effect of partisan poll worker composition on MERCOSUR parliament election results

	Colorado vote share (1)	Liberal vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Colorado trifecta	0.1034 (0.4875)	-0.7374* (0.4354)	0.6340 (0.4475)	-0.1638 (0.2928)	-0.3999** (0.1950)	-0.8075 (0.7886)
Colorado advantage + Other	0.3285 (0.2348)	-0.5169*** (0.1849)	0.1885 (0.2172)	0.0882 (0.1306)	-0.0844 (0.0910)	-0.2450 (0.3533)
Colorado advantage + Liberal	0.5868*** (0.1231)	-0.3011*** (0.1078)	-0.2857** (0.1144)	0.0808 (0.0731)	-0.0700 (0.0517)	0.0551 (0.1898)
Liberal advantage + Colorado	-0.0009 (0.1334)	0.2127* (0.1222)	-0.2118 (0.1306)	0.0244 (0.0825)	-0.1448*** (0.0561)	0.1304 (0.2181)
Liberal advantage + Other	-0.1213 (0.4570)	-0.0727 (0.3195)	0.1940 (0.4245)	0.0041 (0.2102)	0.0548 (0.1903)	0.4678 (0.7618)
Liberal trifecta	-2.4478 (1.7716)	0.6209 (1.5544)	1.8269 (1.3718)	1.2319** (0.6263)	-0.0940 (0.5312)	0.0525 (1.9021)
Other poll worker allocation	0.0748 (0.1665)	-0.1439 (0.1430)	0.0691 (0.1583)	0.0478 (0.0927)	0.1466** (0.0707)	0.0812 (0.2511)
Mean of Dependent Variable	42.1341	30.5360	27.3299	8.4776	3.9100	122.5657
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	20,273	20,273	20,273	20,273	20,273	19,265
R ²	0.8022	0.8617	0.8485	0.5476	0.1869	0.7168

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares on Columns (1) to (3) are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares on Columns (4) to (5) are calculated by dividing by turnout (i.e., all votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

under GANAR), so we generate an outcome variable for Liberal/GANAR vote shares. We once again observe a similar pattern for the Colorado and Liberal/GANAR vote shares as in Tables H15 and H16. Whenever the Colorado party has two poll workers counting votes, its vote share grows significantly by 0.46 pp and 0.49 pp. If instead the Liberal party has two poll workers and the Colorado party has one counting votes, the Liberal/GANAR vote share increases significantly by 0.4 pp. Also, when the Colorado party has two poll workers and there is one Liberal poll worker or one poll worker not registered to the Colorado or Liberal party, the Liberal/GANAR vote share decreases significantly by 0.25 pp and 0.5 pp respectively. We again find that if the other parties have no poll workers counting votes the vote share for other parties decreases by 0.28 pp and 0.2 pp. If the Liberal party has two poll workers and there is one Colorado poll worker or one poll worker not registered to the Colorado or Liberal party, the null vote share decreases significantly by 0.10 pp (significant at the 10 percent level) and 0.42 pp respectively. If the Colorado party has two poll workers and there is one Liberal poll worker, the null vote share declines significantly (at the 10 percent level) by 0.08 pp. Finally, we do not observe any significant effects on the blank vote share or turnout.

In Table H18 we analyze the effect of partisan poll workers on the departmental governor election by running equation (1). Similarly to Table H17, we use an outcome variable for Liberal/GANAR vote shares because the Liberal party either runs separately or through the GANAR alliance throughout the whole country for this electoral race. The results from this table are more similar to those of Table H14, as both explore the effects of partisan poll workers on elections defined by SMD plurality voting. We find that whenever the Colorado party has two poll workers counting votes, its vote share grows by 0.39 pp and 0.42 pp. In addition, whenever the Colorado party has two poll workers the Liberal/GANAR vote share decreases significantly by 0.47 pp and 0.48 pp respectively. We also find that “other” poll worker allocations are associated with a significant increase in the vote share for other parties by 0.23 pp. This is plausible because these “other” poll worker allocations consist of any poll worker allocation excluding those that are de-

Table H17: Effect of partisan poll worker composition on deputies' election results

	Colorado vote share (1)	Liberal vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Colorado trifecta	0.2758 (0.4673)	0.0640 (0.3994)	-0.3398 (0.4646)	-0.1023 (0.1999)	-0.1779 (0.1607)	-0.4763 (0.7914)
Colorado advantage + Other	0.4876** (0.2322)	-0.4951*** (0.1825)	0.0076 (0.2134)	-0.0292 (0.0972)	0.0553 (0.0870)	-0.0316 (0.3490)
Colorado advantage + Liberal	0.4551*** (0.1159)	-0.2518** (0.1068)	-0.2033* (0.1126)	-0.0402 (0.0513)	-0.0782* (0.0436)	0.0085 (0.1860)
Liberal advantage + Colorado	-0.1125 (0.1274)	0.3970*** (0.1266)	-0.2845** (0.1340)	-0.0377 (0.0562)	-0.0503 (0.0492)	0.0872 (0.2090)
Liberal advantage + Other	-0.3307 (0.3760)	0.0677 (0.3130)	0.2630 (0.3507)	-0.1604 (0.1585)	-0.1033 (0.1374)	0.6627 (0.5761)
Liberal trifecta	-2.2114 (1.5302)	0.7208 (1.3127)	1.4906 (1.0552)	-0.4972 (0.4973)	0.2142 (0.4985)	-0.1145 (2.0371)
Other poll worker allocation	0.0239 (0.1527)	-0.2210 (0.1398)	0.1970 (0.1478)	-0.0455 (0.0698)	-0.0351 (0.0565)	0.0058 (0.2508)
Mean of Dependent Variable	39.1551	30.2855	30.5593	5.1788	3.0362	123.1645
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	20,138	20,138	20,138	20,138	20,138	19,134
R^2	0.8486	0.8812	0.9232	0.5051	0.1523	0.6657

Note: A unit of observation is a voting booth. The parties belonging to GANAR vary across Paraguayan departments for the deputies elections, with FG running independently in some departments. However, the Liberal party always runs separately or through GANAR (and mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Standard errors are robust. Vote shares on Columns (1) to (3) are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares on Columns (4) to (5) are calculated by dividing by turnout (i.e., all votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The number of observations is lower for this electoral race as there is no deputies’ election for Paraguayan voters abroad. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

noted with the other independent variables and the “fair” allocations having one Colorado and one Liberal poll worker. Hence, these allocations include, for example, those electoral tables with 2 FG poll workers and those that have multiple unaffiliated poll workers who might be independent and more likely to support the non-traditional (non-established) parties. If the Liberal party has two poll workers and there is one Colorado poll worker, the null vote share declines significantly by 0.10 pp. Finally, we do not observe any significant effects on the blank vote share or turnout.

Finally, Table H19 shows the effect of partisan poll workers on the departmental council election by running equation (1). Similarly to Tables H17 and H18, we use an outcome variable for Liberal/GANAR vote shares because the Liberal party either runs separately or through the GANAR alliance throughout the whole country for this electoral race. We continue finding a similar pattern for the Colorado and Liberal/GANAR vote shares as in Tables H15 to H17. Whenever the Colorado party has two poll workers counting votes, its vote share grows by 0.66 pp and 0.43 pp. In addition, whenever the Colorado party has two poll workers, the Liberal/GANAR vote share drops significantly by 0.51 pp and 0.62 pp respectively. We also find that if only the Colorado party is counting votes at an electoral table through a trifecta then the Liberal/GANAR vote share declines significantly by approximately 1.1 pp. In addition, other poll worker allocations lead to a decline of 0.31 pp in the Liberal/GANAR vote share.

Next, we again see that if the other parties have no poll worker present (particularly when a voting booth has 2 Liberal and 1 Colorado poll worker) the vote share for other parties declines by 0.22 pp. We also notice again that “other” poll worker allocations are associated with a increase in the vote share for other parties by 0.28 pp. Finally, we can observe that if only the Liberal party is counting votes at an electoral table through a trifecta the vote share of other parties rises by 2.5 pp. This coefficient estimate is in comparison to “fair” poll worker allocations having one Colorado and one Liberal poll worker. This coefficient suggests that Liberal poll workers may guard or favor other parties for these particular elections, which is plausible because the Liberal party tends to be in the opposition with the other parties against the Colorado party. At the same time, it is

Table H18: Effect of partisan poll worker composition on governor election results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Colorado trifecta	0.7428 (0.4735)	-0.4342 (0.4601)	-0.3086 (0.3025)	-0.1021 (0.1847)	-0.1286 (0.1459)	-0.9737 (0.8679)
Colorado advantage + Other	0.4158* (0.2281)	-0.4816** (0.2109)	0.0658 (0.1391)	-0.1097 (0.0815)	0.0792 (0.0704)	-0.0927 (0.3539)
Colorado advantage + Liberal	0.3881*** (0.1220)	-0.4713*** (0.1178)	0.0832 (0.0726)	-0.0041 (0.0444)	-0.0634 (0.0389)	0.0560 (0.1992)
Liberal advantage + Colorado	-0.0897 (0.1258)	0.1880 (0.1222)	-0.0983 (0.0803)	-0.0070 (0.0456)	-0.0969** (0.0395)	0.1161 (0.2070)
Liberal advantage + Other	-0.3790 (0.3616)	0.0420 (0.3956)	0.3369 (0.2692)	-0.1129 (0.1252)	0.0011 (0.1123)	0.5823 (0.5663)
Liberal trifecta	-1.6390 (1.0998)	0.6323 (1.1115)	1.0068 (0.6762)	0.2508 (0.6359)	-0.6177 (0.4783)	1.3708 (1.7457)
Other poll worker allocation	-0.1357 (0.1580)	-0.0948 (0.1532)	0.2305** (0.1053)	-0.0656 (0.0552)	0.0155 (0.0482)	-0.0833 (0.2598)
Mean of Dependent Variable	46.9013	42.3609	10.7379	3.6921	2.5681	122.1091
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	18,144	18,144	18,144	18,144	18,144	17,289
R ²	0.8142	0.8563	0.9083	0.4340	0.2076	0.6474

Note: A unit of observation is a voting booth. The parties belonging to the GANAR alliance vary across Paraguayan departments for the governor elections, with FG running independently in some departments. However, the Liberal party always runs separately or through GANAR (and mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Standard errors are robust. Vote shares on Columns (1) to (3) are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares on Columns (4) to (5) are calculated by dividing by turnout (i.e., all votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The number of observations is lower for this electoral race as there is no governor election for Paraguayan voters abroad and those in the capital district. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

important to note that the Liberal party has trifactas for only 17 tables (compared to the Colorado party which has 158), so this result could be idiosyncratic and is driven by few observations. If the Colorado party has two poll workers and there is one Liberal poll worker, the null vote share declines significantly (at the 10 percent level) by 0.08 pp. Finally, we do not observe any significant effects on the blank vote share or turnout.

Table H19: Effect of partisan poll worker composition on departmental council election results

	Colorado vote share (1)	Liberal vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Colorado trifecta	0.5310 (0.4845)	-1.0895** (0.4901)	0.5585 (0.5097)	0.1194 (0.2401)	-0.1082 (0.1936)	-0.4681 (0.8651)
Colorado advantage + Other	0.4279* (0.2517)	-0.6167*** (0.2004)	0.1889 (0.2249)	0.1299 (0.1260)	-0.0690 (0.0885)	-0.1489 (0.3679)
Colorado advantage + Liberal	0.6596*** (0.1319)	-0.5145*** (0.1215)	-0.1451 (0.1227)	0.0279 (0.0659)	-0.0872* (0.0503)	0.0176 (0.2008)
Liberal advantage + Colorado	0.0842 (0.1322)	0.1363 (0.1286)	-0.2204* (0.1285)	-0.0368 (0.0655)	-0.0487 (0.0537)	0.2002 (0.2101)
Liberal advantage + Other	-0.1209 (0.4059)	-0.2000 (0.3502)	0.3209 (0.3600)	-0.1678 (0.2431)	0.1194 (0.2214)	0.7217 (0.5918)
Liberal trifecta	-1.3125 (1.4742)	-1.2272 (1.5510)	2.5397* (1.3661)	-0.4390 (0.5731)	-0.3529 (0.5563)	1.2137 (1.6937)
Other poll worker allocation	0.0305 (0.1679)	-0.3077* (0.1588)	0.2772* (0.1629)	0.0005 (0.1020)	-0.0168 (0.0701)	-0.1811 (0.2689)
Mean of Dependent Variable	40.3654	34.3802	25.2544	6.7051	3.4382	121.8964
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	18,130	18,130	18,130	18,130	18,130	17,275
R ²	0.8084	0.8354	0.8333	0.3534	0.1755	0.6485

Note: A unit of observation is a voting booth. The parties belonging to the GANAR alliance vary across Paraguayan departments for the departmental council elections, with FG running independently in some departments. However, the Liberal party always runs separately or through GANAR (and mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Standard errors are robust. Vote shares on Columns (1) to (3) are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares on Columns (4) to (5) are calculated by dividing by turnout (i.e., all votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. The number of observations is lower for this electoral race as there is no departmental council election for Paraguayan voters abroad and those in the capital district. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Next, we examine whether the presence of any partisan poll workers (regardless of the number) can explain the electoral results. To do so, we generate indicator variables for whether there is at least one of the following types of poll workers in an electoral table: Colorado supporter, Liberal supporter, GANAR supporter (for presidential races), other party supporter, multi-party supporter, and unaffiliated. Hence, we end up with the following regression specification format for all races except the presidential one:

$$\begin{aligned}
Y_{ab} = & \beta_0 + \beta_1 \text{Any_Colorado}_{ab} + \beta_2 \text{Any_Liberal}_{ab} + \beta_3 \text{Any_Othpart}_{ab} + \beta_4 \text{Any_Multipart}_{ab} \\
& + \beta_5 \text{Any_Unaffiliated}_{ab} + \delta_1 \text{voter_prop_Colorado}_{ab} + \delta_2 \text{voter_prop_Liberal}_{ab} \\
& + \delta_3 \text{voter_prop_Other}_{ab} + \theta_a + \varepsilon_{ab}.
\end{aligned}
\tag{5}$$

For the presidential race we have this analogous specification:

$$\begin{aligned}
Y_{ab} = & \beta_0 + \beta_1 \text{Any_Colorado}_{ab} + \beta_2 \text{Any_GANAR}_{ab} + \beta_3 \text{Any_Othpart}_{ab} + \beta_4 \text{Any_Multipart}_{ab} \\
& + \beta_5 \text{Any_Unaffiliated}_{ab} + \delta_1 \text{voter_prop_Colorado}_{ab} + \delta_2 \text{voter_prop_GANAR}_{ab} \\
& + \delta_3 \text{voter_prop_Other}_{ab} + \theta_a + \varepsilon_{ab}.
\end{aligned}
\tag{6}$$

We analyze whether the presence (regardless of the number) of partisan poll workers can explain the electoral results by running equations (5) and (6). Although our previous regression specifications are more informative because the official results for each voting booth are decided by what the majority of poll workers at an electoral table decide, we include these for completeness. Overall, the most consistent patterns within these tables are as follows. Having a Liberal poll worker (or GANAR poll worker for the presidential race) counting votes tends to decrease the Colorado party's vote share and increase the Liberal/GANAR vote share. In addition, having a poll worker from the other parties count votes tends to significantly increase the vote share of these

other parties, but only on PR races.

Table H20: Effect of partisan poll worker composition on presidential election results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Any Colorado poll worker	0.0825 (0.2171)	-0.0740 (0.2117)	-0.0085 (0.1086)	0.1221* (0.0626)	0.0550 (0.0734)	-0.2232 (0.3268)
Any GANAR poll worker	-0.5063*** (0.1952)	0.4793** (0.1935)	0.0270 (0.0970)	0.0597 (0.0523)	-0.0107 (0.0613)	-0.1596 (0.3073)
Any other party poll worker	0.1526 (0.1438)	-0.2116 (0.1417)	0.0590 (0.0732)	-0.0424 (0.0444)	0.0188 (0.0473)	0.2039 (0.2384)
Any multi-party poll worker	-0.2396* (0.1350)	0.2815** (0.1348)	-0.0418 (0.0682)	-0.0078 (0.0396)	0.0373 (0.0453)	-0.3034 (0.2155)
Any unaffiliated poll worker	-0.1877 (0.1329)	0.1883 (0.1321)	-0.0006 (0.0630)	-0.0025 (0.0363)	-0.0603 (0.0406)	0.0400 (0.2038)
Mean of Dependent Variable	48.6944	45.3871	5.9185	2.3829	2.7564	122.8357
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
GANAR voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	20,287	20,287	20,287	20,287	20,287	19,281
R ²	0.8114	0.8202	0.7957	0.4631	0.2462	0.7312

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares for the first three columns are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares for columns (4) and (5) are calculated by dividing by turnout (total votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. “Any Colorado poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Colorado party. “Any GANAR poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the political parties that are part of the GANAR alliance (the Liberal party, FG, among other smaller left-wing parties). “Any other party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support an individual political party that is not the Colorado party or a party from the GANAR alliance. “Any multi-party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support multiple political parties. “Any unaffiliated poll worker” is an indicator variable for whether any of the three poll workers at the voting booth is not registered to any party and does not support any political party as an electoral agent according to the election authority’s data. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Table H21: Effect of partisan poll worker composition on senatorial election process results

	Colorado vote share (1)	Liberal vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Any Colorado poll worker	-0.0971 (0.2176)	0.0304 (0.1980)	0.0667 (0.2528)	0.0949 (0.1086)	0.1730* (0.0962)	-0.2752 (0.3679)
Any Liberal poll worker	-0.2293 (0.1571)	0.4160*** (0.1253)	-0.1866 (0.1691)	-0.0937 (0.0732)	0.0329 (0.0624)	-0.0218 (0.2500)
Any other party poll worker	-0.1603 (0.0981)	-0.0954 (0.0856)	0.2557** (0.1094)	-0.0731 (0.0469)	0.0938** (0.0426)	0.0208 (0.1633)
Any multi-party poll worker	-0.3398** (0.1440)	0.2473** (0.1256)	0.0925 (0.1650)	0.0653 (0.0701)	0.1035 (0.0638)	-0.4149* (0.2411)
Any unaffiliated poll worker	-0.1207 (0.1414)	0.3198*** (0.1206)	-0.1991 (0.1567)	-0.0216 (0.0655)	0.1149* (0.0610)	0.0827 (0.2312)
Mean of Dependent Variable	32.6369	24.4988	42.8642	5.2841	3.6022	122.5547
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	20,257	20,257	20,257	20,257	20,257	19,249
R^2	0.8027	0.8597	0.8476	0.5613	0.1454	0.7076

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares for the first three columns are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares for columns (4) and (5) are calculated by dividing by turnout (total votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. “Any Colorado poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Colorado party. “Any Liberal poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Liberal party. “Any other party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support some party other than the Colorado or Liberal party. “Any multi-party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support multiple political parties. “Any unaffiliated poll worker” is an indicator variable for whether any of the three poll workers at the voting booth is not registered to any party and does not support any political party as an electoral agent according to the election authority’s data. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Table H22: Effect of partisan poll worker composition on MERCOSUR parliament election process results

	Colorado vote share (1)	Liberal vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Any Colorado poll worker	-0.0596 (0.2459)	0.0856 (0.2043)	-0.0261 (0.2293)	0.0135 (0.1328)	-0.1159 (0.1082)	-0.4668 (0.3873)
Any Liberal poll worker	-0.2722* (0.1616)	0.4712*** (0.1359)	-0.1990 (0.1530)	-0.1350 (0.0922)	0.0349 (0.0663)	0.0774 (0.2461)
Any other party poll worker	-0.2528** (0.1017)	0.0262 (0.0906)	0.2267** (0.0969)	-0.0427 (0.0602)	0.1349*** (0.0433)	-0.0457 (0.1612)
Any multi-party poll worker	-0.3861** (0.1526)	0.2697** (0.1364)	0.1164 (0.1512)	-0.0338 (0.0894)	0.1035 (0.0668)	-0.3551 (0.2389)
Any unaffiliated poll worker	-0.2775* (0.1481)	0.2400* (0.1289)	0.0375 (0.1386)	-0.1672* (0.0866)	0.1655*** (0.0632)	0.0534 (0.2323)
Mean of Dependent Variable	42.1341	30.5360	27.3299	8.4776	3.9100	122.5657
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	20,273	20,273	20,273	20,273	20,273	19,265
R^2	0.8021	0.8617	0.8485	0.5476	0.1869	0.7169

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares for the first three columns are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares for columns (4) and (5) are calculated by dividing by turnout (total votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. “Any Colorado poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Colorado party. “Any Liberal poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Liberal party. “Any other party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support some party other than the Colorado or Liberal party. “Any multi-party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support multiple political parties. “Any unaffiliated poll worker” is an indicator variable for whether any of the three poll workers at the voting booth is not registered to any party and does not support any political party as an electoral agent according to the election authority’s data. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Table H23: Effect of partisan poll worker composition on deputies' election process results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Any Colorado poll worker	-0.0197 (0.2241)	0.2296 (0.1992)	-0.2099 (0.2125)	0.2235** (0.0963)	0.0168 (0.0839)	-0.3832 (0.3522)
Any Liberal poll worker	-0.2440 (0.1539)	0.2385* (0.1330)	0.0055 (0.1465)	0.0183 (0.0669)	0.0503 (0.0558)	-0.0048 (0.2442)
Any other party poll worker	-0.1106 (0.0975)	-0.0869 (0.0919)	0.1975** (0.0968)	0.0666 (0.0428)	0.0585 (0.0373)	-0.0463 (0.1566)
Any multi-party poll worker	-0.2949** (0.1431)	0.0061 (0.1333)	0.2889** (0.1433)	0.0790 (0.0648)	0.0400 (0.0542)	-0.3397 (0.2342)
Any unaffiliated poll worker	-0.1864 (0.1400)	0.1189 (0.1285)	0.0675 (0.1392)	-0.0077 (0.0621)	0.1151** (0.0507)	0.0642 (0.2241)
Mean of Dependent Variable	39.1551	30.2855	30.5593	5.1788	3.0362	123.1645
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	20,138	20,138	20,138	20,138	20,138	19,134
R^2	0.8485	0.8810	0.9232	0.5053	0.1523	0.6657

Note: A unit of observation is a voting booth. The parties belonging to GANAR vary across Paraguayan departments for the deputies' elections, with FG running independently in some departments. However, the Liberal party always runs separately or through GANAR (and mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Standard errors are robust. Vote shares for the first three columns are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares for columns (4) and (5) are calculated by dividing by turnout (total votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. "Any Colorado poll worker" is an indicator variable for whether any of the three poll workers at the voting booth support the Colorado party. "Any Liberal poll worker" is an indicator variable for whether any of the three poll workers at the voting booth support the Liberal party. "Any other party poll worker" is an indicator variable for whether any of the three poll workers at the voting booth support some party other than the Colorado or Liberal party. "Any multi-party poll worker" is an indicator variable for whether any of the three poll workers at the voting booth support multiple political parties. "Any unaffiliated poll worker" is an indicator variable for whether any of the three poll workers at the voting booth is not registered to any party and does not support any political party as an electoral agent according to the election authority's data. The number of observations is lower for this electoral race as there is no deputies' election for Paraguayan voters abroad. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Table H24: Effect of partisan poll worker composition on governor election process results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Any Colorado poll worker	0.1762 (0.2245)	0.2022 (0.2257)	-0.3784** (0.1475)	0.1219 (0.0786)	-0.0175 (0.0700)	-0.2750 (0.3582)
Any Liberal poll worker	-0.2485 (0.1543)	0.3342** (0.1488)	-0.0857 (0.0996)	0.0538 (0.0554)	0.0247 (0.0473)	0.0109 (0.2495)
Any other party poll worker	-0.1025 (0.1004)	0.0370 (0.0978)	0.0655 (0.0623)	0.0171 (0.0368)	0.0577* (0.0318)	-0.0118 (0.1641)
Any multi-party poll worker	-0.3299** (0.1493)	0.3469** (0.1474)	-0.0170 (0.0997)	0.0350 (0.0538)	0.1039** (0.0467)	-0.4842** (0.2447)
Any unaffiliated poll worker	-0.2156 (0.1412)	0.1759 (0.1380)	0.0397 (0.0913)	-0.0539 (0.0509)	0.1118** (0.0443)	-0.0291 (0.2276)
Mean of Dependent Variable	46.9013	44.8315	10.7379	3.6921	2.5681	122.1091
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	18,144	18,144	18,144	18,144	18,144	17,289
R^2	0.8141	0.8562	0.9083	0.4341	0.2076	0.6474

Note: A unit of observation is a voting booth. The parties belonging to GANAR vary across Paraguayan departments for the governor elections, with FG running independently in some departments. However, the Liberal party always runs separately or through GANAR (and mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Standard errors are robust. Vote shares for the first three columns are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares for columns (4) and (5) are calculated by dividing by turnout (total votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. “Any Colorado poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Colorado party. “Any Liberal poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Liberal party. “Any other party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support some party other than the Colorado or Liberal party. “Any multi-party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support multiple political parties. “Any unaffiliated poll worker” is an indicator variable for whether any of the three poll workers at the voting booth is not registered to any party and does not support any political party as an electoral agent according to the election authority’s data. The number of observations is lower for this electoral race as there is no governor election for Paraguayan voters abroad and those in the capital district. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

Table H25: Effect of partisan poll worker composition on departmental council election process results

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other vote share (3)	Blank vote share (4)	Null vote share (5)	Turnout (6)
Any Colorado poll worker	0.0016 (0.2377)	0.3187 (0.2172)	-0.3203 (0.2196)	0.2684** (0.1348)	-0.0894 (0.1099)	-0.5116 (0.3655)
Any Liberal poll worker	-0.3905** (0.1672)	0.6400*** (0.1501)	-0.2495 (0.1566)	-0.1041 (0.0865)	0.0685 (0.0651)	0.1697 (0.2606)
Any other party poll worker	-0.3702*** (0.1066)	0.0915 (0.1014)	0.2787*** (0.1026)	0.0121 (0.0540)	0.0891** (0.0425)	-0.0860 (0.1655)
Any multi-party poll worker	-0.5191*** (0.1526)	0.4955*** (0.1430)	0.0236 (0.1509)	0.1301 (0.0925)	0.0345 (0.0635)	-0.3711 (0.2474)
Any unaffiliated poll worker	-0.3012** (0.1505)	0.3181** (0.1373)	-0.0170 (0.1412)	-0.0711 (0.0817)	0.0650 (0.0592)	-0.1341 (0.2308)
Mean of Dependent Variable	40.3654	36.1578	25.2544	6.7051	3.4382	121.8964
Polling station FE	✓	✓	✓	✓	✓	✓
Colorado voter prop. control	✓	✓	✓	✓	✓	✓
Liberal voter prop. control	✓	✓	✓	✓	✓	✓
Other party voter prop. control	✓	✓	✓	✓	✓	✓
Observations	18,130	18,130	18,130	18,130	18,130	17,275
R ²	0.8083	0.8353	0.8333	0.3537	0.1756	0.6485

Note: A unit of observation is a voting booth. The parties belonging to GANAR vary across Paraguayan departments for the departmental council elections, with FG running independently in some departments. However, the Liberal party always runs separately or through GANAR (and mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Standard errors are robust. Vote shares for the first three columns are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. Vote shares for columns (4) and (5) are calculated by dividing by turnout (total votes including null and blank votes) and multiplying by 100. The number of observations on Column (6) is smaller because we restrict our sample to booths with exactly 200 registered voters. “Any Colorado poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Colorado party. “Any Liberal poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support the Liberal party. “Any other party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support some party other than the Colorado or Liberal party. “Any multi-party poll worker” is an indicator variable for whether any of the three poll workers at the voting booth support multiple political parties. “Any unaffiliated poll worker” is an indicator variable for whether any of the three poll workers at the voting booth is not registered to any party and does not support any political party as an electoral agent according to the election authority’s data. The number of observations is lower for this electoral race as there is no departmental council election for Paraguayan voters abroad and those in the capital district. The sample is restricted to voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths).

On Tables H26 and H27 we tested whether the effect of the partisan poll worker allocations varied depending on whether the Colorado or Liberal party was the incumbent party. The incumbent party was defined as the party of the municipal mayor as these usually have a local organizational advantage, particularly the established parties. We find that the Colorado vote share further increases when there are two Colorado and one Liberal poll worker at a voting booth and the Colorado party is the incumbent party. On the other hand, the Colorado vote share particularly decreases when there are two Liberal and one other party poll worker at a voting booth and the Colorado party is the municipal incumbent. We also find that the Liberal vote share rises significantly when there are two Liberal and one Colorado party poll worker at a voting booth and the Liberal party is the municipal incumbent. Finally, we also find that the Liberal vote share decreases most when there are two Colorado and one other party poll worker at a voting booth and the Liberal party is the incumbent party.

Table H26: Effect of partisan poll worker composition on election results interacted with Colorado incumbency

	Colorado vote share (1)
Colorado trifecta × Colorado incumb.	-0.5013 (0.4131)
Colorado advantage + Other × Colorado incumb.	-0.1530 (0.1914)
Colorado advantage + Liberal × Colorado incumb.	0.3985*** (0.0987)
Liberal advantage + Colorado × Colorado incumb.	0.4711*** (0.1048)
Liberal advantage + Other × Colorado incumb.	-0.7617** (0.3212)
Liberal trifecta × Colorado incumb.	-0.8703 (1.1460)
Other poll worker allocation × Colorado incumb.	0.0640 (0.1294)
Colorado trifecta	0.5778* (0.3213)
Colorado advantage + Other	0.5251*** (0.1409)
Colorado advantage + Liberal	0.3146*** (0.0678)
Liberal advantage + Colorado	-0.2696*** (0.0731)
Liberal advantage + Other	0.1439 (0.2258)
Liberal trifecta	-1.4519** (0.7033)
Other poll worker allocation	-0.0020 (0.0943)
Mean of Dependent Variable	41.5808
Polling station-elect. race FE	✓
Colorado voter prop. control	✓
Liberal voter prop. control	✓
Other party voter prop. control	✓
Observations	117,229
R^2	0.8425

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The vote share is calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. “Colorado incumb.” is an indicator variable for voting booths located in municipalities where the incumbent mayor is from the Colorado party. The coefficient for Colorado incumbent is omitted because it is collinear after controlling for polling station-electoral race fixed effects.

Table H27: Effect of partisan poll worker composition on election results interacted with Liberal incumbency

	Liberal/GANAR vote share (1)
Colorado trifecta × Liberal incumb.	0.0217 (0.4630)
Colorado advantage + Other × Liberal incumb.	-0.5086*** (0.1863)
Colorado advantage + Liberal × Liberal incumb.	-0.0705 (0.0961)
Liberal advantage + Colorado × Liberal incumb.	0.3853*** (0.1032)
Liberal advantage + Other × Liberal incumb.	-0.3824 (0.2838)
Liberal trifecta × Liberal incumb.	-0.7136 (0.9455)
Other poll worker allocation × Liberal incumb.	0.0422 (0.1317)
Colorado trifecta	-0.5148** (0.2054)
Colorado advantage + Other	-0.3660*** (0.0901)
Colorado advantage + Liberal	-0.3536*** (0.0558)
Liberal advantage + Colorado	0.0347 (0.0649)
Liberal advantage + Other	0.1398 (0.1829)
Liberal trifecta	0.6129 (0.7191)
Other poll worker allocation	-0.1723** (0.0709)
Mean of Dependent Variable	34.4443
Polling station-elect. race FE	✓
Colorado voter prop. control	✓
Liberal voter prop. control	✓
Other party voter prop. control	✓
Observations	117,230
R^2	0.8869

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. The vote share is calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. “Liberal incumb.” is an indicator variable for voting booths located in municipalities where the incumbent mayor is from the Liberal party. The coefficient for Liberal incumbent is omitted because it is collinear after controlling for polling station-electoral race fixed effects.

Table H28 examines whether the effect of partisan poll worker allocations varies depending on the competitiveness of the municipality of the polling station. To do so, we interact our partisan poll worker allocation indicator variables with an indicator variable for competitive municipalities. We define competitive municipalities as those where the victory margin for the most recent municipal mayor race (held 3 years before the general elections we study) was smaller than 5%. 47 out of the 254 municipalities in the country are considered competitive under this definition. We can observe that Colorados tend to fare better in competitive municipalities, while Liberal poll workers tend to have lower vote shares. In addition, other party votes tend to do better in competitive municipalities if voting booths have two Liberal poll workers.

Table H28: Effect of partisan poll worker composition on election results by district competitiveness

	Colorado vote share (1)	Liberal/GANAR vote share (2)	Other party vote share (3)
Colorado trifecta × Competitive mun.	2.3898*** (0.5219)	-1.9644*** (0.4541)	-0.4254 (0.4046)
Colorado advantage + Other × Competitive mun.	1.0265*** (0.2373)	-0.9942*** (0.2035)	-0.0323 (0.1964)
Colorado advantage + Liberal × Competitive mun.	0.2992** (0.1244)	-0.3927*** (0.1174)	0.0935 (0.1085)
Liberal advantage + Colorado × Competitive mun.	-0.0859 (0.1337)	-0.4007*** (0.1311)	0.4867*** (0.1157)
Liberal advantage + Other × Competitive mun.	0.2247 (0.3537)	-0.8133** (0.3253)	0.5886* (0.3197)
Liberal trifecta × Competitive mun.	-2.7614** (1.2767)	5.5378*** (1.2685)	-2.7764*** (0.8057)
Other poll worker allocation × Competitive mun.	1.4212*** (0.1661)	-0.9618*** (0.1626)	-0.4594*** (0.1490)
Colorado trifecta	-0.2732 (0.2161)	-0.0595 (0.2040)	0.3327* (0.2021)
Colorado advantage + Other	0.2488** (0.1067)	-0.3149*** (0.0875)	0.0661 (0.0927)
Colorado advantage + Liberal	0.4595*** (0.0550)	-0.3076*** (0.0503)	-0.1518*** (0.0484)
Liberal advantage + Colorado	-0.0188 (0.0583)	0.2807*** (0.0559)	-0.2619*** (0.0544)
Liberal advantage + Other	-0.2599 (0.1860)	0.1559 (0.1603)	0.1040 (0.1661)
Liberal trifecta	-1.0405 (0.6857)	-1.2869** (0.5813)	2.3274*** (0.5961)
Other poll worker allocation	-0.2225*** (0.0713)	0.0092 (0.0650)	0.2133*** (0.0640)
Mean of Dependent Variable	41.5808	34.4445	23.9746
Polling station-elect. race FE	✓	✓	✓
Colorado voter prop. control	✓	✓	✓
Liberal voter prop. control	✓	✓	✓
Other party voter prop. control	✓	✓	✓
Observations	117,229	117,229	117,229
R ²	0.8426	0.8870	0.9308

Note: A unit of observation is a voting booth-electoral race combination. Standard errors are robust. The Liberal party always ran separately or through the GANAR alliance (while mainly proposing its own candidates), hence we have an outcome variable for Liberal/GANAR vote shares. Vote shares are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. A trifecta indicates all three poll workers from the same party work at the voting booth. Advantage indicates that two out three poll workers from the same party work at the voting booth. Other refers to a poll worker that is not registered as supporting the Colorado or Liberal party. The excluded category corresponds to voting booths with “fair allocations” having one Colorado party poll worker and one Liberal poll worker. The “other poll worker allocation” refers to any remaining poll worker allocation after accounting for “fair allocations” and the other allocations referenced with the independent variables. “Competitive mun.” is an indicator variable for municipalities where the victory margin for the most recent municipal mayor race (held 3 years before the general elections we study) was smaller than 5%. The coefficient for competitive municipality is omitted because it is collinear after controlling for polling station-electoral race fixed effects.

We obtained legal documents from the election authority indicating all electoral tables where electoral results were contested (*impugnaciones electorales*) at the electoral race level and we codified these into a dataset. For each electoral contestation, we have information on the voting booth and particular electoral race contested, the parties contesting the results, and whether the contestation was accepted. Among the contestation outcomes possible is annulling the tally of the electoral table for the particular race being contested, which entails that zero votes are counted from that electoral table for that particular race. To determine whether a contestation is accepted, the election authority checks the tallies submitted by each of the poll workers. If a majority (two or three) of the poll workers' tallies agree with the electoral contestation, then the results of the tallies are amended. Yet given how this system works and that some parties have an outright majority or collude at a booth, contestations may not be successful despite being legitimate. Overall, there are not many electoral contestations: 3,213 out of 122,595 possible electoral table-race combinations. Out of 3,213 contestations in this election, only 738 were accepted. The low number of contestations may be partly because parties need to have either poll workers, poll watchers, or empowered party officers present to observe irregularities, and only the established parties are well-resourced enough to cover most of the country. In addition, given that ultimately the contestations are decided by what the majority of poll workers wrote down, some parties may not even submit a contestation which they expect to be ultimately rejected. This was confirmed to us by some party activists from smaller parties.

Table H29 explores whether certain allocations of partisan poll workers on voting booths lead to more electoral contestations where results are challenged. Overall, there are not many contestations in our sample: 3,116 out of 117,742 (2.65%) possible voting booth-electoral race combinations.⁷ This is not fully surprising because most often parties need to have either poll workers, poll

⁷The sample of 117,742 comes from the voting booths for which we have the ID numbers of all three poll workers (which is around 96% of all voting booths). If we consider all voting booths in the elections, we have contestations in 3,213 out of 122,595 (2.62%) possible voting

watchers, or empowered party officers present to observe irregularities and file a contestation. Only the Colorado party and Liberal party (to a somewhat lesser degree) are well-resourced enough to cover most of the country. In addition, the way that contestations are adjudicated is by showing the tallies filled out individually by the three poll workers and confirming that at least two of the three poll workers have tallies that coincide. If at least two tallies coincide, then the results from those tallies are confirmed as the official results. This is a conspicuous weakness of the electoral contestation process given our evidence that individual political parties tend to have a majority in more than a third of all voting booths, and that some parties may collude at the tally-writing process. If all three tallies differ, then the tally for the relevant electoral race in that voting booth is annulled, meaning that zero votes are counted for that race in that voting booth.

Table H29 shows that contestations are much less common when a single party controls a voting booth through a trifecta of poll workers. This is unsurprising because if no poll worker from another party is around, it is less likely any irregularity will be called out. Due to the low number of contestations, even fewer voting booths get their counts amended due to contestations being accepted or that the tally for a particular race at a particular voting booth is annulled. Hence, although contestations are a recourse that political parties use in other contexts to demand greater electoral integrity, this recourse appears to be quite ineffective in the Paraguayan context. Electoral courts are meant to resolve electoral disputes and address allegations of electoral irregularities by either recognizing their legitimacy or discarding them if they do not prove legitimate. Given our findings that partisan poll workers tend to favor their own parties, particularly when they have a majority at a voting booth, the fact that we observe less contestations when only one party controls a voting booth is likely problematic.

Tables H30 to H32 additionally test whether the alphabetical ranking of voters' surnames (which determines the booth where they vote) is uncorrelated with electoral results for this election. To do so, we first calculate the alphabetical ranking of voters' last names within their polling booth-electoral race combinations, as shown on OA Table H13.

Table H29: Effect of partisan poll worker composition on electoral contestations

	Contested (1)	Contested by non-Colorado (2)	Contested by non-Liberal (3)	Contestation accepted (4)	Tally annulled (5)
Colorado trifecta	-0.0218*** (0.0035)	-0.0167*** (0.0035)	-0.0115*** (0.0029)	-0.0074*** (0.0008)	-0.0051*** (0.0007)
Colorado advantage + Other	0.0005 (0.0026)	-0.0003 (0.0024)	-0.0011 (0.0021)	-0.0009 (0.0012)	-0.0008 (0.0009)
Colorado advantage + Liberal	0.0002 (0.0013)	0.0007 (0.0012)	0.0006 (0.0011)	0.0004 (0.0007)	0.0007 (0.0005)
Liberal advantage + Colorado	0.0003 (0.0014)	0.0005 (0.0013)	0.0002 (0.0012)	-0.0010 (0.0007)	-0.0011** (0.0005)
Liberal advantage + Other	-0.0038 (0.0036)	-0.0034 (0.0034)	-0.0014 (0.0032)	-0.0017 (0.0018)	-0.0000 (0.0016)
Liberal trifecta	-0.0152*** (0.0036)	-0.0144*** (0.0034)	-0.0118*** (0.0034)	-0.0048*** (0.0015)	-0.0037*** (0.0012)
Other poll worker allocation	-0.0001 (0.0018)	-0.0003 (0.0017)	0.0002 (0.0016)	0.0005 (0.0010)	0.0006 (0.0008)
Mean of Dependent Variable	0.0265	0.0230	0.0189	0.0059	0.0036
Polling station FE	✓	✓	✓	✓	✓
Observations	117,742	117,742	117,742	117,742	117,742
R ²	0.1714	0.1854	0.1255	0.0434	0.0547

Note: A unit of observation is a voting booth. Standard errors are robust. “Contested” is an indicator variable for whether the electoral results for this electoral race and voting booth were contested. “Contested by non-Colorado (Liberal)” is an indicator variable for the voting booth having its results contested by a political party that is not the Colorado party (Liberal party). “Contestation accepted” is an indicator variable for whether the contestation towards the electoral results in this voting booth were accepted by the election authority, thus amending the count. “Tally annulled” is an indicator variable for whether the electoral results from this voting booth were annulled (i.e., 0 votes are counted).

station. This ranking is normalized by the number of voters in each polling station such that all within-polling station rankings go from 0 to 1. That is, voters with the earliest names in the alphabet in their polling station have a ranking that is very close to 0, whereas the voter with the latest name in the alphabet has a ranking of 1. We then calculate the average voter alphabetical ranking that each voting booth has. One table shows regressions of the Colorado party vote share for each electoral race on the alphabetical ranking of the voting booths. We find no significant correlation between the order of voters' last names and their preference towards the Colorado party. The other two tables run similar tests but instead use the Liberal party and GANAR vote share respectively. Both of these tables show similar non-significant results. Hence, these placebo tests also indicate that voters' first letters of their last names do not correlate with their political preferences.

Table H30: Relationship between voters' within-polling station alphabetical ranking and Colorado party votes

	President vote share (1)	Senator vote share (2)	MERCOSUR parliament vote share (3)	Deputies vote share (4)	Governor vote share (5)	Departmental council vote share (6)
Avg. surname alphabetical ranking	0.3681 (0.2935)	-0.0366 (0.3007)	0.1144 (0.3123)	-0.0515 (0.3384)	0.0583 (0.3157)	-0.0391 (0.3269)
Mean of Dependent Variable	48.6974	32.6445	42.1395	39.1594	46.9023	40.3697
Observations	20,298	20,268	20,284	20,149	18,153	18,139
R^2	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares for each electoral race are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. The "Avg. surname alphabetical ranking" is calculated by ranking all voters within each polling station in terms of the alphabetical order of their surname and then calculating the average ranking per voting booth.

Our analyses using data on voters' surnames and their political preferences provide a rationale for our assumption that the assignment of voters to voting booths is a quasi-random assignment. Hence, any strong deviance in results recorded across booths within a polling station are likely due to the partisan representation of poll workers in the booth after we control for polling station fixed effects.

Table H31: Relationship between voters' within-polling station alphabetical ranking and Liberal party votes

	Senator vote share (1)	MERCOSUR parliament vote share (2)	Deputies vote share (3)	Governor vote share (4)	Departmental council vote share (5)
Avg. surname alphabetical ranking	-0.2408 (0.3071)	-0.3436 (0.3305)	-0.4191 (0.4649)	-0.0390 (0.4473)	-0.6417 (0.4118)
Mean of Dependent Variable	24.5030	30.5376	28.7323	44.8315	36.1613
Observations	20,268	20,285	12,489	8,812	11,032
R^2	0.0000	0.0001	0.0001	0.0000	0.0002

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares for each electoral race are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. The “Avg. surname alphabetical ranking” is calculated by ranking all voters within each polling station in terms of the alphabetical order of their surname and then calculating the average ranking per voting booth.

Table H32: Relationship between voters' within-polling station alphabetical ranking and GANAR votes

	President vote share (1)	Deputies vote share (2)	Governor vote share (3)	Departmental council vote share (4)
Avg. surname alphabetical ranking	-0.3711 (0.3005)	0.1472 (0.5413)	0.3387 (0.5169)	0.2284 (0.5635)
Mean of Dependent Variable	45.3860	32.8310	40.0363	31.6273
Observations	20,298	7,660	9,341	7,107
R^2	0.0001	0.0000	0.0000	0.0000

Note: A unit of observation is a voting booth. Standard errors are robust. Vote shares for each electoral race are calculated by dividing by the number of valid votes (i.e., all votes excluding null and blank votes) and multiplying by 100. The “Avg. surname alphabetical ranking” is calculated by ranking all voters within each polling station in terms of the alphabetical order of their surname and then calculating the average ranking per voting booth.