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ELECTORAL TURNOVERS

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ABSTRACT

In most national elections, voters face a key choice between continuity and change. Electoral turnovers occur when the incumbent candidate or party fails to win reelection. To understand how turnovers affect national outcomes, we study the universe of presidential and parliamentary elections held since 1945. We document the prevalence of turnovers over time and we estimate their effects on economic performance, trade, human development, conflict, and democracy. Using a close-elections regression discontinuity design (RDD) across countries, we show that turnovers improve country performance. These effects are not driven by differences in the characteristics of challengers, or by the fact that challengers systematically increase the level of government intervention in the economy. Electing new leaders leads to more policy change, it improves governance, and it reduces perceived corruption, consistent with the expectation that recently elected leaders exert more effort due to stronger reputation concerns.

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An online appendix is available at <http://www.nber.org/data-appendix/w29766>

1 Introduction

In most societies, voting incumbents out is the only mechanism allowing citizens to peacefully replace their country’s leadership. For this reason, electoral turnovers are fundamental to the functioning of democracy, which [Przeworski \(1991\)](#) characterized as “a system in which parties lose elections.” Despite this, economists have given little attention to the consequences of electoral turnovers at the national level. Assessing the costs and benefits of turnovers is particularly relevant to current debates on the merits of democracy prompted by democratic backsliding in many countries ([Levitsky and Ziblatt, 2019](#)).

This paper asks how power transitions caused by national elections shape country performance. [Jones and Olken \(2005\)](#) showed that, in autocracies, new leaders appointed after the death of their predecessor can change the growth trajectory of nations. Electoral turnovers could give new impetus to a country’s performance by bringing to power new leaders facing stronger reelection incentives and reputation concerns ([Holmström, 1999](#); [Ashworth, 2005](#)). The related literature has focused on one specific mechanism, the effects of term limits on the performance of local politicians ([Ferraz and Finan, 2011](#)), but there is no comparable evidence at the country level. At the same time, the loss of political experience ([Alt et al., 2011](#)), the personnel instability ([Akhtari et al., 2022](#)), and the policy uncertainty ([Alesina et al., 1996](#)) created by turnovers could be detrimental to economic performance.

To explore the impacts of power transitions caused by elections, we build a new dataset of national election results. Our dataset, assembled through a systematic process of identifying and validating available sources of electoral results, includes the universe of presidential and parliamentary elections held around the world since 1945. We estimate the impact of electing a challenger versus that of reelecting the incumbent on several dimensions of country performance, using a regression discontinuity design (RDD) across countries. Electoral turnovers are not random events and in particular may be more likely to occur after an economic downturn, making it difficult to attribute post-election differences in performance to the electoral outcome ([Brender and Drazen, 2008](#); [Nunn et al., 2018](#)). By focusing on close elections in which the incumbent narrowly won or lost, our empirical strategy addresses this concern. Our paper is among the first to implement a close-elections RDD in a cross-country setting.¹

We define an electoral turnover as an electoral defeat of the incumbent candidate or party, namely an election where the candidate of the incumbency fails to secure a plurality of votes (in presidential elections) or a plurality of seats (in parliamentary elections). We identify an incumbent candidate or party across 2,493 national elections, including 1,820 parliamentary elections and 673 presidential elections. These elections constitute the main sample for our analysis. [Figures 1 and 2](#) show the worldwide prevalence of electoral turnovers since 1945. The frequency of turnovers at the national level has increased sharply since the early 1990s and averages 40% in recent years.

Electoral turnovers potentially affect a large number of outcomes, raising the problem of multiple testing. To minimize the risk of finding false positives, our analysis focuses on an index of economic performance as well as four wide-ranging outcomes: international trade, human development, peace, and the quality of democracy. We follow [Kling et al. \(2007\)](#) to compute the economic index (which is the average of standardized GDP growth, inflation, and unemployment) and a general index of country performance combining all these outcomes. To construct these indicators, we identified relevant variables

¹One exception is [Girardi \(2020\)](#), who estimates the stock market impacts of partisanship across 758 national elections.

from a wide range of administrative sources, prioritizing sources with the best reliability and coverage.²

We show that turnovers positively affect the performance of countries along multiple dimensions. An electoral defeat of the national incumbent results in a 0.34 standard deviation (SD) improvement in economic performance and a 0.22 SD improvement in our general index of country performance. These effects are large in magnitude, robust to a range of robustness checks, and materialize gradually over time. The impact on our general index is larger in presidential elections than in parliamentary elections, and larger in non-OECD countries relative to OECD countries, but the point estimates are positive and sizeable in all these subsamples, and differences across subsamples are generally non-significant.

The effects of electoral turnovers are partly driven by turnovers in the executive branch in both presidential systems, where the victory of a challenger generally leads to a power transition, and parliamentary systems. In the latter, we show that a defeat of the incumbent party leads to a discontinuous increase in the likelihood of a turnover in the executive branch. Having documented this relationship, we show that executive turnovers improve a country's index of performance by 0.26 SD. Furthermore, turnovers matter more when the member of the executive appointed following the election has more power, and when there are fewer internal and external constraints on the executive, such as institutional checks and balances and exposure to globalization.

Our identification of the causal effects of turnovers assumes that elections won by the incumbent are ex ante comparable to elections won by the challenger. One important concern involves the potential ability of incumbents to manipulate election results. Under such manipulation, any effects of turnovers on performance could be driven by unobservable differences between elections that lead to a turnover, and those that do not. We present various identification checks to validate our empirical strategy, including the local polynomial density test from [Cattaneo et al. \(2018\)](#) to detect manipulation of the running variable (the victory margin of the challenger) in close national elections, and the permutation test from [Canay and Kamat \(2017\)](#). We also show that a range of baseline covariates are continuous across the RD cutoff. Finally, we obtain very similar results using the randomization inference estimation procedure from [Cattaneo et al. \(2015\)](#). With these identification checks, we extend to a cross-country setting the literature discussing the validity of RDDs in close elections (e.g., [Eggers et al., 2015](#)).

One question raised by our approach is whether the positive impacts of turnovers only hold for close national elections or extend more broadly to all national elections. Incumbents who struggle to win reelection may perform more poorly than the average incumbent, and weak incumbents may encourage the strategic entry of high-quality challengers ([Gordon et al., 2007](#); [Ban et al., 2016](#)). By estimating the impact of turnovers in a sample of close elections, we may therefore be comparing unobservably low-quality incumbents to high-quality challengers. As long as the quality of candidates does not jump discontinuously at the RD cutoff, this is not a concern in terms of causal identification. However, it could mean that turnovers improve performance only when elections are close to begin with.

We conduct two exercises to show that the positive effect of turnovers likely extends away from the cutoff. First, we look at a subsample of national elections involving "unlucky incumbents," namely elections conducted in the aftermath of a global oil shock. Following [Arezki et al. \(2020\)](#), we use the fact that these elections are close not as a result of poor incumbent performance, but due to global macroe-

²We do not study the short-term response of financial markets to close national elections, which has been explored by papers focusing on the left-right divide ([Snowberg et al., 2007](#); [Girardi, 2020](#)). Our analysis focuses on outcomes measured one to four years after the election.

conomic circumstances outside the incumbent’s control. We show that our main results hold in this subsample. Second, we implement the statistical procedure from Angrist and Rokkanen (2015) to show that the positive effects of turnovers on performance also hold away from the RD cutoff.

We systematically investigate a range of potential mechanisms, following predictions from the literature. Citizen-candidate models predict that turnovers will affect policies if they bring to power new parties or leaders with different *characteristics* (Osborne and Slivinski, 1996; Besley and Coate, 1997). Besley et al. (2011) provide evidence for this channel at the country level, looking at leaders’ education, and other recent papers study how certain types of leaders have affected national performance throughout history (Dube and Harish, 2020; Ottinger and Voigtländer, 2021). To understand whether differences in candidate characteristics are driving our results, we explore two hypotheses: (i) whether electoral turnovers bring to power leaders with different characteristics, and (ii) whether electing a leader with different characteristics affects country-level outcomes. We find little evidence in favor of the first hypothesis: the challengers who win close national elections are not disproportionately younger, more left-wing, more populist, or more illiberal.³ Furthermore, the election of a candidate with those characteristics does not have a sizeable effect on country outcomes. For example, the close election of a left-wing leader has a -0.02 SD effect on our general index of performance, which falls well short of statistical significance. This null result contributes to a large literature on the impacts of partisanship at the subnational level, which has found mixed evidence (Pettersson-Lidbom, 2008; Ferreira and Gyourko, 2009; Folke, 2014; Beland, 2015; Fiva et al., 2018; Dynes and Holbein, 2020).

Even if candidate characteristics are not driving the positive impacts of turnovers, elected challengers could implement different *policies* once in office, relative to reelected incumbents. To explore this mechanism, we look at four measures of government intervention in the economy: government expenditure, tax revenue, national debt, and an index combining these three outcomes. Since we are agnostic about the sign of the relationship between government intervention and performance, we look at these measures both in levels (do electoral turnovers lead to more government intervention?) and in absolute value of the differences relative to the previous term (do electoral turnovers lead to more change in government intervention?). We find little evidence that turnovers affect the level of government intervention. Electoral turnovers lead to a 0.04 SD increase in our index of government intervention (non-significant). The effect on the *change* in government intervention is larger in magnitude (0.23 SD) and statistically significant (at 10%), suggesting that electing challengers does lead to more policy change.⁴ This evidence adds to a literature exploring the relationship between political leadership and government intervention (Brender and Drazen, 2013; Blinder and Watson, 2016).

We then turn to accountability mechanisms to explain the poorer performance of reelected incumbents. Electoral turnovers improve the quality of governance and reduce the incidence of corruption, two standard measures of politician performance in the literature on political agency (Besley, 2007). Strikingly, turnovers have a large and robust negative effect on various measures of perceived corruption, including indices of accountability, executive corruption, public sector corruption, and the control of

³We do not explore the gender dimension because there are too few national elections involving female candidates in our sample. At the subnational level, various papers have estimated impacts of a leader’s gender on policy outcomes (Chattopadhyay and Duflo, 2004; Clots-Figueras, 2011; Ferreira and Gyourko, 2014; Brollo and Troiano, 2016).

⁴In the Appendix, we also look at other measures of economic policy, including a measure of central bank independence and measures of financial liberalization. We find no robust evidence that turnovers affect these policies in levels, and mixed evidence in terms of effects measured in changes.

corruption measured across different data sources. These effects on corruption increase over time: challengers become relatively less corrupt than reelected incumbents over the course of the subsequent term. These dynamic effects on corruption mirror the effects we find on our main outcomes of interest—i.e., the economic effects of turnovers also become more positive over time.

One explanation for this finding could be related to constitutional term limits, which are generally more binding for reelected incumbents than for leaders in their first term. Country leaders who will not stand for reelection as a result of *de jure* rules likely face fewer incentives to perform well in office (Ferraz and Finan, 2011; Fourniaies and Hall, 2021). However, two sets of results indicate that this is likely not the main explanation driving our results. First, our main results hold in the subsample of parliamentary elections, where members of the executive designated by parliament generally do not face a term limit. Second, term limits are present and differentially binding for the incumbent and the challenger in only half of the presidential elections, and our results are robust to dropping those elections.

Even in the absence of term limits, several mechanisms involving reputation and reelection concerns could explain why challengers perform better than reelected incumbents. These potential mechanisms include the erosion of party discipline after some time spent in office, as well as learning in corruption, delayed corruption, and a more general deterioration of democratic norms which makes it harder to hold long-serving incumbents accountable.⁵ All these mechanisms are consistent with a simple conceptual framework in which incumbent leaders and parties build reputation by exerting more effort early in their tenure (as in Ashworth, 2005), and use their later terms in office to extract rents. During each subsequent term in office, the disciplining effect of reelection incentives becomes weaker since the reputation of incumbents (individuals or parties) is already well established. Thus, electoral turnovers improve country performance by helping to replace poorly incentivized and low-performing incumbents with new national leaders facing greater incentives to deliver tangible benefits to their electorate.

Our results can also be interpreted in light of Olson (1984)'s seminal argument, itself echoing Hegel (1820), that stable societies eventually experience institutional sclerosis and economic stagnation, unlike societies that undergo deep structural changes as a result of wars and revolutions. While our analysis focuses primarily on power transitions occurring within a given set of institutions and political regime, it is possible that electoral turnovers also trigger a reshuffling of the governing elite and impede the formation of "distributional coalitions" which, in Olson's view, could undermine economic efficiency.

By providing the first estimates of the impact of national electoral turnovers, our paper relates to the vast literature on the economic impacts of democracy. Others have shown that democratization affects the pace of policy reforms (Papaioannou and Siourounis, 2008; Giuliano et al., 2013) and economic growth (Rodrik and Wacziarg, 2005; Acemoglu et al., 2019). We show that what matters for good performance is not just democracy, but a competitive electoral system allowing citizens to periodically replace their country's leadership. Furthermore, many regimes classified as "electoral autocracies" or "hybrid regimes" also hold regular elections (Guriev and Treisman, 2019). We focus on a phenomenon, electoral turnovers, which occurs across different types of political regimes—in our data, approximately 15% of close elections are held under non-democratic regimes. By studying the impact of political transitions induced by elections, our results extend beyond the literature on the impacts of democratization. Importantly, electoral turnovers do not lead to more democratization episodes or democratic reversals,

⁵The French language contains a phrase, *l'usure du pouvoir* (the erosion of power), describing this phenomenon.

and they also improve country performance when the election does not coincide with a regime change, which occurs for slightly less than 20% of elections in our data.

The remainder of the paper is organized as follows. We describe our data in Section 2 and our empirical strategy in Section 3. Section 4 presents our main results and Section 5 discusses conceptual mechanisms. Section 6 concludes.

2 Key Data Sources

We draw upon a variety of data sources to analyze the impact of electoral turnovers. Our main dataset combines the results of all presidential and parliamentary elections conducted worldwide since 1945 with detailed data on economic performance, policy outcomes, leader characteristics, and regime types. This section provides a description of our data collection. We refer to Appendix A for additional details.

2.1 Data on Elections, Leaders, and Institutions

Elections and electoral results. Our complete dataset contains 4,073 national elections held since 1945, including 1,110 presidential elections and 2,963 parliamentary elections. For parliamentary elections, we include all unicameral parliaments as well as the lower chamber of bicameral parliaments. To construct this database, we proceed as follows. First, we identify the universe of national elections using the Varieties of Democracy (V-Dem) database (Coppedge et al., 2021) as our primary source. We complement V-Dem with the Parliaments and Governments (PARLGOV) database, the Manifesto Project, numerous handbooks by Dieter Nohlen and coauthors, the Database of Political Institutions (DPI) database, the Global Elections Database, and the Constituency-Level Elections Archive. Appendix A.1 provides a complete description of the data construction process and how we prioritize between data sources.

We then search for the results of each election. For this step, we rely on the aforementioned sources as well as Adam Carr’s Psephos election archive, the African Elections Database, the European Elections Database, the Political Database of the Americas, the Inter-Parliamentary Union PARLINE database, the International Institute for Democracy and Electoral Assistance (IDEA) database, the International Foundation for Electoral Systems (IFES) election guide, and the National Archives presidential elections database. We prioritize sources which cover more elections, show fewer inconsistencies, and have been used more often in previous work.⁶ Academic sources are lacking or incomplete for 13.6% of elections. In these cases, we collect the results from Wikipedia. Appendix Figure C.1 shows a comparison between our sample and preexisting databases as well as the number of elections collected from each source.

We collect data on vote shares for presidential elections and seat shares for parliamentary elections. We then systematically check the consistency of the data within each source, as described in Appendix A.1.4. In collecting parliamentary election results, we take into account the existence of ex ante party coalitions officially formed before the election, as described in Section 3.1 and Appendix A.1.3. Overall, we are able to retrieve data on election results for 97% of presidential elections and 97% of parliamentary elections identified in the first step.

⁶In particular, Nohlen’s handbooks proved to be an invaluable source of election results—we digitized and standardized the results presented in these books.

Leaders and their parties. We combine various sources to link election results with information on leaders and political parties. First, we identify a head of state (HOS) and a head of government (HOG) for each country-year in our data. We can pin down the precise dates (within a year) at which leaders took power for over 99.9% of observations at the country-year-leader type level. Appendix A.2 provides details on this dataset. We then associate parties in our database of election results with parties in V-Parties, another dataset provided by V-Dem. This dataset contains time-varying expert-coded measures of populism, illiberalism, and left-right ideology for a large number of political parties. Appendix A.3 describes this matching process. To retrieve data on the age of candidates, we link the main parties in parliamentary elections with their party leaders, and we link these leaders as well as candidates in presidential elections with demographic information from their Wikidata pages.⁷

Institutions and regimes. We also retrieve data on the political regimes and constitutional rules under which national elections take place. First, using V-Dem as our primary source, we divide the post-WWII history of each country into political regimes, allowing us to better understand the role of every election. Appendix A.4 describes the data on regimes. Second, we determine whether each election in our data led to the nomination of a HOS, a HOG, or none of the two. Appendix A.5 describes the rules used to determine the role of each election, as well as data quality checks. Third, we rely on the Comparative Constitutions Project (Elkins et al., 2021) to identify term limits faced by candidates. Appendix A.6 provides additional details on these data.

2.2 Data on National Outcomes

In our analysis, we estimate the impact of electoral turnovers on measures of country performance falling into five broad categories: economic performance, international trade, human development, peace, and the quality of democracy.⁸ A detailed description of the rules we used to select relevant variables under each category is provided in Appendix A.7. Here, we provide a brief description.

To measure economic performance, we use three indicators: GDP growth from the Penn World Tables (Feenstra et al., 2015),⁹ CPI inflation from the IMF, and the unemployment rate from the International Labor Organization. For international trade, we construct a measure of trade intensity using the total value of imports and exports divided by GDP (measured by the World Bank). For human development, we use the Human Development Index (HDI) from the UNDP. We measure the incidence of conflict using the Correlates of War (COW) Project (Sarkees and Wayman, 2010; Palmer et al., 2015). Our conflict outcome is a dummy equal to 1 if the country experienced any inter-, intra-, or extra-state conflict in a given year, and 0 otherwise. Finally, we rely on V-Dem’s various measures of the quality of democracy, including deliberative, egalitarian, liberal, participatory, and electoral democracy. We use the simple average of these five measures (which all vary between 0 and 1) to quantify the quality of democracy. To avoid results being driven by outliers and measurement errors, variables which are the most volatile (GDP growth, inflation, unemployment, and trade intensity) are winsorized at the 3rd and

⁷Appendix Figure C.2 shows that we were able to match the vast majority of candidates with Wikidata.

⁸Appendix Tables E.12 to E.16 report results for a broader set of outcomes than those considered in our baseline analysis.

⁹We use version 9.0 of the Penn World Tables, which addresses the data issues highlighted by Johnson et al. (2013) (see Feenstra et al., 2015). In Appendix Table E.12, we show robustness to using alternative sources to measure GDP growth, including estimates from the World Bank.

97th percentiles—we check the robustness to different winsorizing and to trimming. Table 1 indicates the timeframe and the total number of elections for which we have data on each outcome. Appendix Table D.1 shows that the fraction of observations with missing data is not significantly affected by the occurrence of an electoral turnover.

3 Empirical Framework

This section presents our empirical strategy. We first define the key concepts of incumbency and electoral turnovers (Section 3.1). We then describe our sample (Section 3.2) and the construction of our outcome variables (Section 3.3). Section 3.4 presents our main empirical specification. Finally, we describe alternative specifications used to estimate the impact of turnovers in the executive branch (Section 3.5) and the effects of candidate and party characteristics (Section 3.6).

3.1 Defining Electoral Turnovers

Our analysis estimates the impacts of electoral turnovers using a RDD. To set up this design, we must identify which candidate or party represents the incumbency in each election. We then define electoral turnovers as a defeat of the candidate or party representing the incumbency. We create for each election a running variable X equal to the difference between the score of the challenger and the score of the incumbent, and a binary treatment variable T equal to 1 if X is positive and an electoral turnover occurs. This section describes how we construct these key variables for each type of election.

Presidential elections. In presidential elections, the incumbent candidate is the individual or party which effectively held power at the time the election took place. To account for caretaker governments and transition periods, we use a flexible definition: we define the incumbent as the leader who held executive power for a period of at least 365 days in the two-year period before the election. An incumbent party is analogously defined as the party which held executive power for at least 365 days during the same period. Panel (a) of Appendix Table C.1 illustrates the implementation of this rule.

To deal with elections where the incumbent does not individually compete but instead has a clear designated successor, we consider that the incumbency is represented by the following: (1) the incumbent leader, if the leader is personally competing; (2) the candidate of the incumbent party, if the leader is not personally competing; (3) the candidate unambiguously designated as the representative of the ruling government, if neither the country leader nor any candidate from their party are competing.¹⁰ Elections in which we cannot define a candidate of the incumbency are excluded from the analysis.

We then construct a treatment variable T equal to 1 if the candidate of the incumbency fails to win the election. The running variable X is equal to the margin of victory of the best ranked challenger, which is the difference between this challenger’s vote share and the incumbent’s vote share. When the election features a runoff and the incumbent competed in the second round, we use the second round results to construct the running and treatment variables. If the incumbent candidate did not compete in the second round, we do not define a running variable. Furthermore, we exclude from the sample elections where

¹⁰When the election features two rounds, we check whenever possible that this support was expressed before the first round.

one candidate ran unopposed or obtained 100% of the votes, indirect presidential elections which could easily be manipulated because they involved several rounds of voting or the electoral college had less than 1,000 unpledged electors, as well as various types of inconsequential elections (Appendices B.1 and B.2 provide additional details).¹¹

Parliamentary elections. In parliamentary elections, the incumbent party is defined as the party which secured a plurality of seats in the previous parliamentary election. Our definition is based on the results of the previous election because the available data do not systematically document how the composition of parliaments varies between national elections, for example through by-elections.¹² Furthermore, note that some parliamentary elections lead to the designation of a leader of the executive branch. Yet, our definition does not depend on this and is only based on seat shares, because the relative seat shares obtained by different parties may matter in and of themselves, independently of who controls the executive. Our definition allows us to include parliamentary elections which are not associated with the designation of a member of the executive and which may nonetheless be impactful, such as the elections to the lower chamber of parliament in presidential systems.

We set the treatment variable T equal to 1 if the incumbent party (the party that won a plurality of seats in the previous election) fails to secure again a plurality. The running variable X is equal to the margin of victory of the best ranked opposition party, i.e., the difference between the seat share of this party and that of the incumbent party. Once again, we drop elections in which the incumbent party ran unopposed or obtained 100% of the seats, as well as elections to constitutional assemblies without any legislative power, and elections where a fraction of parliamentary seats are appointed rather than elected, as described in Appendix B.1. In addition, we do not define a treatment variable when $X = 0$, which occurs when the incumbent and challenger parties obtain exactly the same number of seats.¹³

As with presidential elections, we account for cases where the incumbent party does not compete in the election but has a clear successor party. We also account for the existence of coalitions between parties. We collected systematic evidence to identify party coalitions and distinguish coalitions officially formed before the election (ex ante coalitions) from those formed after the election (ex post coalitions). To compute seat shares, we group together parties belonging to the same ex ante coalition (e.g., the CSU and CDU coalition in Germany) but we keep as separate the members of ex post coalitions, since these are endogenous to election results. Therefore, the candidate of the incumbency in parliamentary elections is represented by: (1) the incumbent party when it participates in the election, or alternatively the coalition of which the incumbent party is part of; (2) the party or coalition unambiguously designated as the representative of the ruling government if the incumbent party is not competing. As with presidential elections, we exclude elections in which we cannot define a party representing the incumbency. When identifying the previous election, we exclude inconsequential elections, constitutional assembly

¹¹In Appendix Figure D.1, we verify that electoral turnovers are not associated with a significantly different probability of exclusion from the sample following these criteria, using the empirical strategy described in Section 3.

¹²In case of a tie in the previous election, we apply the following rule. If the election leads to the designation of a leader (typically the head of government), and the leader designated after the election is affiliated to one of the tied parties, we define the party of this leader as incumbent party. Else, we designate as incumbent party the party which won most votes. If the incumbent party was a coalition of several parties which split after the election, we consider as incumbent party the member of the coalition with most seats.

¹³There are 25 such elections in our data including, e.g., the 2010 Australian federal election and the 1979 Swiss federal election.

elections, and elections which are not the last parliamentary elections within a year. We also impose that the previous election took place no more than 10 years earlier.¹⁴

3.2 Sample Description

Overall, we are able to identify an incumbent candidate (resp. incumbent party) and to define a running and treatment variable in 673 presidential elections (resp. 1,820 parliamentary elections). Accordingly, our main sample for the analysis includes a total of 2,493 national elections across 201 countries.¹⁵ 59% of these elections are conducted under regimes classified as liberal or electoral democracies by V-Dem, and 41% under regimes classified as electoral or closed autocracies. 26% of elections in the main sample take place in OECD countries, and 74% in non-OECD countries. Close to the threshold, when the running variable is comprised between -5 and 5 percentage points, the fractions of elections in democracies and in OECD countries increase to 84% and 39%, respectively.

Figure 1 (a) shows the share of elections featuring an electoral defeat of the incumbency, worldwide and separately for OECD and non-OECD countries. Figure 2 shows the geographic distribution of all elections we identified over the period, as well as all elections included in our main analysis, and all elections with a turnover. Overall, the frequency of electoral turnovers hit a low point during the 1960s but has been increasing since the early 1990s. Today, around 40% of elections are associated with a turnover defined as an electoral defeat of the incumbency.

3.3 Outcome Variables

We explore how turnovers affect various outcomes at the national level. To compare the level of an outcome Y before and after an election E taking place in country c during year t_E , we compute the difference between the average level of Y in the four years following the election and the level of Y in the year before the election:

$$\underbrace{\Delta Y_E}_{\text{Improvement over the election cycle}} = \underbrace{\left(\frac{1}{k} \sum_{\tau=1}^k Y_{c,t_E+\tau} \right)}_{\text{Post-election average of the outcome}} - \underbrace{Y_{c,t_E-1}}_{\text{Pre-election value of the outcome}}$$

This definition of our outcomes enables us to control for large differences in levels across countries and to increase the precision of our estimates. In our baseline analysis, we use $k = 4$ since the modal distance between elections of the same type in a country is four years. To make estimates comparable across outcomes, we standardize the ΔY_E . In the Appendix, we report a wide range of checks verifying the robustness of our results to using different values of k and to replacing the pre-election value of the outcome with the average over the last three years before the election.

Building indices. Electoral results potentially affect a large number of outcomes, which raises the problem of multiple testing. To minimize the risk of overrejecting the null hypothesis, and to gain statistical

¹⁴If this condition is not met, or if we do not have results for this election, we try to define an incumbent party through additional background research.

¹⁵Our sample includes a few autonomous territories which are not United Nations members (e.g., Greenland and Puerto Rico).

power, we group the ΔY_E constructed above for our three economic outcomes (GDP growth, inflation, and the unemployment rate) into an index equal to the unweighted average of the three standardized variables, following the procedure of Kling et al. (2007). When a component is missing, we do not include it in the average (i.e., we do not impute a value). Furthermore, we adjust the sign of the components such that higher values of the index reflect better outcomes. Thus, inflation and unemployment enter negatively in the index. We use the same method to aggregate this economic index and the standardized ΔY_E of international trade, conflict, human development, and democracy into a general index. While we also report estimates of the effect of turnovers separately for each component, the impact on this general index of country performance is our main outcome of interest.

3.4 Regression Discontinuity Estimation

Effects of an electoral defeat of the incumbent. We estimate the effects of an electoral defeat of the incumbent with the following RD equation, using one observation per election:

$$\Delta Y_E = \alpha + \beta_1 X_E + \beta_2 X_E T_E + \gamma T_E + \varepsilon_E, \quad (1)$$

where X_E , the running variable, is the victory margin of the best-ranked challenger and $T_E = \mathbb{1}(X_E > 0)$, as described in Section 3.1. ΔY_E measures the difference in national outcomes between the post-election average and the pre-election value (see Section 3.3). Equation (1) is estimated with the non-parametric method of Calonico et al. (2014). Using this method, we report the standard RD point estimate γ and the robust standard error as well as the p-value associated with the robust confidence interval for γ . In our exploration of mechanisms, we also estimate alternative versions of equation (1) where we use $|\Delta Y_E|$ as the outcome (i.e., we compute the absolute value of the difference in national outcomes between the post-election average and the pre-election value). We also report RD plots separately for each outcome of interest. In these plots, we use quantile-spaced bins and a third-degree polynomial to approximate the population CEF on each side of the threshold.

3.5 Turnovers in the Executive Branch

When interpreting the effects of electoral turnovers shown in Section 4, it is important to keep in mind that such turnovers often generate a change of leadership in the executive branch. Therefore, *executive* turnovers may contribute to the effects of *electoral* turnovers.

In presidential elections, electoral and executive turnovers generally coincide because the defeat of the incumbent candidate means that a challenger becomes president for the next term. In parliamentary elections, things are more complex. First, only slightly over half of the parliamentary elections in the sample lead—in a constitutional sense—to the designation of a leader of the executive branch (a head of state or a head of government). Second, in these elections, electoral turnovers tend to lead to a change in the executive, but this is not always the case. For example, an incumbent party that loses a parliamentary election may still be able to retain executive power by forming a different coalition after the election.

To determine whether a parliamentary election led to a turnover in the executive branch, we must define a leader and leading party before and after the election. Namely, we define as the leader and leading party before (resp. after) the election the individual and party which led the branch of the

executive designated by parliament during a period of at least 365 days during the two years before (resp. following) the election. Panel (b) of Appendix Table C.1 illustrates the implementation of this rule, and Appendix A.8 provides additional details.

We then define as an executive turnover T^x the nomination of a new leader at an executive position. This variable is set to 0 (meaning that an executive turnover did *not* take place) if: (1) the leader before and after the election are the same person; (2) the leading party before and after the election are the same; or (3) the leading party before the election did not compete and instead supported the leading party after the election. If none of these conditions hold, we consider that there has been an executive turnover and set T^x as equal to 1. If we are unable to define a leading party before the election (for example because the leader was an independent) or a leading party after the election, we do not define T^x . Figure 1 (b) shows the evolution of the frequency of turnovers in the executive branch since 1945.

In Figure 3 (a), we show the impact of electoral turnovers on executive turnovers in the sample of parliamentary elections leading to the designation of a leader of the executive. We use T^x as the dependent variable in a specification in the form of equation (1). We observe a large upward jump (of 0.37 percentage points) at the threshold, indicating that executive turnovers are much more likely to occur when the challenger party obtained slightly more seats than the incumbent party. This result generalizes a finding from Fujiwara and Sanz (2018) to the entire world. It reflects the norm that the party with a plurality of seats generally has priority over the formation of a new government. Naturally, we observe an even larger jump (of 0.60 percentage points) when we also include presidential elections, in which electoral and executive turnovers generally coincide (Figure 3 (b)). Thus, the effects of electoral turnovers on country performance are likely to be mediated in part by executive turnovers.

Some of our analyses seek to isolate the effects of an executive turnover on country performance. These analyses restrict the sample to presidential elections and parliamentary elections leading to the designation of a leader of the executive branch. They use a distinct running variable, X^x , equal to the margin of victory of the best ranked challenger over the representative of the leader or leading party before the election, defined using vote shares in presidential elections and seat shares in parliamentary elections. To estimate the effect of a turnover in the executive branch, we rely on a fuzzy RDD in which T^x is instrumented with the assignment variable $A^x = \mathbb{1}(X^x > 0)$. For these estimates to capture the effect of a turnover in the executive branch, we must assume the following exclusion restriction: the defeat of the leading party only affects outcomes through the higher probability of an executive turnover. Since this assumption is unlikely to hold in some settings, we also report reduced-form estimates in addition to the fuzzy RDD results. The RD, first stage, and reduced-form equations are shown in Appendix B.3.

It is important to note that for parliamentary elections it is possible to have $X^x \neq X$. When we estimate the effects of electoral turnovers, the incumbent party is defined using the results of the previous election while when we focus on executive turnovers, the leading party is defined based on which party held executive power in the two-year period before the election. Furthermore, it is possible to have $T^x \neq T$, for instance because the head of government appointed following a parliamentary election is not necessarily affiliated with the party which won a plurality of seats. Finally, since not all parliamentary elections lead to the designation of a leader of the executive, it is not always possible to define T^x even when we can define T .

Examples. To make clearer the definitions in this section, we provide some examples:

- **2007 French presidential election.** The incumbent leader was Jacques Chirac from the UMP party. He did not compete in the election, but Nicolas Sarkozy (also from UMP) did. He won the election with 53.1% of the vote, with the opponent Segolène Royal obtaining 46.9% of the vote. Here, the running variable is $X = X^x = -6.2\%$ and the treatment variable is $T = T^x = 0$ (there was an electoral win of the incumbency and no turnover in the executive branch).
- **1993 Canadian parliamentary elections.** The Progressive Conservative party had won a plurality of seats in the previous election in 1988. The Progressive Conservative party ranked 5th in the 1993 election with 0.7% of the total number of seats in parliament. The Liberal party won the election with 60% of seats and designated a new leader of the executive, Joseph Chrétien, following the election. For this election, we have $X = X^x = 59.3\%$ and $T = T^x = 1$ (there was an electoral defeat of the incumbency and a turnover in the executive branch).
- **2011 Danish parliamentary election.** The Venstre party won a plurality of seats in the previous election in 2007, and the incumbent HOG (Lars Løkke) was from the Venstre. The Venstre party won a plurality of seats in the 2011 elections (with 26.3% of seats), and the Social Democrats party ranked second (with 24.6% of seats), but the HOG after the election was Helle Thorning-Schmidt from the Social Democrats. Here, we have $X = X^x = -1.7\%$. However, we have $T = 0$ and $T^x = 1$ (there was an electoral victory of the incumbency and a turnover in the executive branch).
- **2005 Norwegian parliamentary election.** The Labour party won a plurality of votes in the previous election in 2001. However, the incumbent leader (Kjell Magne Bondevik) was affiliated to the Christian Democratic party. In the 2005 election, the Labour party arrived first with 36.1% of seats, the Progress party arrived second with 22.5% of seats, and the Christian Democrats arrived 5th with 6.5% of seats. The leader after the election was Jens Stoltenberg from the Labour party. Therefore, we have $X = -13.6\%$, $X^x = 29.6\%$, $T = 0$, and $T^x = 1$ (there was an electoral victory of the incumbency and a turnover in the executive branch).

3.6 Effects of Party Characteristics

In Section 5, we also explore whether electing candidates with specific characteristics (e.g., electing a left-wing candidate/party or a populist candidate/party) affects national outcomes. To estimate the effects of a victory of a left-wing party, we consider the top two parties competing in an election and define the running variable X^ℓ as the winning margin of the most left-wing party, and the treatment variable as $T^\ell = \mathbb{1}(X^\ell > 0)$. An election is therefore considered treated if the most left-wing party (among the top two) wins, irrespective of their incumbency status. We then estimate the following sharp RD equation, using the same estimation procedure as with equation (1):

$$\Delta Y_E = \alpha + \beta_1 X_E^\ell + \beta_2 X_E^\ell T_E^\ell + \gamma T_E^\ell + \varepsilon_E. \quad (2)$$

We estimate similar equations for the effects of an electoral victory of a populist party or an illiberal party, and when we explore the effects of electing a younger candidate.

4 Main Results

This section presents our main results. We first report identification checks and placebo tests to verify the validity of our RDD (Section 4.1). We then present our main results showing a positive effect of electoral turnovers on country performance (Section 4.2), along with a variety of robustness and specification checks (Sections 4.3 and 4.4) and heterogeneity analyses (Section 4.5). Finally, we estimate the effect of turnovers in the executive branch (Section 4.6) and check the external validity of our results beyond close national elections (Section 4.7).

4.1 Identification Checks

Implementing a RDD in a sample of close national elections raises a concern of sorting at the threshold. Incumbents may have the ability to manipulate election results, in a way that would systematically benefit them and hurt challengers. If this occurred, we would observe a discontinuous drop in the density of our running variable (the victory margin of the best-ranked challenger) across the RD threshold.

To address these concerns and to build confidence in the internal validity of our results, we first implement the density test from Cattaneo et al. (2018) testing for manipulation of the running variable. Figure 4 reports these density tests for the full sample of national elections (panel a) and separately for presidential elections (panel b) and parliamentary elections (panel c). While there is more mass of the running variable on the left-hand side of the threshold (indicating that incumbents, overall, win the majority of elections), we find no evidence of manipulation of the running variable in the full sample of elections (p-val.=0.798) and in the subsamples of presidential and parliamentary elections (p-val.=0.204 and 0.655, respectively).¹⁶ Furthermore, in Appendix Figure D.2, we find no evidence of manipulation among elections in democracies, elections in autocracies, and elections assessed as free and fair by V-Dem (panels a, b, and c). However, the density test fails for elections assessed as not free and fair (panel d). We keep these elections in the main sample because the negative jump in the density of the running variable could be due to endogenous retrospective coding instead of actual manipulation: experts may be more likely to rate an election as not free and fair because it was won by the incumbent. Reassuringly, Appendix Table E.1 shows that our main results are robust to dropping these elections from the analysis.

We then implement a variety of placebo tests showing that the treatment has no impact on our outcomes of interest measured in pre-election years. Appendix Tables D.2 to D.4 report these tests with outcomes measured in levels for years $t_E - 1$, $t_E - 2$, and $t_E - 3$, while Appendix Tables D.5 and D.6 report these tests in year-on-year differences. In Appendix Table D.7, we regress decade and region dummies on equation (1) and find no evidence that turnovers are associated with these variables. We also find no jump at the threshold for the time elapsed since the last treatment, the running variable in the previous election, and the value of the treatment in the previous election (Appendix Figures D.3, D.4,

¹⁶In parliamentary elections, bunching on either side of the threshold may be more likely to occur in small parliaments. Indeed, the lower the number of seats, the easier it may be for the incumbent or the challenger party to win a small plurality of seats by manipulating the results (or exerting additional effort) in a few tangential constituencies. However, the median number of seats in parliaments in our sample is relatively high (127 seats), and we continue to find no evidence of manipulation of the running variable when focusing on the subsample of parliamentary elections with fewer than 60 seats, which corresponds to the 25th percentile of the distribution (see Appendix Figure D.2, panel f). Furthermore, as shown in Appendix Table E.3, the impact of electoral turnovers on the general index of country performance is robust to excluding parliamentary elections with fewer than 60 seats.

and D.5). We further fail to reject the null hypothesis of continuity of the distribution of a large set of pre-election covariates at the cutoff, using Canay and Kamat (2017)'s permutation test, either in our full sample or in the subsamples of presidential, parliamentary, free and fair, and non free and fair elections (see Appendix Table D.8).

Finally, we find no effect at the threshold on the number of years until the next election takes place (Appendix Figure F.1), and no effect on the probability of a turnover in the next election (Appendix Figure F.2). Overall, we conclude from these various checks that the results we show can be attributed to the causal effects of a turnover in the present election.

4.2 Main Results: Effects of an Electoral Defeat of the Incumbent

We now turn to our exploration of the consequences of electoral turnovers. Table 2 presents RD estimates of the effect of an electoral defeat of the incumbent—we report our estimate of γ from equation (1). Our outcomes of interest are the standardized index of economic performance (combining GDP growth, inflation, and unemployment), international trade, human development, peace, democracy, and the general index of country performance combining all these measures. Figure 5 complements Table 2 with RD plots for these various outcomes. As discussed in Section 3.4, we use the non-parametric method of Calonico et al. (2014) for estimation.

Electoral turnovers improve country performance along all dimensions, although estimates are statistically significant for only some of these dimensions. An electoral defeat of the incumbent results in a 0.34 standard deviation (SD) improvement in economic performance, which is mainly driven by a large decrease in both inflation and unemployment (Table 2). The effect of turnovers on GDP growth is positive but smaller in magnitude and non-significant. We also estimate positive and fairly large effects of turnovers on trade intensity (0.24 SD), human development (0.21 SD), and peace (0.10 SD), but only the first of these estimates is statistically significant.¹⁷ Finally, our general index of country performance increases by 0.22 SD when the incumbent candidate or party is defeated in a national election, which is significant at the 1% level. In Appendix Table E.2, we also report estimates measured in natural units rather than standard deviations. These estimates can be compared to the mean and standard deviations of the outcomes of interest, shown in Appendix Table C.2.

The positive effect of turnovers on democracy, which is also large (0.18 SD) and significant, warrants particular attention. Indeed, one could be concerned that experts responsible for the retrospective evaluation of democratic quality across regimes may be influenced ex post by the occurrence of an electoral turnover. Because we cannot rule this out, this estimate should be interpreted with caution. Nonetheless, our estimates of the effect of turnovers on the general index of performance are robust to excluding democracy from the construction of this index: the point estimate is nearly identical in this case (0.24 SD), and it is significant at the 1% level (see Appendix Table E.3).

We further assess how the effects of electoral turnovers evolve over time. We estimate the following RD equation for each outcome and each year after the election, i.e. each value of $\tau \in \{-2, 0, 1, 2, 3, 4, 5\}$:

¹⁷The UNDP's Human Development Index is the geometric mean of three components measuring income, life expectancy, and education. Because income is similar to GDP growth, which we include separately in our economic performance index, we show effects on each of these three components separately in Appendix Table E.14. All point estimates are positive and the effect on the geometric mean of life expectancy and education is larger, if anything, than the baseline effect.

$$Y_{c,t_E+\tau} - Y_{c,t_E-1} = \alpha_\tau + \beta_{1,\tau}X_E + \beta_{2,\tau}X_ET_E + \gamma_\tau T_E + \varepsilon_{E,\tau} \quad (3)$$

Figure 6 reports the estimated γ_τ 's. The estimates of γ_{-2} , corresponding to the effect of turnovers on outcomes measured two years before the election, can be interpreted as placebo tests. These estimates are small in magnitude and non-significant, as expected. Furthermore, we find that the effects of turnovers are initially small, but increase over time. This is especially the case for two outcomes: economic performance and trade. The effects on the overall index of performance also increase gradually until the third year after the election. Appendix Figure E.3 corroborates these findings with separate RD plots for the general index of performance and for each year after the election. Overall, these dynamic patterns indicate that it takes a few years for the change in leadership to impact country-level outcomes.

4.3 Robustness Checks

In the Appendix, we show that our results are robust to numerous specification changes and alternative ways of constructing our outcome variables. Here we provide a brief overview of these checks.

Construction of the general index. In Appendix Table E.3, we show that our results for the general index are robust to alternative constructions of this index, namely: excluding each of the components in turn; only keeping elections for which we have data on all components; using a weighted index à la Pocock (1997), which gives less weight to components which are more correlated with each other; defining the general index as the simple average of all outcomes used in the components instead of the simple average of the components; excluding observations in large geographical regions; excluding observations in each decade of the sample; and only looking at elections before or after 1990.

Restricting to major elections. Many countries, including the U.S., hold both presidential and parliamentary elections. In these cases, our main sample includes both types of elections. Appendix Table E.3 shows that our results are robust to restricting the sample to major elections in each country, namely presidential elections in presidential systems, and parliamentary elections in parliamentary systems.

Changing the pre-election baseline. Our main results in Table 2 and Figure 5 compare the post-election average of the outcome to the value of the outcome measured in the year before the election. We show in Appendix Table E.4 that our results are robust to the choice of the pre-election baseline by using the average of the three pre-election years instead of the pre-election year only. Namely, we define $\Delta Y_E = \left(\frac{1}{4} \sum_{\tau=1}^4 Y_{c,t_E+\tau}\right) - \left(\frac{1}{3} \sum_{\tau=1}^3 Y_{c,t_E-\tau}\right)$.

Changing the number of years in the post-election period. Instead of using the average of the four post-election years to measure post-election outcomes, we also estimate equation (1) including three, five, seven, and ten years in the post-election period. We further show that results are robust to adding the year of the election in the post-election period. Appendix Tables E.5 to E.11 report these checks separately for each outcome of interest and for the general index of country performance, constructed with and without the democracy index.

Winsorizing. To avoid results being driven by extreme events (e.g., hyperinflation episodes), changes in measurement, or data errors, we winsorize our most volatile outcomes (GDP growth, inflation, unemployment, and trade) at the 3rd and 97th percentiles. Appendix Tables E.5 to E.11 show that our results remain unchanged when we winsorize less (at the 1st and 99th percentiles) or more (at the 5th and 95th percentiles). These tables also show that our results are robust to trimming instead of winsorizing.

Changing the outcome variables or the source used. To choose our main outcomes, we relied on data availability and reliability. Appendix Tables E.12 to E.16 show additional results for a wider set of variables. For example, we show that our results on economic performance are robust to using growth in GDP per capita instead of GDP growth, and to using data from alternative sources.

4.4 RD Specification Choices and Randomization Inference

We check the robustness of our results to three deviations from the baseline RD specification choices in Calonico et al. (2014). First, our main regressions do not control for any covariate, but the RD estimation procedure of Calonico et al. (2014) allows the inclusion of controls. In Appendix Tables E.5 to E.11, we show that including geographical region and decade fixed effects does not affect the estimates we obtain, and that it does not help us gain statistical power. Appendix Table E.17 shows that controlling for pre-election outcomes also does not change our main results, though it slightly increases the precision of our estimates. Second, in our baseline estimation, we use the MSE-optimal bandwidth from Calonico et al. (2014). In our analysis of the general index of country performance, this bandwidth includes 898 national elections, corresponding to a bandwidth size of 15.3 percentage points on each side of the threshold.¹⁸ Appendix Tables E.5 to E.11 show that we obtain very similar estimates with a bandwidth twice larger or twice smaller than this optimal bandwidth. Third, we show that our results are robust to using a second order local polynomial instead of the default local linear regression of Calonico et al. (2014).

We further check the robustness of our results to using an independent estimation procedure. The RD estimates of Calonico et al. (2014) are valid under assumptions of continuity of potential outcomes around the cutoff, as many RD estimators. An alternative view of RDDs is that the treatment assignment can be considered quasi-random close to the cutoff, not just at the cutoff itself. If we can find a window around the cutoff in which covariates have similar distributions across treatment and control observations, making treatment plausibly random (a local randomization hypothesis), we can then use randomization inference techniques which are valid in finite samples rather than the large-sample approximation of Calonico et al. (2014). We apply the procedure of Cattaneo et al. (2015) to find the largest possible window around the cutoff for which the local randomization assumption is plausible, based on the following covariates: the level of our main outcome variables the year before the election as well as the value of the treatment variable and the running variable in the previous election. We then estimate effects with a difference in means estimator and use a randomization inference procedure to derive the p-value corresponding to the test of the null hypothesis, following Cattaneo et al. (2016). Figure 7 reports the results of these nonparametric tests. These results are consistent with our baseline estimates.

¹⁸The size of the MSE-optimal bandwidth from Calonico et al. (2014) depends on the dependent variable considered. Across our main outcomes, the number of elections included in the bandwidth varies between 581 and 1,196 (see Table 2).

In particular, using an optimally chosen window of 2.4 percentage points on either side of the threshold, we find a 0.23 SD effect of electoral turnovers on the general index of country performance.

4.5 Heterogeneity Analyses

The positive effects of electoral turnovers may be driven by specific types of political regimes. Furthermore, factors that constrain the power of national leaders may diminish their ability to steer country performance, which may in turn reduce the magnitude of the effects we estimate. To explore these possibilities, we estimate the impact of electoral turnovers in various subsamples.

In Table 3, we first report the effects of electoral turnovers across presidential and parliamentary elections separately. We also split our sample between democracies and autocracies and between OECD and non-OECD countries. Overall, turnovers have a positive effect on country outcomes across most subsamples. The effect of turnovers on the general index of performance is large and positive in all subsamples and it is statistically significant in all but one of them. This effect is larger in presidential elections than in parliamentary elections, larger in non-OECD countries relative to OECD countries, and larger in autocracies than in democracies, but we cannot reject the null that effects across these subsamples are identical. For the HDI and peace, the effect appears larger for presidential elections and for OECD countries. Finally, the impact of turnovers on democracy is larger in non-OECD countries and in autocracies, where there is more scope for democratic quality to vary across election cycles.

We also ask whether turnovers matter more when there are fewer internal and external constraints on the executive. We consider three types of constraints: (i) institutional checks and balances, measured using the average of two V-Dem indices (the indices of judicial constraints on the executive and legislative constraints on the executive); (ii) the amount of power vested in the member of the executive appointed following the election, measured using several V-Dem indices (see Appendix A.4.2 for details);¹⁹ and (iii) exposure to globalization (or integration in global markets), which we quantify using trade intensity (imports and exports divided by GDP). For each of these dimensions, we consider the value of the variable in the year before each election, compute the median among close elections (i.e., elections for which the running variable is under 15 percentage points in absolute value), split the sample between elections above and below the median, and estimate equation (1) separately in each subsample.

Table 4 reports the corresponding results. While, again, we cannot reject that effects across subsamples are identical, the takeaways from this analysis are intuitive: the positive effects of turnovers tend to be larger in settings where there are fewer constraints on the executive. In particular, turnovers improve economic performance and the general index of performance relatively more when there are fewer checks and balances (column 3), when the leader nominated after the election holds more power (column 4), and when the country's economy is less globalized (column 7). These effects call for a more systematic examination of the effects of turnovers in the executive branch, which we turn to below.

4.6 Effects of Executive Turnovers

We now explore the impacts of turnovers in the executive branch. As discussed in Section 3.5, we instrument the occurrence of an executive turnover with a binary treatment variable indicating an electoral

¹⁹This measure can only be defined when the election leads to the designation of a member of the executive.

defeat of the party which led the executive branch before the election, and we estimate a fuzzy RDD. In order to interpret the corresponding estimates causally, we must assume that the defeat of the leading party only affects outcomes through the higher probability of an executive turnover.

Appendix Figure F.4 shows reduced form RD plots and Table 5 displays the first stage, second stage, and reduced form estimation results. The effects of executive turnovers are qualitatively similar to the effects of electoral turnovers in the main sample. They are slightly less precisely estimated since the exclusion of parliamentary elections which do not lead to the designation of a member of the executive decreases the sample size.

In parliamentary elections, a challenger party may win a plurality of seats without being able to gain executive power. Therefore, one would expect executive turnovers to have larger effects than electoral turnovers. Our results are generally consistent with this expectation: executive turnovers increase the index of economic performance and the general index of performance by 0.41 and 0.26 SD respectively, as compared to effect sizes of 0.34 and 0.22 SD for electoral turnovers. The effects of executive turnovers on trade and human development are also larger. By contrast, the effect on democracy is slightly smaller and, if anything, the effect on peace is negative (but non-significant), contrasting with the positive (and also non-significant) point estimate we found for electoral turnovers.

4.7 External Validity

Although the RDD allows us to estimate a causal effect of electoral turnovers, this effect is a local one: specifically, we measure the effect of turnovers for elections *exactly* at the cutoff. If these elections are substantially different from elections which are less close, our conclusions may have limited external validity. To alleviate these concerns, we implement two exercises. First, building on [Arezki et al. \(2020\)](#), we look at a subsample of “unlucky incumbents” who stand for reelection in the aftermath of a global oil shock. The intuition behind this exercise is akin to finding exogenous variation for the *occurrence* of a close election, in addition to the variation we exploit in the outcome of the election. Second, we follow [Angrist and Rokkanen \(2015\)](#) to estimate RD treatment effects in a larger window around the cutoff.

Global oil shocks. Close national elections may attract specific types of candidates. To the extent that incumbents who performed poorly are more likely to find themselves in a close reelection battle, incumbents may be negatively selected in the sample of close national elections. In turn, weak incumbents might incentivize high-quality challenger candidates to enter the race ([Gordon et al., 2007](#); [Ban et al., 2016](#)). By focusing on close national elections, we may therefore be comparing unobservably weak incumbents with unobservably strong challengers. As long as the quality of each candidate does not jump discontinuously at the cutoff, this does not affect the causal interpretation of our RD estimates. However, it could mean that electoral turnovers improve country performance only when elections are close. To probe this interpretation, it is informative to look at national elections that happened to be close not as a result of poor incumbent performance, but due to exogenous factors outside the incumbent’s control.

[Arezki et al. \(2020\)](#) show that incumbents are penalized by their electorate when elections take place in the aftermath of an oil shock. This could occur because voters over-attribute observable outcomes to leaders’ characteristics and fail to take into account the adverse circumstances that these unlucky incumbents might have faced (see also [Glaeser and Ponzetto, 2017](#)). The timing of global oil shocks therefore

provides exogenous variation that we can use to predict the occurrence of close national elections. While some incumbents struggle to get reelected because of their own poor performance, other unlucky incumbents face stiffer competition due to adverse oil shocks. In Appendix Table F.1 we estimate the effects of turnovers in elections conducted after a global oil shock. To measure oil shocks, we use the World Bank Commodity Price Data (The “Pink Sheet”). For each year, we compute the annual growth in the worldwide price of crude oil g_t . We then associate an election taking place at time t_E with the oil shock $s_{t_E} = (g_{t_E-1} + g_{t_E-2})/2$, and divide the sample between above and below-median s_{t_E} .

As expected, elections in the high oil shock sample have a running variable which is 3.4 percentage points higher than those in the low oil shock sample: the occurrence of an oil shock improves the performance of challengers on average. Yet, the positive effects of turnovers at the threshold hold in both subsamples. Electoral turnovers improve the general index of country performance by 0.20 SD and 0.28 SD in the high and the low oil shock subsamples, respectively. Both effects are similar to the baseline estimate (0.22 SD) and statistically significant. Turnovers also improve economic performance in both subsamples, by 0.22 and 0.41 SD respectively. In sum, the incumbents who are closely reelected after a global oil shock also tend to perform worse than counterfactual challengers. Thus, the positive effects of turnovers do not seem driven by differential selection of incumbents and challengers in close national elections. These results suggest that the effects we find at the threshold hold some validity for non-close elections. We now use a complementary exercise to explore this claim directly.

Estimating effects away from the cutoff. Table 6 and Appendix Figures F.6 and F.7 report results from the procedure of Angrist and Rokkanen (2015). This procedure relies on a testable conditional independence assumption (CIA): in a window around the cutoff, potential outcomes are assumed to be mean-independent of the running variable conditional on a set of controls. We focus on the [-15pp,+15pp] window, which encompasses about 40% of elections in our sample, and more than half of elections in democracies. In Appendix Figure F.6, we test the CIA hypothesis. We fail to reject its validity for the general index and all its components except the economic performance index. We then construct two CIA-based estimators: the first is a linear reweighting estimator discussed by Kline (2011), and the second is a version of the Hirano et al. (2003) propensity score estimator. Table 6 reports the corresponding estimates. We find treatment effects consistent with our headline results, although smaller in magnitude. On average, elections won by the challenger by 15 percentage points at most increase the general index by 0.11 SD. These results indicate that the effects of electoral turnovers on country performance are not limited to elections at the threshold. The effects may be particularly important for close elections, but we fail to reject equality of the Calonico et al. (2014) and CIA-based estimates for all but one outcome.

5 Mechanisms

We now explore the mechanisms that could explain the positive effect of electoral and executive turnovers. In this discussion, we mainly follow the predictions from the literatures on political representation and political agency. We first ask whether the higher performance of elected challengers comes from differences in the characteristics of candidates and their parties (Section 5.1) or from differences in the policies they implement in one broad area of economic policy: the level of government intervention

in the economy (Section 5.2). Then, we estimate effects of turnovers on a standard measure of politician performance: corruption, measured from indices of perceived corruption from various sources (Section 5.3). We highlight several channels to explain this set of results. We conclude by discussing alternative mechanisms which we deem unlikely to explain our main results (Section 5.4).

5.1 Candidate and Party Characteristics

Recent studies show the importance of national leaders for country-level outcomes throughout history (Dube and Harish, 2020; Ottinger and Voigtländer, 2021; Peveri, 2021). The insights from this literature are broadly in line with citizen-candidate models, which predict that electing leaders with certain characteristics could affect the quality and the type of policies implemented at the country level (Osborne and Slivinski, 1996; Besley and Coate, 1997) and, in turn, impact country performance.

This mechanism might explain our results if two conditions are satisfied. First, challenger candidates or parties should have systematically different characteristics than incumbents. Second, these characteristics should be conducive to better performance. For instance, electoral turnovers might systematically correlate with the electoral victory of more left-wing national leaders if challenger candidates or parties are more left-wing than incumbent candidates on average. We would then estimate a positive effect of turnovers if left-wing policies improve country performance. Accordingly, exploring this representation mechanism requires implementing two series of tests.

First, we investigate whether electoral turnovers coincide with the victory of candidates with specific characteristics. In Figure 8, we test this hypothesis for one demographic characteristic of leaders (age) and three ideological characteristics of parties measured in V-Dem, namely the parties' position in terms of the left-right divide, populism, and illiberalism.²⁰ Here, we estimate equation (1) using as our dependent variable the age, the left-right ideology, the populism score, and the illiberalism score of the winning candidate. We report the RD point estimate at the bottom of each graph. Elected challengers tend to be younger (by 2.2 years), more to the right (by 0.02 SD), more populist (by 0.26 SD), and less illiberal (by 0.18 SD) than reelected incumbents, but none of these effects is statistically significant.²¹

Second, we ask whether electing a leader with different characteristics affects country-level outcomes. Note that even if we found this to be the case, this would not suffice to explain our main results since turnovers do not systematically lead to the election of challengers of a certain type. However, the small (and non-significant) differences in Figure 8 could still matter. Furthermore, measuring the effect of electing a leader with certain characteristics is of independent interest. To do so, we restrict the sample to elections where we observe either the age of the top-two candidates or the ideology of the top-two parties. We then estimate equation (2) to measure the effect of electing a younger candidate, or a more left-wing, more populist, or more illiberal party.²² These effects are shown in Table 7.

Overall, we find little evidence that electing a candidate with these characteristics affects country per-

²⁰To estimate the effect on leaders' age, we restrict the sample to presidential elections and parliamentary elections that lead to the designation of a member of the executive.

²¹In addition to age, we note that the positive effects of turnovers are unlikely to be driven by changes in the gender of national leaders. Indeed, there are only 133 electoral races where exactly one female candidate is among the top two candidates in our main sample, and our results are robust to dropping these elections.

²²In Appendix Figure D.6, we verify the absence of manipulation of the corresponding running variable, constructed as the margin of victory of the youngest candidate, the most left-wing party, the most populist party, and the most illiberal party.

formance. Electing the youngest candidate leads to a -0.04 SD decrease in country performance, while left-wing victories have a -0.02 SD effect on performance, both of which are non-significant. Victories of the left seem to increase unemployment (by 0.20 SD), but this effect is imprecisely estimated. Electoral victories of populist parties have a negative effect on country performance (-0.07 SD). However, this effect is mainly driven by variation in the democracy index—the impacts on economic and trade outcomes are small in magnitude and non-significant. Finally, electoral wins for illiberal parties have a large negative effect on GDP growth (0.35 SD). However, we are unable to detect a significant effect on the other outcomes, including the general index of performance. We also obtain non-significant results when we restrict the sample to elections where the age difference between the top two candidates is large (over 10 years) or to elections where the difference between the scores of the top-two parties is larger than one standard deviation of the score (Appendix Table F.2), and when we use binary classifications of parties' ideologies as left vs. right, populist vs. non-populist, and liberal vs. illiberal instead of continuous scores. Appendix A.3.2 provides additional details about this classification, and Appendix Table F.3 shows the corresponding regression estimates.²³

We interpret these results with much caution. The sample size in these regressions is relatively small, and the analysis of ideological differences entirely relies on V-Dem's classification of party ideologies across all national elections held worldwide since 1945. The left-right, populism, and illiberalism scores are missing for many parties, and rigorously comparing these ideologies when they are non-missing may be too demanding a task. Nonetheless, it is striking that these alternative analyses deliver mostly null and few consistent results, echoing the non-significant results obtained by Ferreira and Gyourko (2009) and Dynes and Holbein (2020) for U.S. mayoral and state elections, but contrasting with the substantial effects found by Pettersson-Lidbom (2008), Folke (2014) and Fiva et al. (2018) in local European elections.

5.2 Effects on Policy: Government Intervention in the Economy

Even if turnovers do not bring to power leaders with systematically different ideologies, challengers may still adopt different *policies* than incumbents would have in the counterfactual electoral outcome. This could occur if challengers differ from incumbents along unobservable characteristics (e.g., competence) or if pursuing better policies requires more effort, and incumbents and challengers exert different levels of effort. The policies adopted by challengers could in turn improve country performance.

To explore this possibility, we first ask whether electoral turnovers lead to more or less government intervention in the economy. We consider four measures of government intervention: government expenditure, tax revenue, national debt (all measured as a share of GDP), as well as a standardized index combining these three outcomes. We focus on these policy dimensions for several reasons. First, the data we collected allow us to consistently measure these outcomes. Second, government intervention is typically one of the key policy levers that elected challengers employ to improve economic performance upon their inauguration. Historically, issues related to taxation, public spending, and government deficits have been central in many national electoral campaigns; and newly elected country leaders

²³The lack of effects of candidate characteristics on our main outcomes could result from the fact that different types of candidates implement different policies, but these policies fail to affect country performance. However, as shown in Appendix Table F.4, we generally obtain non-significant effects as well when estimating the impact of leaders' age and ideology on the policy outcomes we explore in Section 5.2.

are often keen to adopt landmark economic policy legislation early in their tenure.²⁴

Figure 9, panel a, shows that the effects of turnovers on all four measures of government intervention are small and non-significant. Not only is there no discontinuous jump (in either direction) of government intervention at the cutoff, but the levels of intervention (relative to the year before each election) are also similar in magnitude on both sides of the discontinuity, away from the cutoff. Appendix Table F.5 reports effects on other types of economic policies, each measured in a smaller subset of elections: a measure of central bank independence from Garriga (2016); government expenditure composition (namely the share of government expenditure and the share of GDP dedicated to health, education and military expenditure) from Ortiz-Ospina (2016); taxation composition (the share of taxes coming from consumption, income, and trade) from the World Bank; and measures of financial liberalization from Abiad et al. (2010). While some estimates are statistically significant, as one would expect, we do not find robust evidence that electoral turnovers systematically move policies in one direction or another. For example, there is some suggestive evidence that turnovers increase financial liberalization (by 0.29 SD) and central bank independence (by 0.30 SD). But the sample size for these regressions is generally small, and the standard errors around each point estimate are large.

Importantly, this evidence alone does not completely rule out the possibility that challengers enact policies which are different, and potentially better, than the policies chosen by a counterfactual incumbent who won reelection. Indeed, suppose that challengers are more likely to implement policies tailored to the country's needs and that these policies depend on the prevailing economic context, whereas incumbents prefer the status quo. For instance, challengers might increase government intervention (relative to incumbents) in times of economic downturns and reduce it when the economy is overheating. Such heterogeneous effects would be consistent with the lack of impact on the average direction of policies, which we observe in Figure 9.

Such mechanisms would be captured by the effect of turnovers on *non-directional* policy outcomes. Accordingly, we compute the absolute value of the difference between the post-election average and the pre-election average of each measure of government intervention, and we estimate again equation (1) using the transformed outcomes as our dependent variables. Interestingly, we find positive effects of turnovers on changes in government expenditure, national debt, and tax revenue. The two latter effects are significant at the 10% level (Figure 9, panel b).²⁵ The effect on the overall index of change in government intervention, of 0.23 SD, is also significant at 10%. This suggests that non-directional differences in the policies implemented by incumbents and challengers might contribute to the positive effect of turnovers. We probe the mechanisms underlying these policy changes in the next section.

5.3 Effects on Governance and Corruption

The evidence presented above suggests that differences in candidate characteristics cannot entirely explain the positive effect of turnovers on country performance. One implicit assumption behind these tests was that national elections serve as a mechanism for citizens to select candidates (or policies) on a

²⁴In the U.S., Franklin D. Roosevelt passed most of the New Deal legislation within his first 100 days in office, while major economic stimulus bills were adopted in the early days of several recent presidencies.

²⁵In Appendix Table F.6, we show additional results on the absolute value of the difference of the same set of policy variables examined in Appendix Table F.5. Most estimates (21 out of 25) in this table are positive, and five are statistically significant.

spectrum—a *representation* mechanism. However, it may also be that turnovers improve country performance because newly elected challengers are more *accountable* to their voters than reelected incumbents. If this were the case, we should observe that standard proxies for politician performance, such as corruption (e.g., Besley, 2007; Ferraz and Finan, 2011), also vary as a result of turnovers. While there are no verifiable measures of government corruption (e.g., audit reports) available at the country level, V-Dem and other sources provide several expert-coded measures of perceived corruption and accountability.

We measure the effects of an electoral defeat of the incumbent on such measures, namely an index of government accountability²⁶ and indices of executive corruption and public sector corruption from V-Dem, the World Bank’s index on the control of corruption, and a standardized index aggregating the four previous measures. Figure 10 shows the corresponding RD plots and point estimates. Table 8 examines the heterogeneity in these effects across different subsamples. Finally, Appendix Table F.7 shows results for a broader set of variables collected from V-Dem and the World Bank.²⁷

Strikingly, across many of these outcomes, turnovers improve governance and reduce perceived corruption. In Figure 10, these effects are large in magnitude (ranging from 0.16 SD for public sector corruption to 0.49 SD for the control of corruption) and they are generally significant at the 1% or 5% level. In Table 8, effects are larger for presidential elections, elections conducted outside OECD countries, and elections held in regimes where the leader nominated after the election holds more power. This suggests that turnovers are especially conducive to good governance in countries with fewer checks and balances on the executive, where reelected incumbents may otherwise use their power to extract rents. In Appendix Table F.7, among 17 outcomes signed such that higher values indicate more accountability/less corruption, only two are negatively affected by turnovers (and both estimates are small and non-significant). The remaining estimates are all larger than 0.10 SD, and eight are statistically significant. Overall, these results provide consistent evidence that government accountability increases as a result of electoral turnovers. This is not restricted to indicators provided by V-Dem: for example, turnovers have a 0.38 SD effect on the World Bank’s measure of the rule of law.

As with measures of democracy explored in Section 4, one might fear that the coding of these indicators is endogenous to the occurrence of a turnover. Experts might infer that corruption decreased from the fact that the incumbent was defeated. In that case, corruption indices would drop sharply during the year of the turnover, or shortly thereafter. To test whether this is the case, we estimate dynamic effects of electoral turnovers on corruption, using specifications in the form of equation (3). Instead, we find that the effects of a turnover on corruption are initially small and increase over time (Appendix Figure F.5).

Overall, the effects of turnovers on governance and corruption display a similar pattern to what we observed when looking at country performance: namely, they increase dynamically over time, and they appear stronger in countries with fewer constraints on the executive. This provides suggestive evidence that improvements in governance and corruption might contribute to the overall improvement in coun-

²⁶The accountability index of V-Dem aggregates measures of vertical, diagonal, and horizontal accountability. Vertical accountability captures the extent to which citizens can hold the government accountable. Diagonal accountability covers the mechanisms that citizens, civil society, and the media can use to hold the government accountable. Finally, horizontal accountability captures the power of state institutions to oversee the government. The effects of electoral turnovers are strongest for horizontal accountability, followed by diagonal accountability and vertical accountability (Appendix Table F.7).

²⁷Before 2002, the World Bank governance indicators, including the control of corruption index and indicators shown in Appendix Tables E.16 and F.7, were only measured every other year. Appendix Table F.8 checks the robustness of our effects on these indicators when we restrict the sample to the period post 2002.

try performance we observe. A large literature has documented the relationship between corruption and economic performance (Mauro, 1995) through theft of government resources (Olken, 2006; Ferraz et al., 2012), effects on firms (Svensson, 2003; Sequeira and Djankov, 2014), misallocation of capital (Khwaja and Mian, 2005), and demand for regulation (Di Tella and MacCulloch, 2007). In our context, a plausible channel might involve corruption inside the government and the bureaucracy trickling down to other sectors of the economy, generating adverse effects on overall country performance.

Term limits. Why do electoral turnovers improve accountability and reduce perceived corruption? The related literature highlights a simple mechanism: in many political systems, individual incumbents in their late (e.g., second or third) terms often face a term limit and cannot run for reelection. In the absence of reelection incentives, incumbents might exert less effort and perform more poorly (Ferraz and Finan, 2011; Fourinaies and Hall, 2021). This could offset the potential negative effects of turnovers through loss of experience, personnel instability, and policy uncertainty, and it would adversely affect country performance along the dimensions we study.

However, Table 3 already provided some evidence inconsistent with this mechanism. Electoral turnovers also improve country performance under parliamentary systems, where individual leaders (as well as parties) generally do not face a term limit.²⁸ In parliamentary regimes, turnovers improve economic performance by 0.22 SD (significant at the 10% level), trade intensity by 0.22 SD, and the general index of performance by 0.17 SD, an effect significant at the 10% level. These effects cannot be easily explained by differences in reelection incentives coming from term limits.

Nonetheless, term limits could play a role in the context of presidential elections, where the effect of turnovers on country performance appears slightly larger. To explore this, we rely on data from the Comparative Constitutions Project (CCP) (Elkins et al., 2021) to identify regimes with presidential term limits. In these regimes, we determine whether the incumbent and challenger would face a term limit, should they win. The CCP covers 59.3% of our presidential elections. Focusing on this subsample, we find that term limits are not specified in the country's constitution in 12.3% of elections, and that they are explicitly indicated as nonexistent in 4.6% of elections. Furthermore, in 44.9% of elections, term limits exist but they are not differentially binding for the incumbent and the challenger.²⁹ In total, term limits exist and are differentially binding for the incumbent and the challenger in less than half of the presidential elections covered by the CCP.

Table 4, column 8 reports the effects on our main outcomes in a subsample including parliamentary elections as well as presidential elections in which there is no differentially binding term limit. Electoral turnovers improve the general index of country performance by 0.16 SD in this subsample, which is similar to the point estimate in the full sample (column 1). The effects on the different components are of similar magnitude as in the full sample. Therefore, we conclude that presidential term limits are unlikely to be driving our results.³⁰

²⁸In our data, the only specified term limits for the head of government under parliamentary systems are in Andorra, Benin (in 1964 only), Serbia (in 1990 and 1991 only), and Thailand (between 2008 and 2013).

²⁹This occurs because: presidents can only serve one term (11.7%), the candidate representing the incumbency is not the incumbent themselves (30.2%), the challenger had already been in power in the past (1.5%), or the candidate representing the incumbency had already been in power in the past but the term limit is of three terms or more (1.5%).

³⁰The small number of elections with a differentially binding term limit unfortunately means that we do not have sufficient sample size to estimate the effect of electoral turnovers in these elections.

Incumbent career concerns. Electoral turnovers could still improve accountability through other related mechanisms, even in the absence of *de jure* term limits. Intuitively, many of these mechanisms relate to Holmström (1999)’s idea of career concerns in labor markets, transposed to electoral settings. In regimes that hold regular elections, incumbent leaders and parties may want to build reputation by exerting more effort early in their tenure, and use their later terms in office to extract rents. In the late terms of a given leader or party, the incentives to not misbehave are diminished because voters have already formed precise beliefs about the incumbent’s type, and additional new information is unlikely to change these beliefs substantially. In a model featuring both moral hazard and learning by voters, Ashworth (2005) shows that an incumbent’s action (i.e., the resources they allocate to constituency service) is decreasing over their tenure and over time. Our posited mechanism follows the same intuition.

Several channels appear related to this idea. Since these channels are observationally equivalent, we cannot decisively adjudicate between them, but we hypothesize that a combination of these mechanisms explains the positive effects of turnovers. One channel involves learning in corruption by incumbent leaders or parties—incumbents learn over time how to extract rents, holding checks and balances constant. If this occurs, we should observe higher corruption after the reelection of an incumbent. Another channel might involve delayed corruption or “golden goose” effects (as in Niehaus and Sukhtankar, 2013, who look at non-elected bureaucrats), leading national leaders to refrain from misbehavior early in their tenure so that they can win reelection and extract more rents in their later terms. These effects could be magnified if close elections signal to incumbents that their days as national leaders are numbered, providing additional incentives to extract more rents, a mechanism akin to a “*de facto*” term limit. Yet another channel might involve political parties struggling to hold long-serving incumbents accountable, e.g., because such incumbents hold greater sway over the choice of their political successor. Finally, incumbents might simply be experiencing government fatigue—an erosion of their motivation and power simply due to the effect of time. Giving an impulse to country reforms and performance is more difficult for individuals and parties who have held power for a long time.

5.4 Alternative Mechanisms

Several other complementary mechanisms could mediate the effects of turnovers on performance. First, turnovers might improve country-level outcomes by fostering a democratization episode, or a change in the nature of the political regime in a direction that tends to promote economic performance. Several recent revolutions occurred in the immediate aftermath of a close national election—e.g., the 2003 Rose Revolution in Georgia, the 2004 Orange Revolution in Ukraine, or the 2005 Tulip Revolution in Kyrgyzstan. However, these regime change episodes are unlikely to explain our main results. Indeed, turnovers do not lead to a discontinuous jump in the likelihood of a democratization episode (or a democratic reversal) in the aftermath of the election—we show this result in Appendix Figure F.8. In addition, while some elections in our sample coincide with a regime change, our results are robust to excluding these elections from the analysis. Overall, 20% of national elections are concomitant with a regime change taking place in the years $t \in [-1, 3]$ around each election. Appendix Table E.3 shows that the impact of electoral turnovers on the general index of country performance remains nearly identical (0.23 SD) when these elections are removed from the sample.

Second, electoral transitions could directly impact outcomes through their effect on personnel

changes and bureaucratic quality. However, two separate studies by Akhtari et al. (2022) and Toral (2021) find opposite effects in the context of mayoral elections in Brazil, where personnel turnover is detrimental to municipal performance. Unfortunately, there are no available data on bureaucratic turnover across countries and throughout our study period. But to the extent that personnel turnover negatively impacts bureaucratic performance, we should expect this channel to work against our main findings.

Third, turnovers could affect the level of alignment between the central and local governments, which in turn reduces policy frictions (Brollo and Nannicini, 2012). However, unless electoral turnovers at the country level systematically follow turnovers at lower levels of government, the turnovers we study should not be systematically correlated with an increase in political alignment.

Finally, turnovers could affect performance by impacting political stability and trust. A large literature (e.g., Algan and Cahuc, 2010) studies the economic benefits of trust, and Nunn et al. (2018) show that recessions are associated with political turnover in countries with lower levels of generalized trust. The fact that we estimate a positive effect of turnovers implies that deteriorating trust is likely not playing a major role in our results.

6 Conclusion

Since the end of World War II, most countries have held regular presidential or parliamentary elections to determine the composition of their government. A key function associated with these elections is to allow citizens to ask for continuity or change in their country's leadership: short of staging a revolution, dismissing incumbents in the ballot box is the main way in which citizens can chart a new course for their country. In order to evaluate the merits of electoral democracy, understanding how the outcome of national elections affects country-level performance—including, but not limited to economic performance—is of major importance. To a large extent, the benefits of electoral transitions are commensurate with their ability to deliver improvements in citizens' welfare.

While other studies have focused on the benefits of democracy, which gives citizens the *opportunity* to remove incumbents from office, we focus on a different question: what happens when citizens seize this opportunity. To answer this question, we build a novel database including the universe of national elections held worldwide since 1945 and combine it with data on economic performance, trade intensity, human development, peace, and the quality of democracy. This large dataset allows us to implement a close-elections RDD across countries, giving our analysis a high degree of internal and external validity. This represents an important departure from existing approaches in the related literature in economics and political science, which has typically studied the consequences of electoral outcomes across local elections within a single country.

While this literature emphasizes the importance of political representation in subnational elections, we do not find significant effects of the age and ideology of leaders on our general index of country performance. We note that these characteristics are only observed for a subset of elections. Still, our analysis suggests that mechanisms of agency and accountability play an even greater role for policy outcomes and performance at the country level. The reason why partisanship effects measured in local elections in some Western democracies do not hold in our data may well be that other dimensions of representation matter more in the rest of the world, particularly in non-OECD countries where our effects

are strongest. But regardless of the exact reason, this difference shows that one should be cautious when extrapolating results based on within-country variation, and it underlines the need for sound evidence on the effects of election outcomes at the national level.

Overall, we find that voting for change matters: electoral turnovers deliver improvements in country-level performance along many dimensions. This finding is both novel and surprising, since there are many reasons to expect that turnovers could be detrimental to economic performance. We also observe large effects on indices of corruption and on policy change. We hypothesize that the main force driving the positive effects of turnovers is the role they play in terms of renewing a country's political leadership, and in allowing new leaders facing stronger reputation concerns to rise to power. Over the long term, this finding provides reasons to be cautiously optimistic about the prospects of electoral democracy. In our analysis, turnovers are most beneficial when leaders face few constraints on their executive power. This suggests, in turn, that regimes sliding into autocracy, in which such constraints are typically weak, have most to gain from allowing mechanisms of electoral transition.

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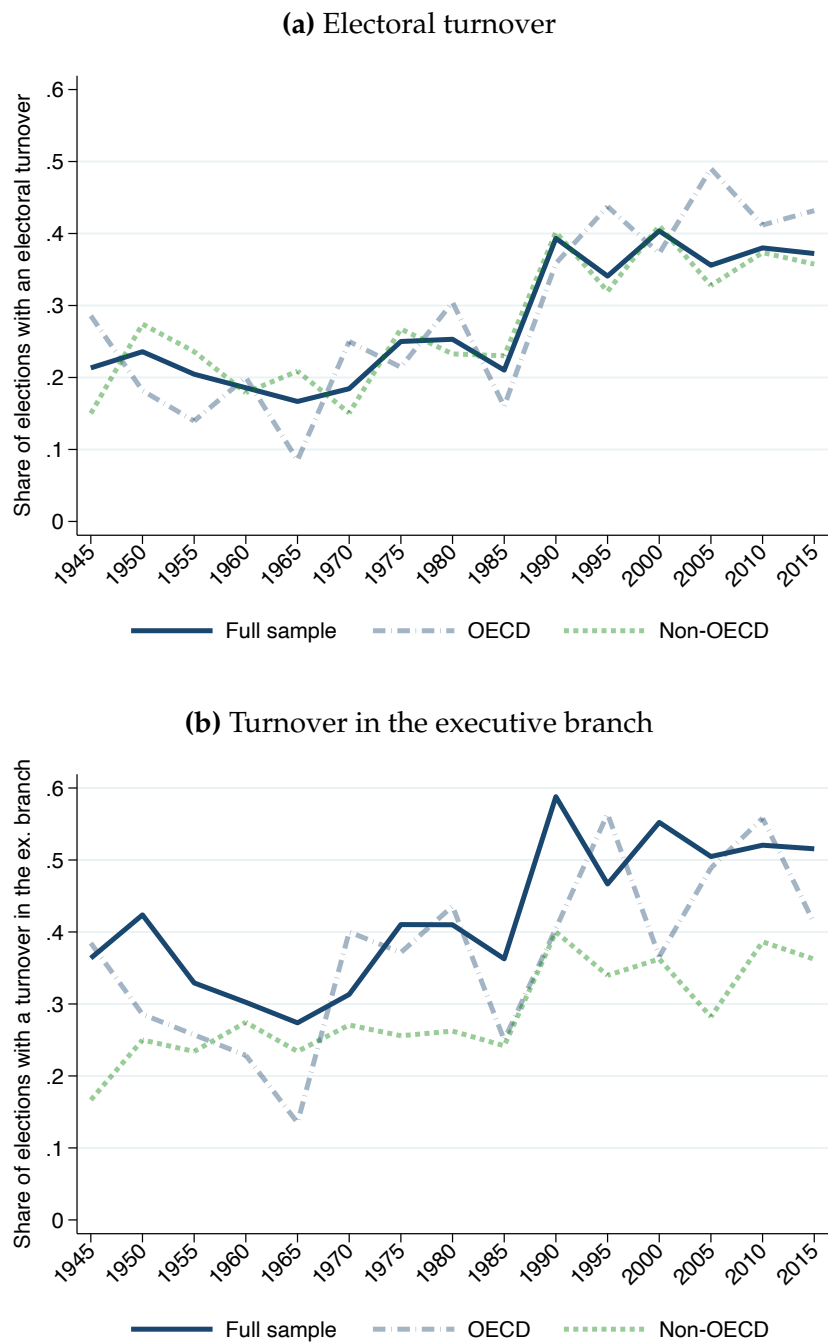
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Figures

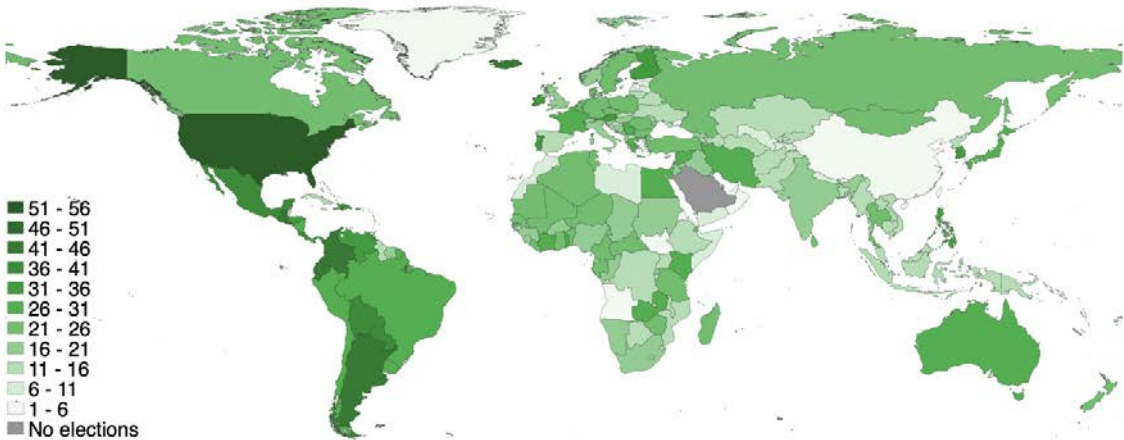
Figure 1: Share of elections with a turnover



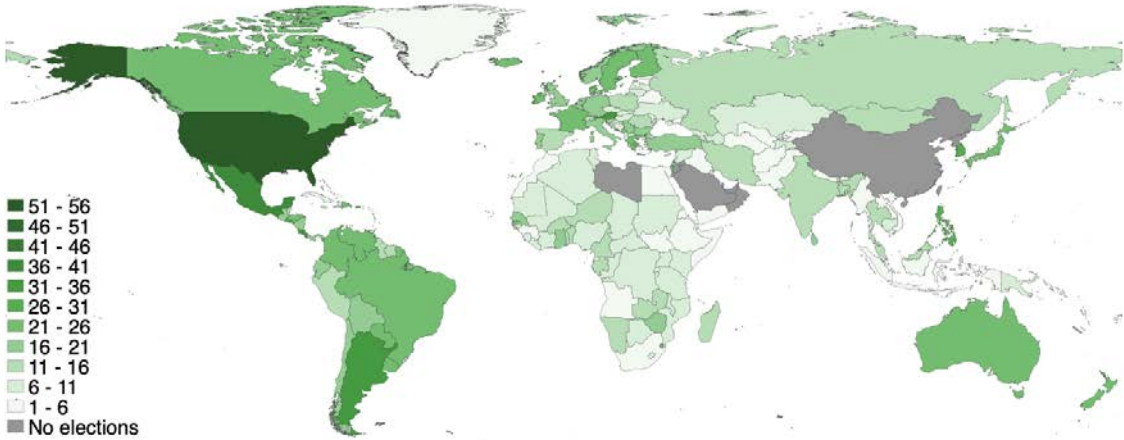
Notes: This figure plots the share of elections associated with a turnover for each half-decade since 1945. Panel (a) focuses on electoral turnovers and panel (b) on turnovers in the executive branch. We define electoral turnovers and executive turnovers in Section 3.1 and Section 3.5, respectively.

Figure 2: Sample description

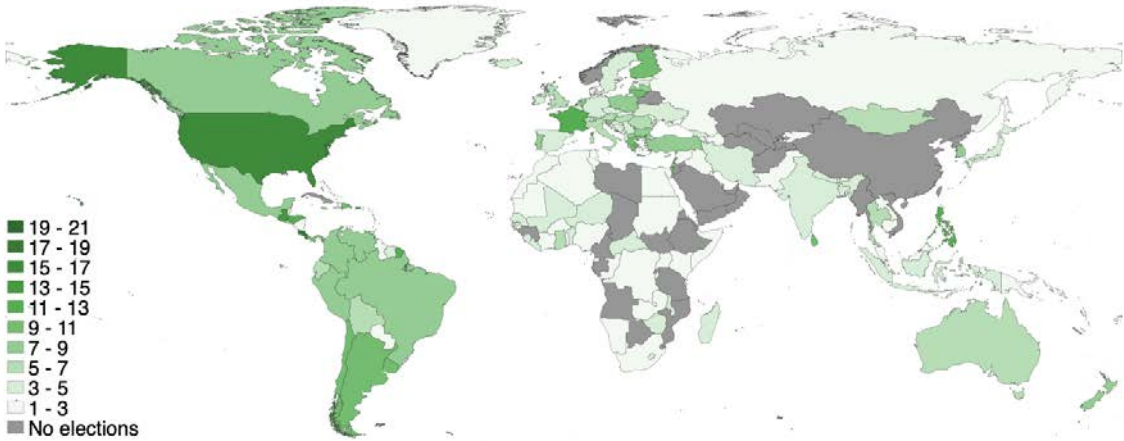
All elections



Elections in the main sample

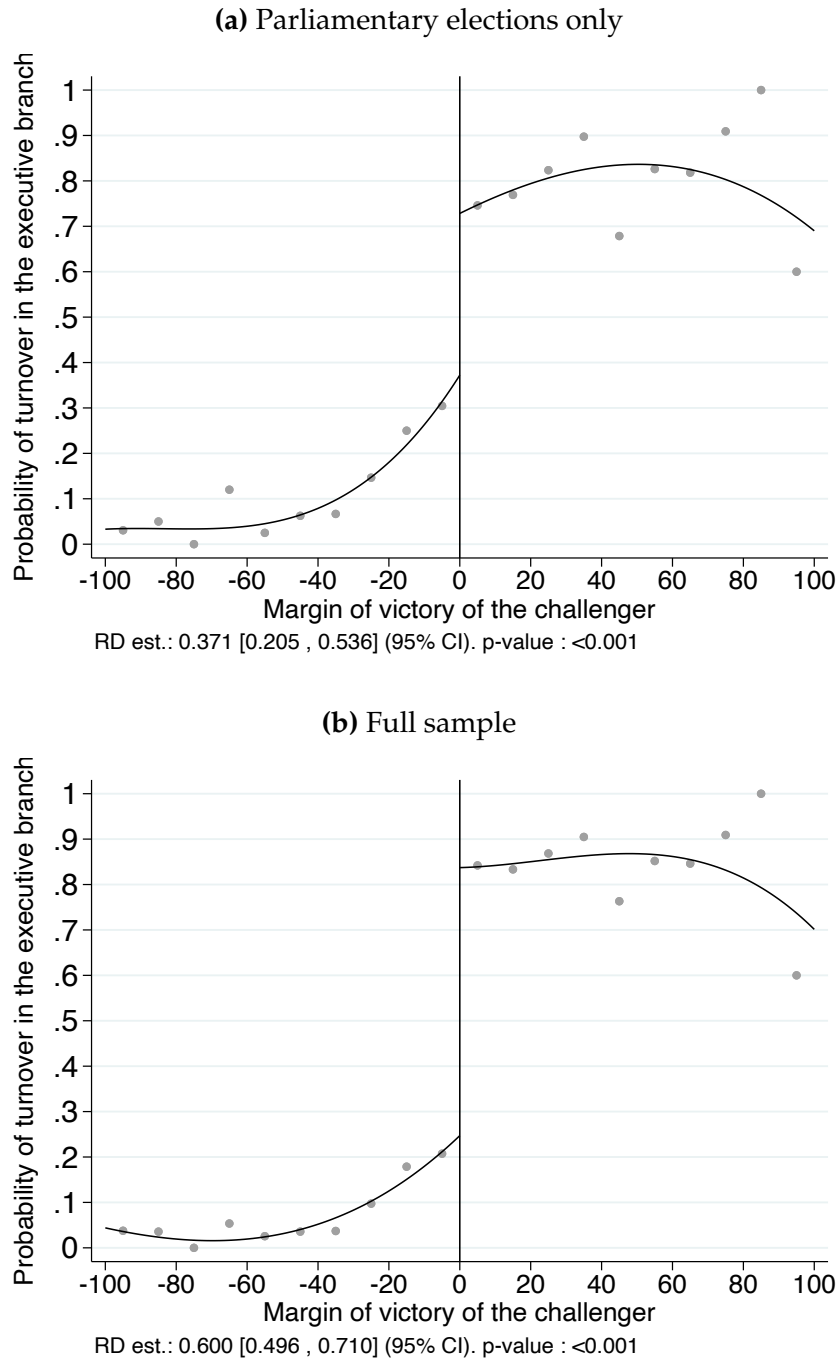


Elections with an electoral turnover



Notes: This figure shows the geographic distribution of all presidential and parliamentary elections since 1945, all elections included in our main analysis, and all elections with an electoral turnover (see Sections 3.1 and 3.2).

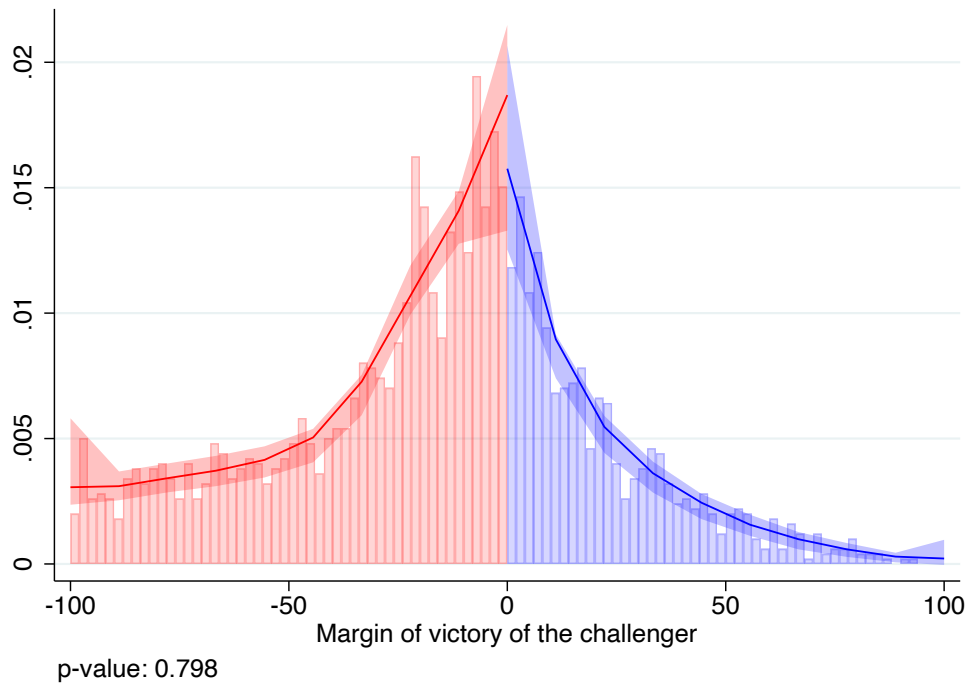
Figure 3: Effect of an electoral turnover on the probability of turnover in the executive branch



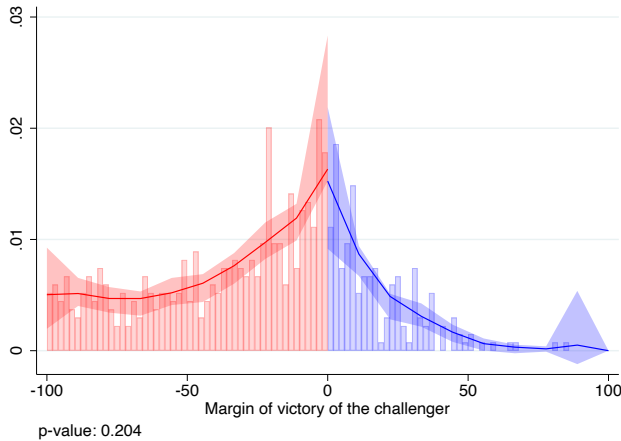
Notes: This figure plots the probability of a turnover in the executive branch depending on the margin of victory of the challenger. Turnovers in the executive branch are defined in Section 3.5. We restrict the sample to elections leading to the designation of a member of the executive, with panel (a) being further restricted to the sample of parliamentary elections. Each grey dot represents the probability of a turnover in the executive branch in a 10pp bin and the lines represent a cubic fit on each side of the discontinuity. At the bottom of each graph, we report the non-parametric RD estimate from [Calonico et al. \(2014\)](#), with the robust 95% confidence interval in brackets, as well as the robust p-value associated with the robust confidence interval for γ in equation (1).

Figure 4: Density tests

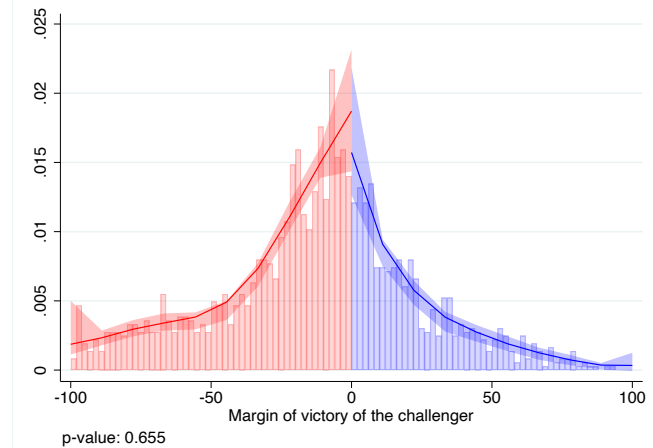
(a) Full sample



(b) Presidential elections

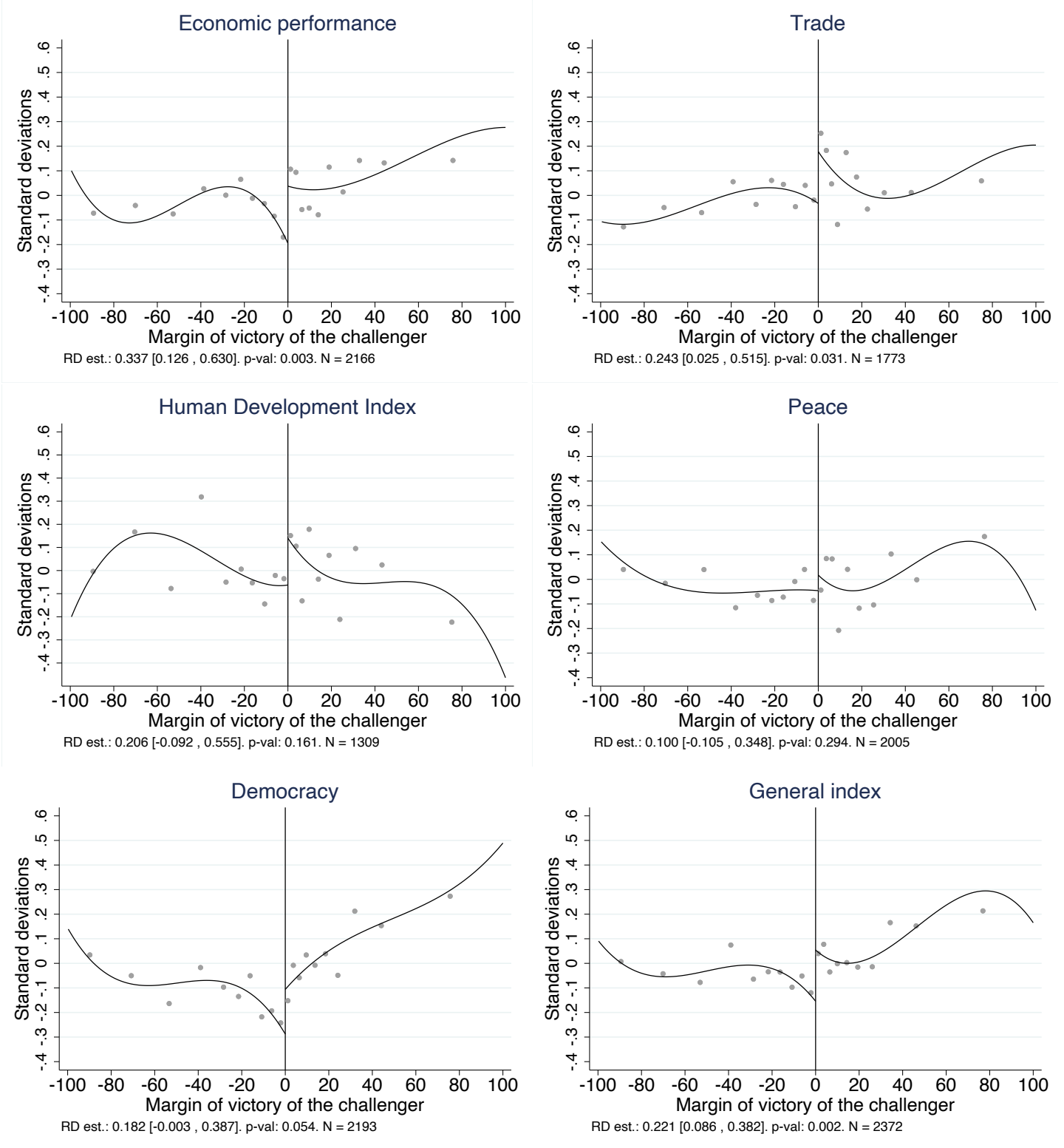


(c) Parliamentary elections



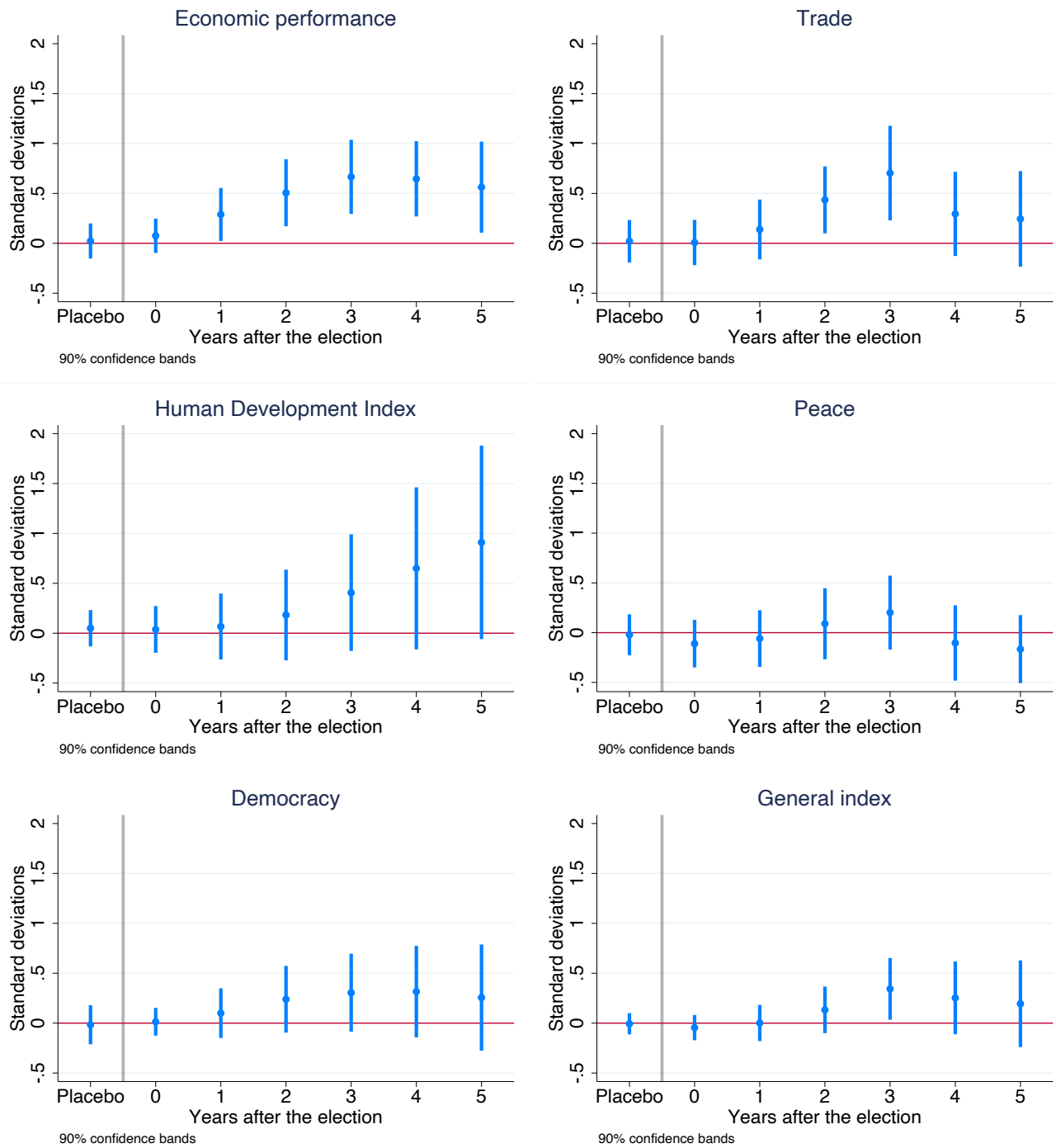
Notes: In this figure, we implement the density test from [Cattaneo et al. \(2018\)](#) using the margin of victory of the challenger as running variable. P-values for this test are reported below each graph, and we plot the density of the running variable on both sides of the cutoff. Panel (a) includes all elections in our sample, and panels (b) and (c) restrict the sample to presidential and parliamentary elections, respectively.

Figure 5: Effects of electoral turnovers on country performance



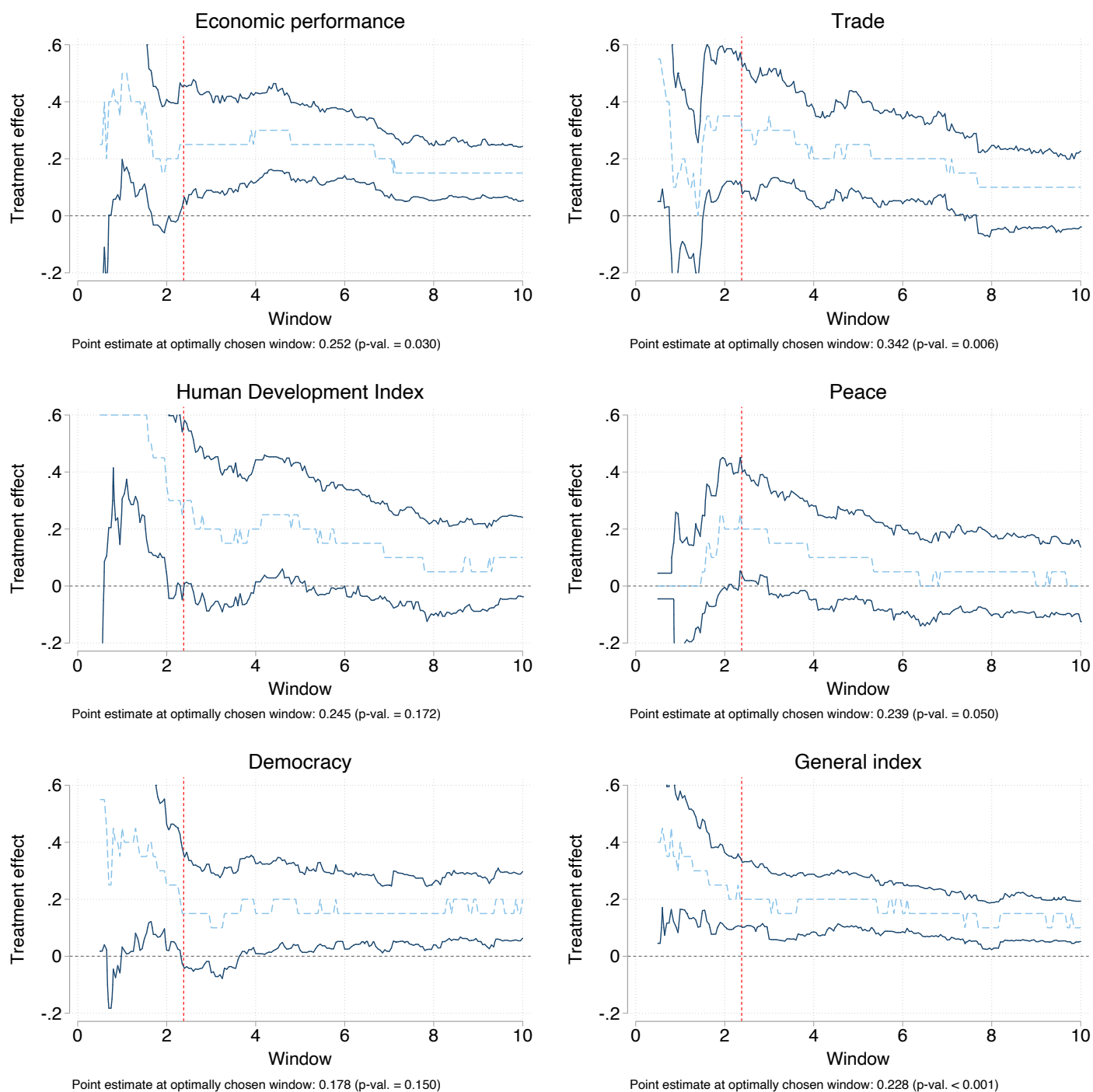
Notes: This figure reports RD plots corresponding to equation (1). The dependent variables are: a standardized index of economic performance (combining GDP growth, inflation, and unemployment), trade intensity, human development, peace, democracy, and a general index of performance combining all these components. The grey dots are binned sample means across quantiles of the running variable. See Section 3.3 for details on the construction of each outcome and data sources. At the bottom of each graph, we report the local linear regression estimate from [Calonico et al. \(2014\)](#), with the robust confidence interval in brackets, as well as the robust p-value associated with the robust confidence interval for γ in equation (1).

Figure 6: Dynamic effects of electoral turnovers on country performance



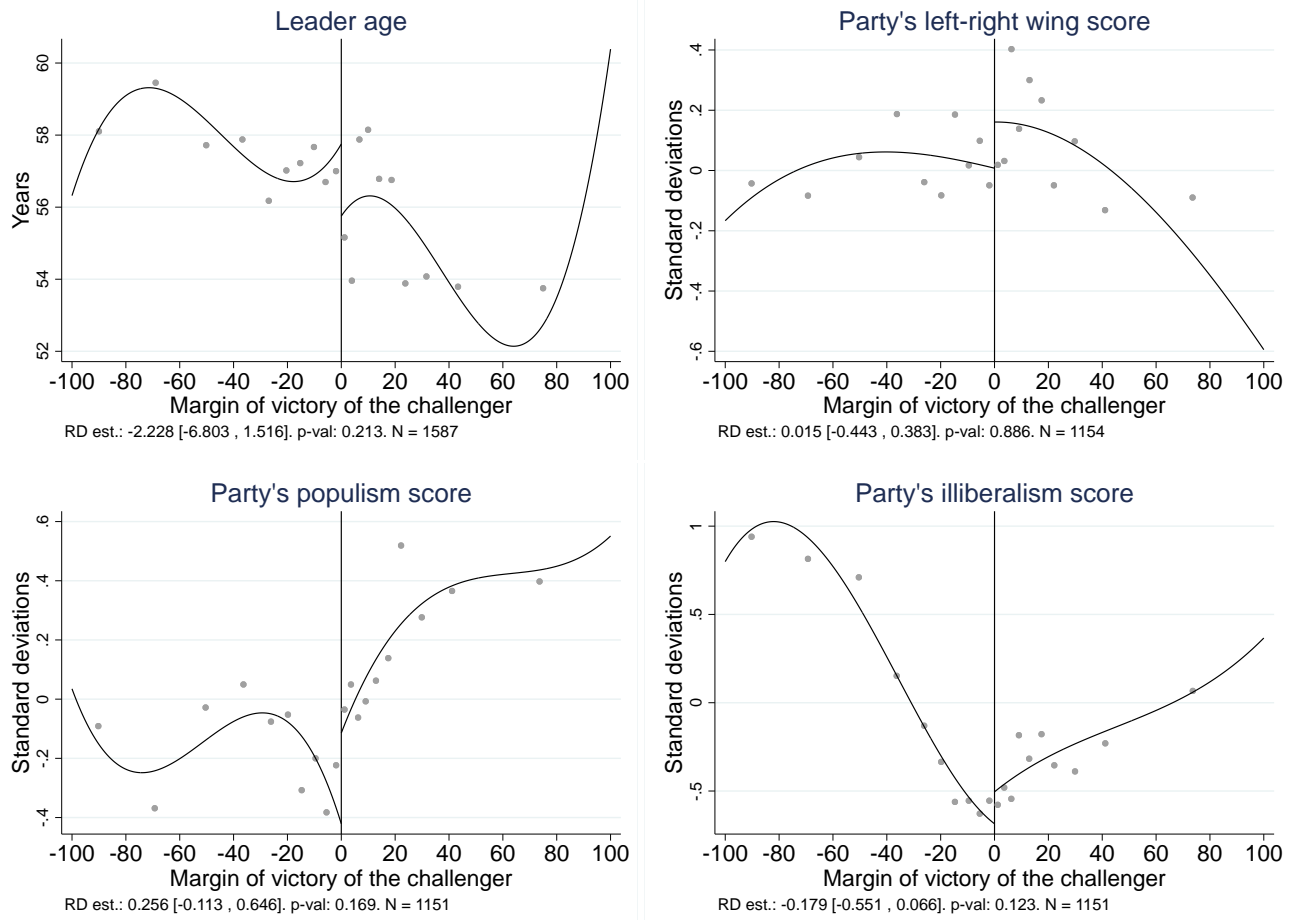
Notes: This figure reports point estimates and 90% robust confidence intervals for the γ_τ in equation (3), with $\tau \in \{-2, 0, 1, 2, 3, 4, 5\}$, for all our main outcomes. Placebo refers to the point estimate obtained for $\tau = -2$. We use the procedure of Calonico et al. (2014) for estimation, and all outcomes are measured in standard deviations.

Figure 7: Randomization inference results



Notes: This figure reports results obtained using the difference in means estimator suggested by Cattaneo et al. (2016). For different windows, the solid lines correspond to 90% confidence bands, and the dashed lines correspond to point estimates. The vertical line corresponds to the optimal window under which the local randomization assumption is expected to hold, selected using the procedure of Cattaneo et al. (2015). To estimate this optimal window, we used the following set of pre-election covariates: the level of our main outcome variables the year before the election, the value of the treatment variable at the previous election, and the value of the running variable at the previous election. We jointly test the local randomization hypothesis of all covariates using the Hotelling T^2 test of Cattaneo et al. (2016). Under each graph, we report the p-value of the randomization inference test at this optimal window.

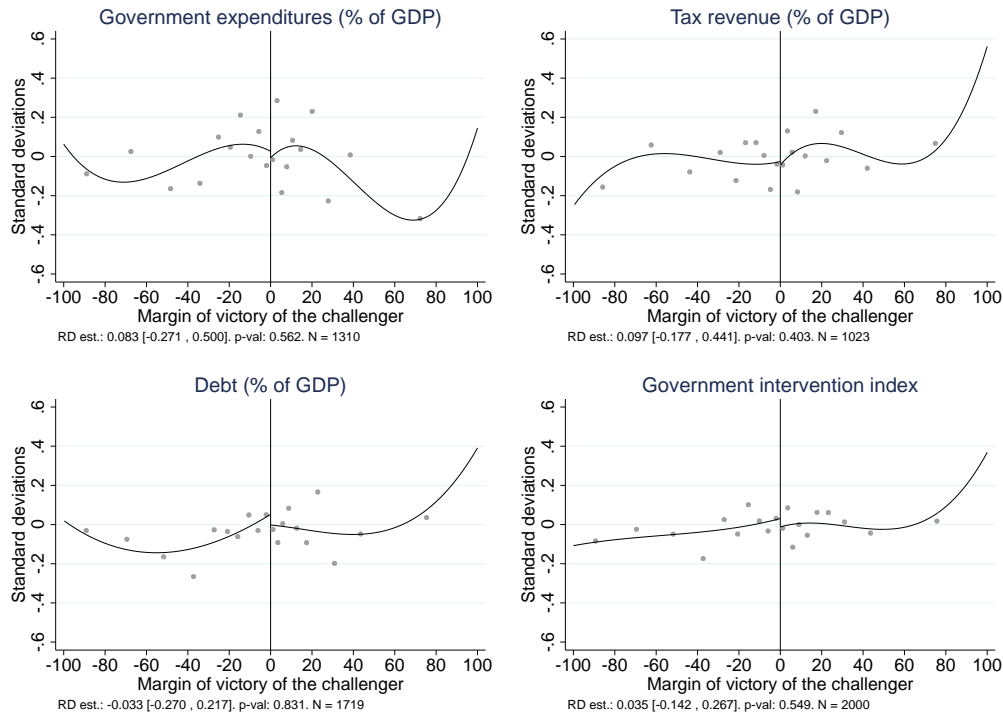
Figure 8: Effects of electoral turnovers on candidate characteristics



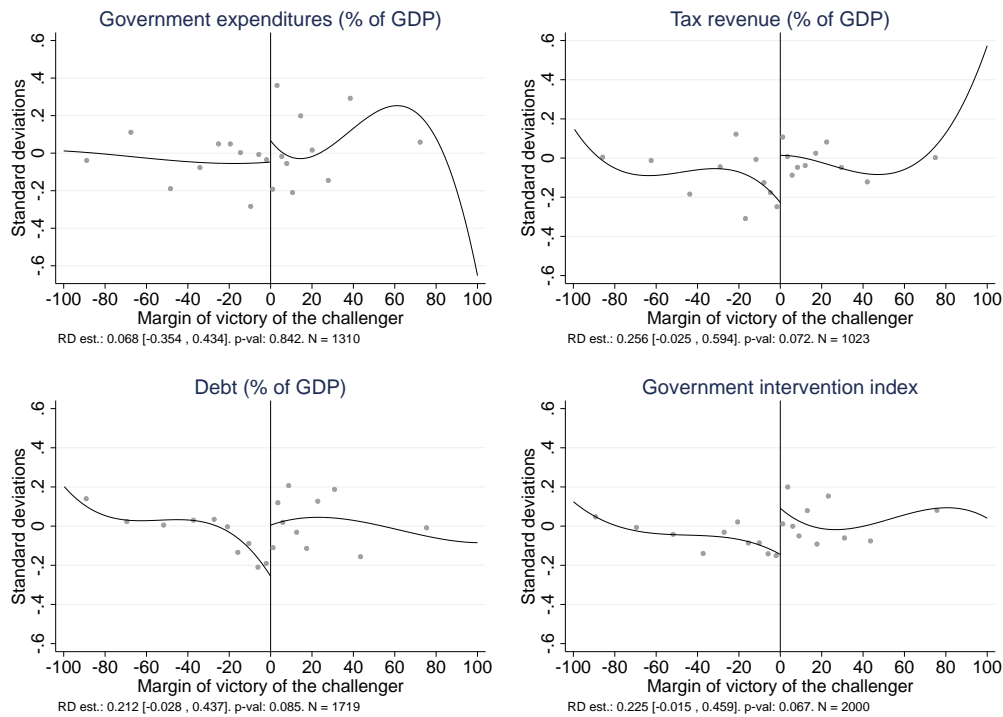
Notes: This figure reports RD plots corresponding to equation (1). The dependent variables are the age of the leader elected during the election as well as the left-wing score, the populism score, and the illiberalism score of the party in power after the election. For the leader's age, we restrict the sample to elections which lead to the nomination of a leader of the executive branch, and retrieve data from V-Dem. Ideology scores are retrieved from V-Parties. The grey dots are binned sample means across quantiles of the running variable. At the bottom of each graph, we report the local linear regression estimate from Calonico et al. (2014), with the robust confidence interval in brackets, as well as the p-value associated with the robust confidence interval for γ in equation (1).

Figure 9: Effects of electoral turnovers on government intervention

(a) Changes in levels

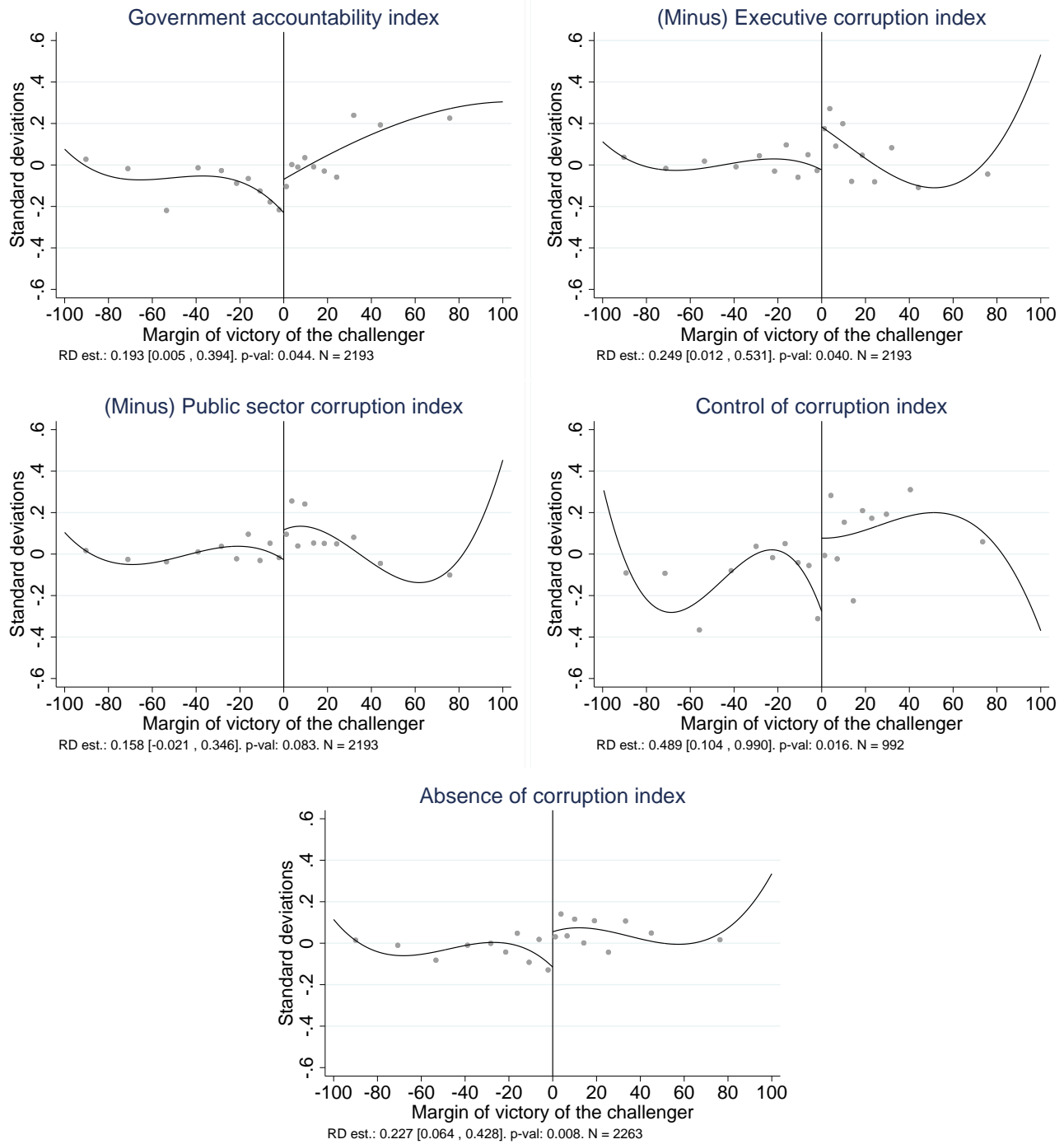


(b) Absolute value of changes



Notes: This figure reports RD plots corresponding to equation (1). The dependent variables are measures of government intervention in the economy: government expenditure (from Our World in Data), tax revenue (from the World Bank), and debt (from the IMF) – all measured as a share of GDP. We also report results for an index combining these three measures. Panel (a) looks at changes in the levels of these variables and panel (b) at the absolute value of these changes. The grey dots are binned sample means across quantiles of the running variable. At the bottom of each graph, we report the local linear regression estimate from [Calonico et al. \(2014\)](#), with the robust confidence interval in brackets, as well as the p-value associated with the robust confidence interval for γ in equation (1).

Figure 10: Effects of electoral turnovers on governance and corruption



Notes: This figure reports RD plots corresponding to equation (1). The dependent variables are indices of government accountability, executive corruption, public sector corruption, and the control of corruption. The government accountability, executive corruption, and public sector corruption indices are from V-Dem (see Section 5.3 for details). The executive corruption index measures the corruption of members of the executive and their agents while the public sector corruption index measures the corruption of public sector employees. Corruption is defined as bribery and the stealing, embezzlement, or misappropriation of public funds. The control of corruption index is one of the six Worldwide Governance Indicators of the World Bank. Finally, the absence of corruption index aggregates the four previous components using the method of Kling et al. (2007). The grey dots are binned sample means across quantiles of the running variable. At the bottom of each graph, we report the local linear regression estimate from Calonico et al. (2014), with the robust confidence interval in brackets, as well as the p-value associated with the robust confidence interval for γ in equation (1).

Tables

Table 1: Outcome variables

Category	Variable	More is...	Source	N	Coverage	Winsor.
Economic	GDP growth	Positive	Penn World Tables	2916	1951–2014	Yes
Economic	Inflation (CPI)	Negative	IMF	2783	1920–2020	Yes
Economic	Unemployment rate	Negative	ILO	1801	1991–2022	Yes
Trade	Trade intensity	Positive	World Bank	2656	1960–2020	Yes
Social	HDI	Positive	UNDP	1782	1990–2019	No
Conflict	In war	Negative	COW Project	3359	1816–2016	No
Democracy	Democracy index	Positive	V-Dem	3600	1789–2020	No

Notes: This table lists the variables which we use to measure country performance. N is the number of elections after 1945 for which we have available data.

Table 2: Effects of electoral turnovers on country performance

	(1) Econ. perf.	(2) GDP growth	(3) (Minus) Inflation	(4) (Minus) Unemp.	(5) Trade	(6) HDI	(7) Peace	(8) Democ.	(9) General index
El. turn.	0.337*** (0.129)	0.100 (0.163)	0.439*** (0.189)	0.318** (0.185)	0.243** (0.125)	0.206 (0.165)	0.100 (0.115)	0.182* (0.100)	0.221*** (0.076)
p-val.	[0.003]	[0.503]	[0.009]	[0.038]	[0.031]	[0.161]	[0.294]	[0.054]	[0.002]
N	2166	1816	1888	1335	1773	1309	2005	2193	2372
N eff.	772	857	719	560	775	581	867	1196	898
Band.	13.9	20.1	14.5	17.3	17.6	18.5	17.9	23.5	15.3

Notes: This table reports RD estimates corresponding to equation (1) for our measures of country performance, expressed in standard deviation terms. We report local linear regression estimates from [Calonico et al. \(2014\)](#), robust standard errors in parentheses, the p-value associated with the robust confidence interval in brackets, the number of observations in the sample and in the bandwidth, and the MSERD-optimal bandwidth. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Heterogeneity by election type, regime type, and OECD membership

	Election type			Regime type		OECD	
	(1) Baseline	(2) Pres.	(3) Parl.	(4) Democ.	(5) Autoc.	(6) Yes	(7) No
Economic performance	0.337*** (0.129)	0.574** (0.262)	0.216* (0.134)	0.311** (0.135)	0.315 (0.302)	0.216** (0.121)	0.399** (0.188)
Trade	0.243** (0.125)	0.238* (0.174)	0.220 (0.166)	0.237* (0.140)	0.329 (0.360)	0.335 (0.207)	0.170 (0.168)
HDI	0.206 (0.165)	0.460* (0.283)	0.075 (0.198)	0.133 (0.167)	0.510 (0.610)	0.468* (0.284)	0.077 (0.209)
Peace	0.100 (0.115)	0.302* (0.236)	0.061 (0.127)	0.061 (0.102)	0.095 (0.391)	0.150 (0.216)	0.041 (0.144)
Democracy	0.182* (0.100)	0.201 (0.257)	0.159 (0.132)	0.124 (0.103)	0.816** (0.361)	0.073 (0.143)	0.305** (0.156)
General index	0.221*** (0.076)	0.320*** (0.123)	0.168* (0.088)	0.173** (0.079)	0.425** (0.196)	0.172 (0.110)	0.240** (0.104)

Notes: This table reports estimated effects of electoral turnovers for different subsamples. Each estimate corresponds to a separate regression. Democracies are regimes labeled as electoral democracies or liberal democracies by V-Dem. Autocracies are regimes labeled as electoral autocracies and closed autocracies by V-Dem. For OECD membership, we consider as members the 30 countries that were members of the OECD at the beginning of 2010. Using the method of [Clogg et al. \(1995\)](#), we cannot reject the equality of the estimates for the general index for presidential and parliamentary elections (p-val. = 0.314), democracies and autocracies (p-val. = 0.233), and OECD and non-OECD countries (p-val. = 0.654). We obtain broadly consistent results when running a parametric regression in which we include the interaction between the treatment and the dimension of heterogeneity. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Heterogeneity by constraints on the executive

	Checks and balances			Leader power		Globalization		Term limit
	(1) Baseline	(2) High	(3) Low	(4) High	(5) Low	(6) High	(7) Low	(8) No
Economic performance	0.337*** (0.129)	0.134 (0.128)	0.464** (0.209)	0.466*** (0.209)	0.099 (0.168)	0.165 (0.136)	0.508** (0.221)	0.219* (0.129)
Trade	0.243** (0.125)	0.221 (0.190)	0.193 (0.207)	0.402** (0.194)	0.353* (0.230)	0.406** (0.210)	0.013 (0.127)	0.216* (0.140)
HDI	0.206 (0.165)	0.254 (0.274)	0.174 (0.234)	0.192 (0.227)	0.190 (0.247)	0.269 (0.244)	0.006 (0.283)	0.063 (0.186)
Peace	0.100 (0.115)	0.103 (0.144)	0.068 (0.175)	0.119 (0.203)	0.034 (0.164)	0.029 (0.139)	0.189 (0.183)	0.083 (0.133)
Democracy	0.182* (0.100)	0.055 (0.061)	0.269 (0.196)	0.219 (0.191)	0.001 (0.133)	0.033 (0.127)	0.382** (0.179)	0.172 (0.119)
General index	0.221*** (0.076)	0.151** (0.072)	0.267** (0.132)	0.217** (0.101)	0.111 (0.103)	0.257*** (0.085)	0.309*** (0.120)	0.162** (0.081)

Notes: This table reports estimated effects of electoral turnovers for different subsamples. Each estimate corresponds to a separate regression. Checks and balances are measured as the average of two V-Dem indices: the judicial constraints on the executive index and the legislative constraints on the executive index. The power enjoyed by the elected leader is an aggregate of power measures from V-Dem: power to dissolve the legislature, to appoint and dismiss ministers, and to propose and veto legislation (see Appendix A.4.2 for more details). We proxy globalization with trade intensity. For these three dimensions of heterogeneity, we consider the value of the variable in the year before each election, compute the median among close elections (i.e., elections for which the running variable is under 15 percentage points in absolute value), and split the sample between elections above and below the median. In column (8), we restrict the sample to parliamentary elections and presidential elections for which there were no differentially binding term limits for the incumbent and the best ranked challenger. Using the method of Clogg et al. (1995), we cannot reject the equality of the estimates for the general index for high and low checks and balances (p-val. = 0.443), high and low leader power (p-val. = 0.461), and high and low globalization (p-val. = 0.725). We obtain broadly consistent results when running a parametric regression in which we include the interaction between the treatment and the dimension of heterogeneity. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Effects of turnovers in the executive branch on country performance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Econ. perf.	GDP growth	(Minus) Inflation	(Minus) Unemp.	Trade	HDI	Peace	Democ.	General index
Panel A: Fuzzy RDD (Effects of an executive turnover)									
Ex. turn.	0.411** (0.220)	0.058 (0.238)	0.433* (0.284)	1.01*** (0.407)	0.484** (0.246)	0.535** (0.278)	-0.169 (0.185)	0.048 (0.168)	0.262** (0.139)
p-val.	[0.017]	[0.630]	[0.055]	[0.003]	[0.017]	[0.029]	[0.457]	[0.978]	[0.022]
N	1557	1290	1379	964	1250	943	1431	1539	1692
N eff.	686	684	631	397	536	455	776	782	719
Band.	17.7	22.6	18.0	16.5	16.3	20.4	23.1	21.2	16.9
Panel B: Reduced form (Effects of a defeat of the leading party before the election)									
El. defeat	0.264** (0.139)	0.086 (0.178)	0.208 (0.190)	0.626*** (0.224)	0.257** (0.150)	0.334** (0.178)	-0.068 (0.124)	0.056 (0.107)	0.167** (0.087)
p-val.	[0.026]	[0.530]	[0.218]	[0.001]	[0.045]	[0.039]	[0.687]	[0.712]	[0.026]
N	1585	1312	1406	985	1275	965	1454	1570	1723
N eff.	634	626	659	389	550	445	617	735	666
Band.	15.8	20.5	18.6	15.5	16.6	19.0	16.8	19.0	15.1
Panel C: First stage (Effects of a defeat of the leading party before the election on the probability of an executive turnover)									
El. defeat	0.627*** (0.074)	0.690*** (0.066)	0.625*** (0.078)	0.605*** (0.090)	0.600*** (0.081)	0.643*** (0.086)	0.611*** (0.066)	0.616*** (0.067)	0.603*** (0.071)
p-val.	[<0.001]	[<0.001]	[<0.001]	[<0.001]	[<0.001]	[<0.001]	[<0.001]	[<0.001]	[<0.001]
N	1557	1290	1379	964	1250	943	1431	1539	1692
N eff.	686	684	631	397	536	455	776	782	719
Band.	17.7	22.6	18.0	16.5	16.3	20.4	23.1	21.2	16.9

Notes: This table reports estimated effects of turnovers in the executive branch for the sample of elections leading to the appointment of a leader in the executive branch. In Panel A, we report fuzzy RDD estimates of the effect of executive turnovers, using as assignment variable the defeat of the leading party before the election and turnover in the executive branch as treatment. We show estimates of γ in equation (4) – see Appendix B.3. In Panel B, we report reduced form estimates of γ^r in equation (6) – see Appendix B.3, corresponding to the effects of an electoral defeat of the leading party before the election. We use the margin of victory of the best ranked challenger of the leading party before the election as the running variable. In Panel C, we report estimates of $\tilde{\gamma}$ in equation (5), corresponding to the first stage of Panel A. Details about the definition of the leading party before the election can be found in Section 3.5. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Angrist and Rokkanen (2015) CIA-based estimates

	CCT	Linear reweighting	Propensity score
Economic performance	0.337*** (0.129) [0.003] N=449/323	0.081* (0.048) [0.094] N=478/342	0.079* (0.048) [0.099] N=478/342
Equality with CCT (p-val.)		0.063	0.060
Trade	0.243** (0.125) [0.031] N=440/335	0.128* (0.069) [0.065] N=399/299	0.130* (0.069) [0.062] N=399/299
Equality with CCT (p-val.)		0.420	0.427
Human Development Index	0.206 (0.165) [0.161] N=317/264	0.052 (0.072) [0.469] N=279/224	0.049 (0.072) [0.501] N=279/224
Equality with CCT (p-val.)		0.391	0.381
Conflict	0.100 (0.115) [0.294] N=512/355	0.036 (0.077) [0.636] N=449/316	0.034 (0.072) [0.637] N=449/316
Equality with CCT (p-val.)		0.647	0.627
Democracy	0.182* (0.100) [0.054] N=732/464	0.182*** (0.064) [0.004] N=496/338	0.177*** (0.061) [0.004] N=496/338
Equality with CCT (p-val.)		1.000	0.963
General index	0.221*** (0.076) [0.002] N=529/369	0.115*** (0.041) [0.005] N=525/363	0.112*** (0.038) [0.003] N=525/363
Equality with CCT (p-val.)		0.217	0.197

Notes: This table compares our baseline estimates from [Calonico et al. \(2014\)](#) (in the “CCT” column) to CIA-based estimates from [Angrist and Rokkanen \(2015\)](#): a linear reweighting estimator discussed by [Kline \(2011\)](#) (in the “Linear reweighting” column), and a version of the [Hirano et al. \(2003\)](#) propensity score estimator (in the “Propensity score” column). Standard errors are reported in parentheses, and p-values are reported in brackets. We also report the number of observations on the left and right of the cutoff within the CCT-optimal bandwidth for the [Calonico et al. \(2014\)](#) estimates and the number of observations on the left and right of the cutoff in the [-15pp, 15pp] window for the [Kline \(2011\)](#) and [Hirano et al. \(2003\)](#) estimates. Finally, we test the equality between the CCT and CIA-based estimates using the method of [Clogg et al. \(1995\)](#). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 7: Effects of candidate characteristics on country performance

	(1) Econ. perf.	(2) GDP growth	(3) (Minus) Inflation	(4) (Minus) Unemp.	(5) Trade	(6) HDI	(7) Peace	(8) Democ.	(9) General index
Panel A: Effects of the victory of a younger leader									
Victory	-0.118 (0.112)	-0.156 (0.172)	-0.120 (0.165)	0.149 (0.204)	-0.034 (0.133)	-0.247* (0.176)	-0.141 (0.130)	0.109 (0.111)	-0.036 (0.073)
p-val.	[0.256]	[0.368]	[0.497]	[0.363]	[0.713]	[0.080]	[0.184]	[0.235]	[0.526]
N	1414	1191	1259	881	1145	867	1305	1384	1511
N eff.	835	652	632	470	678	422	646	854	910
Band.	22.9	21.6	17.5	19.7	22.4	16.8	18.0	23.7	23.6
Panel B: Effects of the victory of the most left-wing party									
Victory	-0.048 (0.114)	0.007 (0.129)	-0.005 (0.174)	-0.197 (0.177)	-0.023 (0.126)	0.064 (0.178)	0.040 (0.126)	-0.023 (0.123)	-0.018 (0.079)
p-val.	[0.754]	[0.953]	[0.971]	[0.303]	[0.634]	[0.976]	[0.653]	[0.719]	[0.642]
N	1715	1480	1545	1071	1462	1043	1597	1781	1782
N eff.	917	1020	749	572	762	505	831	876	848
Band.	19.0	28.3	16.1	18.6	18.1	15.6	18.4	16.8	16.3
Panel C: Effects of the victory of the most populist party									
Victory	-0.031 (0.112)	0.004 (0.131)	-0.017 (0.171)	0.014 (0.182)	0.045 (0.112)	0.114 (0.170)	-0.101 (0.131)	-0.164 (0.118)	-0.074 (0.078)
p-val.	[0.804]	[0.973]	[0.879]	[0.874]	[0.821]	[0.658]	[0.328]	[0.110]	[0.212]
N	1708	1476	1538	1065	1457	1038	1592	1774	1775
N eff.	946	1005	759	570	922	562	752	861	808
Band.	19.9	27.2	16.5	18.5	23.3	18.6	15.9	16.6	15.0
Panel D: Effects of the victory of the most illiberal party									
Victory	-0.091 (0.119)	-0.351** (0.164)	-0.012 (0.191)	0.155 (0.184)	0.021 (0.128)	-0.059 (0.188)	-0.065 (0.143)	-0.166 (0.125)	-0.062 (0.074)
p-val.	[0.301]	[0.014]	[0.804]	[0.366]	[0.916]	[0.622]	[0.630]	[0.190]	[0.392]
N	1671	1441	1501	1044	1424	1017	1555	1736	1737
N eff.	758	652	635	508	737	541	676	820	903
Band.	14.9	14.8	13.0	16.4	18.1	18.1	13.9	16.2	18.4

Notes: This table reports RD estimates from equation (2). The running variable is the margin of victory of the party represented by the youngest leader among the top two parties, in Panel A; the margin of victory of the most left-wing party among the top two parties, in Panel B; the margin of victory of the most populist party among the top two parties, in Panel C; and the margin of victory of the most illiberal party among the top two parties, in Panel D. For details on how we characterize leaders and parties, see Appendices A.2 and A.3. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 8: Effects of electoral turnovers on governance and corruption

	Election type			OECD		Leader power	
	(1) Baseline	(2) Pres.	(3) Parl.	(4) Yes	(5) No	(6) High	(7) Low
Government accountability index	0.193** (0.099)	0.196 (0.257)	0.179 (0.122)	0.058 (0.133)	0.342** (0.155)	0.264 (0.200)	-0.033 (0.117)
(Minus) Executive corruption index	0.249** (0.132)	0.363 (0.337)	0.195 (0.138)	0.217 (0.175)	0.256 (0.174)	0.265 (0.292)	0.133 (0.120)
(Minus) Public sector corruption index	0.158* (0.094)	0.419* (0.260)	0.058 (0.094)	0.034 (0.070)	0.251 (0.158)	0.288 (0.211)	-0.054 (0.111)
Control of corruption	0.489** (0.226)	0.645 (0.419)	0.418* (0.278)	0.276 (0.319)	0.468** (0.248)	0.975*** (0.406)	0.242 (0.291)
Absence of corruption index	0.227*** (0.093)	0.365 (0.255)	0.165* (0.089)	0.099 (0.098)	0.333** (0.147)	0.320** (0.175)	0.023 (0.085)

Notes: This table reports RD estimates corresponding to equation (1) for our measures of governance and corruption, expressed in standard deviation terms, in the main sample (column 1) and in different subsamples (columns 2 to 7). See Table 4 for the definition of the subsamples of leaders with high and low power. Using the method of Clogg et al. (1995), we cannot reject the equality of the estimates for the absence of corruption index in presidential and parliamentary elections (p-val. = 0.459), for OECD and non-OECD countries (p-val. = 0.185), and for high and low leader power (p-val. = 0.128). We obtain broadly consistent results when running a parametric regression in which we include the interaction between the treatment and the dimension of heterogeneity. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.