

# Democratic Peace and Electoral Accountability\*

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## Abstract

This paper shows that elections are good for peace and that politicians' fear of losing office is the reason why disputes between democracies are extremely rare. To examine the impact of electoral accountability on military conflicts, we construct a new dataset of executive term limits for a sample of 177 countries over the 1816-2001 period, and combine this information with a large dataset of interstate militarized disputes. In line with previous studies, we find that democracies are much less likely to fight one another than autocracies or mixed pairs of states. However, this "democratic peace" result does not hold for democracies in which the leaders face binding term limits, which are as conflict prone as autocracies. We also find that disputes involving democracies with term limits are more likely to occur during the executive's last mandate. To explain these findings, we provide a simple theoretical model in which electoral accountability deters politicians from breaking peaceful relations.

*JEL classifications:* F00, C72, D72.

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# 1 Introduction

One of the few stylized facts in international relations is that democracies are much less likely to be in conflict with one another than autocracies or mixed pairs of states. This so-called “democratic peace” phenomenon is supported by a vast empirical literature and has been described as an “empirical law” in international relations. However, the “consensus that democracies rarely if ever fight each other is not matched by an agreement as to how best to explain this strong empirical regularity” (Levy, 2002).

The idea that democracies are less conflict prone than autocracies can be traced back to the writings of Emmanuel Kant [1795]. In his essay on “Perpetual Peace”, he argued that the leaders of republics are less likely to break peaceful relations, since they are accountable to the people, who dislike costly conflicts: if the people who have to pay for it with their lives and possessions decided whether or not there should be a conflict, they “would be very cautious in commencing such a poor game, decreeing for themselves all the calamities of war” (p. 13). In line with Kant’s argument, our paper shows that electoral accountability deters politicians from engaging in costly conflicts and is the main reason why disputes between democracies are so rare.

We argue that democracies in which the leaders can only serve a fixed number of mandates are a natural testing ground for the idea that electoral incentives promote peaceful relations: executive term limits should increase the likelihood of conflicts, since they reduce—and can even completely eliminate—electoral accountability. We thus collect data about different types of executive term limits for a sample of 177 countries over the 1816-2001 period and combine this information with a large dataset of interstate conflicts. In line with previous studies, we find strong support for the democratic peace result. Crucially, however, democratic pairs of states in which the leaders face binding term limits are as likely to fight each other as autocratic and mixed dyads, suggesting that differences across regime types are due to the disciplining role of elections. We also find that conflicts involving democracies with term limits are more likely to occur during the executive’s last mandate than in the penultimate one.

Our paper builds on the political agency literature originated with Barro (1973), which stresses that the desire to maintain office can keep politicians in check. In particular, our analysis is close in spirit to Besley and Case (1995), who exploit the existence of gubernatorial term limits in the United States to examine how electoral accountability affects fiscal policy. Similarly, List and Sturm (2006) provide evidence that term limits can influence environmental policy choices. Our paper complements these studies, showing that electoral accountability (or lack thereof) can have a crucial impact on the use of force.

Term limits on the executive are found in presidential or semi-presidential political systems.

Many countries impose “strong” term limits, which rule out re-election after a *fixed* number of terms. These consist mainly of one-term limits, which rule out the possibility of re-election of the president altogether (e.g., Mexico since 1917) and two-term limits, which only allow for one re-election (e.g., the United States since 1951).<sup>1</sup> Other countries impose “weak” term limits, which restrict the number of *consecutive* terms a person can serve (e.g., Panama since 1920).

Anecdotal evidence seems to suggest that term limits may indeed hinder peace: though conflicts in democratic dyads are rare, there have been several recurrent disputes involving democracies in which the executive could not be re-elected. For example, in recent decades Honduras (one-term limit) has been involved in various conflicts (classified as occupations of territory, seizures, raids, border violations or fortifications) with Nicaragua and El Salvador. Other examples of recurrent conflicts between democracies include those between Costa Rica (one-term limit) and Nicaragua, Colombia (one-term limit) and Venezuela, Sri Lanka (two-term limit) and India, or South Korea (one-term limit) and Japan. However, lack of data on term limits has so far prevented any systematic analysis of the effects of constraints on office holding.

Figure 1: Number of countries by regime type and term limits

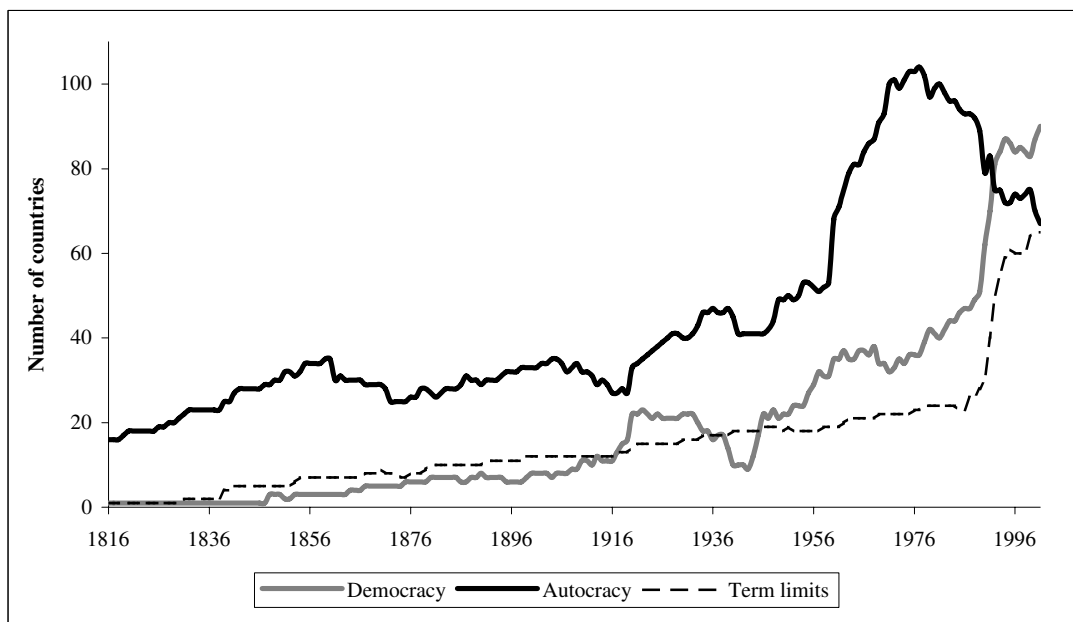


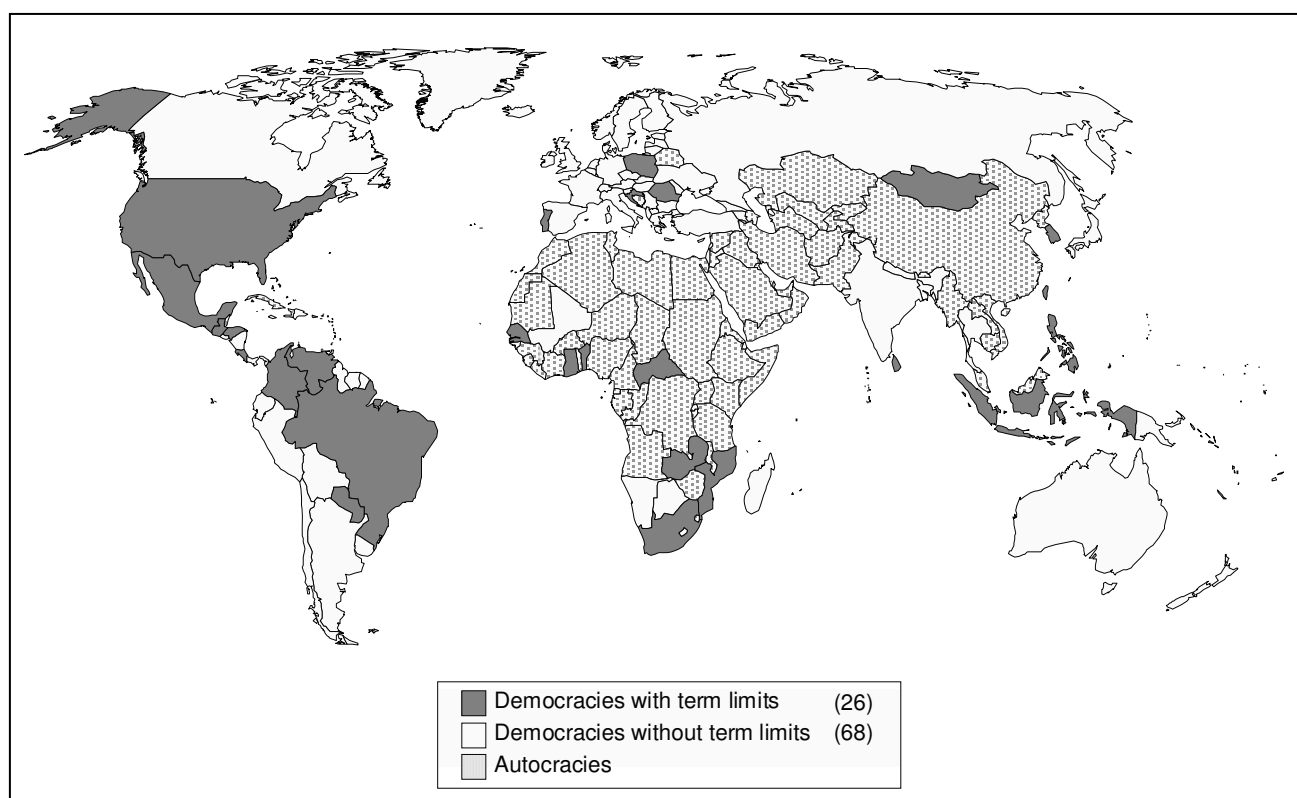
Figure 1 above shows the number of countries by regime type for our sample period, where we use the Polity dataset to define democracies and autocracies (see Section 3 for a detailed

<sup>1</sup>Very few countries adopt three-term limits, allowing the executive to be re-elected twice. Namibia is the only democratic country in our dataset with this type of restriction (introduced in 2001).

description). We can observe an increase in the total number of countries, as well as an increase in the number of democracies. However, these trends are subject to various fluctuations (e.g., World War II, independence of colonies in the 1960s, democratization process in the later years of the sample). Notice that as of the 1990s we observe a higher number of democracies than autocracies.

For each year in our dataset, Figure 1 also shows the total number of countries with executive term limits. This includes all types of term limits in all countries. However, in our analysis we will focus on “strong” term limits that are found in countries classified as democracies, since only these impose clear restrictions on electoral accountability. To examine the impact of re-election motives on the sustainability of international peace, we will compare the conflict patterns of democracies without term limits with those of democracies with one-term or two-term limits. Figure 2 below illustrates which democratic countries had strong term limits in the last year of our sample period.

Figure 2: One-term and two-term limits in democratic countries (2001)



We follow previous empirical studies on the determinants of interstate conflicts (e.g., Martin *et al.*, 2008) and consider the impact of different bilateral variables (e.g., distance, contiguity,

differences in country size and military capabilities, military alliances, colonial links, trade flows) on the likelihood of disputes between two countries. The main focus of our analysis, however, concerns the role of electoral incentives. In line with the literature on the democratic peace, we find that democratic dyads are significantly less likely to fight each other than dyads involving autocracies. Crucially, this result does not hold for democracies in which the leaders cannot be re-elected, which are as likely to be involved in conflicts as autocratic and mixed dyads. Thus, binding term limits invalidate the democratic peace result. Moreover, we find that democracies with term limits are more likely to be involved in a conflict in the executive's last mandate. We show that these results are robust to alternative definitions of political regimes and conflicts, the inclusion of a variety of controls used in the literature, different samples in terms of countries and years, and different estimation strategies. We also argue that our results are unlikely to be driven by an omitted variable—explaining both the fact that some countries adopt term limits and that they are more belligerent—or by reverse causality—the possibility that military conflicts lead to the adoption of term limits.

Existing theoretical explanations for the democratic peace cannot account for the empirical findings on the effects of term limits, since their focus is not on the role of elections. For example, if differences in the conflict patterns between democracies and autocracies are the result of exogenous differences in the political “bias” of leaders, as suggested by Jackson and Morelli (2007), term limits and electoral calendars should play no particular role. Similarly, if the reason for the more peaceful relations between democracies lies in the informational properties of their institutions, as argued by Fearon (1994) and Levy and Razin (2004), among others, it is not clear why elections and term limits should affect the likelihood of conflicts.

To provide an explanation consistent with the observed effects of term limits, we develop a simple model that captures the impact of re-election incentives (or lack thereof) on the likelihood of interstate conflicts. Following an established literature in international relations, we describe security relations by means of a repeated prisoners' dilemma game between two countries. This setting reflects the fact that the use of military force is often beneficial in the short-run, but tends to have long-term detrimental consequences: each country is tempted to attack the other to obtain a portion of its wealth and resources; however, if both countries use force, the resulting military conflict is costly compared to being at peace.<sup>2</sup> We examine how cooperative behavior between countries can be sustained by credible threats among the parties involved when they engage in long-term relationships. The incentives of leaders differ from those of the people in two

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<sup>2</sup>In our model, military conflicts are thus driven by the desire to appropriate a portion of the other country's wealth. See Jackson and Morelli (2009) for a discussion of alternative motives for interstate conflicts.

key dimensions.<sup>3</sup> First, unlike citizens, leaders derive rents from being in office. Second, in line with Kant’s original argument, leaders are more prone to break peaceful relations, since they have a higher share of benefits relative to costs from war when compared to the average citizen. In this respect, our model is close to Jackson and Morelli (2007). However, while they simply assume that democratic leaders are less “biased” than autocratic leaders, we show that such difference is the result of electoral incentives.

In this setting, the threat of losing office deters democratic leaders from triggering costly conflicts and can explain why, in the absence of term limits, disputes between democracies are less likely than conflicts in autocratic and mixed dyads. Our model is also able to provide an explanation for the empirical findings concerning the conflict patterns of democracies with term limits: restrictions on the tenure of the executive make these democracies more conflict prone, since they reduce the disciplining effect of electoral accountability; this effect is completely eliminated in the case of democratic leaders facing binding term limits, who are shown to be as conflict prone as autocratic leaders. Finally, conflicts are more likely to arise in the executive’s last mandate—when he cannot be made accountable for his foreign policy decisions—than in his penultimate mandate—when voters are still able to punish him if he engages in costly conflicts.

The remainder of the paper is organized as follows. Section 2 reviews the related literature. Section 3 describes our dataset on term limits and the other variables used in our empirical analysis. Section 4 presents our empirical methodology and results. Section 5 describes a simple model of interstate conflicts in which electoral incentives can deter politicians from breaking peaceful relations. Section 6 concludes, discussing possible avenues for future research.

## 2 Related Literature

The last few decades have seen an explosion of interest for the study of conflict patterns of different political regimes. The literature on the democratic peace is thus extremely vast, and it will be impossible to give it justice here. This literature is based on two well established empirical findings. The main finding is that over the past two centuries democracies have rarely engaged in conflicts with one another (e.g., Maoz and Russett, 1993; Gartzke, 1998). The second finding is that democracies are not immune from fighting non democracies (e.g., Maoz and Abdolali, 1989;

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<sup>3</sup>In this respect, our analysis departs from the existing literature on self-enforcing international cooperation (e.g., Dixit, 1987; Bagwell and Staiger, 1999)—which considers policymakers and their countries to be one and the same—and is close in spirit to the political economy literature that has stressed the differences between the interests of leaders and those of the broader populace, or the national interest (e.g., Acemoglu and Robinson, 2001).

Rousseau *et al.*, 1996).<sup>4</sup>

Existing theoretical explanations for the democratic peace can be divided into two broad approaches: normative and institutional explanations. The normative approach contends that democracies are less conflict prone toward one another because they share similar norms of compromise and cooperation within their domestic governments (e.g., Maoz and Russett, 1993; Dixon, 1994). In essence, these norms mandate nonviolent conflict resolution and negotiation. Because democratic leaders are committed to these norms they try to adopt them in the international arena rather than resorting to violence. To explain conflicts between democracies and non-democracies, this literature argues that democratic values are applied only when democracies face other democracies and are abandoned otherwise.

The institutional approach can be further divided into two schools. Scholars belonging to the first school argue that democratic institutions increase the *political costs associated with the use of force*, deterring leaders from using force. In line with Kant's arguments, democratic institutions can discipline politicians, who can suffer politically by losing office if they trigger costly conflicts. Examples of these type of studies include Bueno de Mesquita *et al.* (1999) and Jackson and Morelli (2007), among many others.<sup>5</sup> The second institutional school focuses instead on the *informational properties* of democratic institutions, rather than on their constraining role. Scholars in this tradition have argued that democratic institutions help reveal information about the government's political incentives in a crisis by improving its ability to send credible signals (e.g., Fearon, 1994; Schultz, 1998; Levy and Razin, 2004).<sup>6</sup>

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<sup>4</sup>Various studies have examined the possibility of a reverse causality from peace to democracy. Reiter (2001) shows that the transition from autocracy to democracy is not influenced by the fact that a country may have been involved in recent conflicts, while a country's level of economic development and the democratization of its neighboring countries significantly increase the probability of such transition. The possibility of reverse causality is also excluded by Mousseau and Shi (1999): they argue that the reversal would only occur if countries tend to become autocratic in preparation for wars, and they verify that this is not the case.

<sup>5</sup>The paper by Bueno de Mesquita *et al.* (1999) is based on the idea that political leaders must satisfy their key supporters (their "winning coalition") to remain in power: autocratic leaders, who answer to a small winning coalition, can choose to accept less favorable chances of victory because they can placate supporters with private goods; in contrast, democratic leaders with a large winning coalition are willing to go to war only when they believe they have an excellent chance of winning and thus not hurting their backers. Jackson and Morelli (2007) consider a model in which autocratic leaders may find it more attractive to go to war than democratic leaders because they are more "biased", i.e., they have a higher benefit-cost ratio from war compared to that of their country as a whole.

<sup>6</sup>Fearon (1994) and Schultz (1998) argue that threats of military force are more credible when they come from leaders of democracies because such leaders know that a failure to follow through will impose "audience costs" (e.g., political opponents or citizens may charge the leaders with irresolution or diplomatic defeat). Hence, democracies only make threats when they are willing to follow through, making it more likely that disputes between democracies will be settled peaceably. Levy and Razin (2004) provide an explanation based on communication and trust: participation of the public and the open debate send clear and reliable information regarding the intentions of democracies to other states; in contrast, it is difficult to know the intentions of nondemocratic leaders, what effect concessions will have, and if promises will be kept.

Our explanation of the democratic peace belongs to the first of the institutional schools, since it is driven by the general idea that democratic institutions can deter leaders from using force. This paper contributes to the existing literature in two ways. First, by examining the impact of executive term limits on the likelihood of interstate conflicts, we are able to show that re-election incentives are the key reason behind the observed differences of conflict patterns across regime types. Second, we provide a simple model based on Kant’s original idea that electoral accountability can act as a discipline device on leaders. Unlike other explanations of the democratic peace, our model emphasizes the most distinct institutional difference between democracies and autocracies—the presence or lack of periodic elections—and is able to explain the observed effects of term limits on military disputes.

Our analysis is also related to a series of papers that have looked at how electoral calendars affect the use of force.<sup>7</sup> Most studies have focused on the United States and examined how the use of force varies within election cycles.<sup>8</sup> One of the few studies to have examined the relationship between electoral calendars and international conflicts using a broad set of democratic states is Gaubatz (1991). He finds that democracies start wars early in the electoral cycle, suggesting that approaching elections depress the rate at which democratic states enter war. He interprets the observed political-military cycles as being in line with the Kantian idea that the public acts as a restraint on war. Our analysis of the effects of executive term limits in democracies provides further evidence about the disciplining role of electoral accountability.

### 3 Dataset and Variables

#### Conflicts

The data on interstate conflicts come from the Correlates of War project (COW hereafter) that makes a very large array of datasets related to armed conflicts and country characteristics available.

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<sup>7</sup>We examine the role of re-election incentives (or lack thereof)—comparing the likelihood of conflicts across different *mandates*—while the literature on “military political cycles” examines the impact of electoral proximity—comparing the likelihood of conflicts across different *years* within a leader’s mandate.

<sup>8</sup>The results obtained in this area are quite diverse. An early study by Stoll (1984) finds fewer uses of force in the six months before presidential elections during peacetime, but a slight increase in forceful acts when the President seeks re-election during a war. Other studies have found that the use of force abroad is invariant to the domestic political calendar (e.g., Ostrom and Job, 1986). Hess and Orphanides (1995) show that the rate at which the United States initiates or escalates conflicts doubles when elections are pending during recessions. To interpret this result, they argue that democratic leaders who are in a difficult domestic political situation may be inclined to use force as a rational diversion to improve their electoral success (Hess and Orphanides, 2001). Successive studies have found conflicting evidence on the diversionary use of force and have raised some doubts on the empirical evidence offered by Hess and Orphanides (1995) (see Oneal and Tir (2006) for a review).



The original dataset from Jones *et al.* (1996) records whether a given country is engaged in a Militarized Interstate Dispute (MID) in a given year. We use the dyadic form of the data from Maoz (2005), which records if a given country-pair is in conflict in a given year for the period 1816-2001. Since we are interested in explaining the occurrence of conflicts rather than their duration, we drop all dyad-year pairs corresponding to ongoing disputes.

Each MID is coded with a hostility level ranging from 1 to 5 (1=No militarized action, 2=Threat to use force, 3=Display of force, 4=Use of force, 5=War). In the COW project, war is defined as a conflict with at least 1,000 deaths of military personnel. By this standard, around 100 interstate wars have been fought in the period 1816-2001. Since the small number of warring country pairs inhibits the creation of truly robust estimates of the determinants of wars, we follow the practice common in the empirical literature to analyze the determinants of conflicts using a broader definition—which includes display of force, use of force and war itself. Examples of display of force (level 3 of a MID) include a decision of mobilization, a troop or ship movement, a border violation or a border fortification. These are government-approved and non-accidental decisions. Examples of use of force (level 4 of a MID) include blockades, seizures, occupation of territory or attacks.

Table 1: Number of conflicts by dyads	
	Full Sample
Non-fighting dyads	545,027
Fighting dyads	2,945
Hostility:	
3: Display of force	725
4: Use of force	1,855
5: War	365
Total	547,972

Notes: the number of observations excludes years of ongoing conflicts; sample period: 1816-2001.

Our dependent variable is  $MID_{ijt}$ , which is equal to 1 (and zero otherwise) if a MID of hostility level 3, 4 or 5 occurs at date  $t$  between countries  $i$  and  $j$ . Our sample consists, for each year in the 1816-2001 period, of all country pairs in existence. As it appears from Table 1 above, it contains 547,972 observations, out of which 2,945 (0.54%) are in conflict according to our definition. The data in our sample comprise an unbalanced panel, in that not all dyads are observed for the same number of years due to missing data or entry and exit from the system.<sup>9</sup>

<sup>9</sup>A total of 177 countries are included in our dataset (see table in the Appendix). However, the number of

## Political regimes

Following the literature, we use the Polity dataset by Monty and Jagers (2002) to define political regimes. This dataset provides a composite index that ranks each country on a  $-10$  to  $+10$  scale in terms of democratic institutions, where  $10$  represents the highest score for a democracy. The latest version, Polity IV, contains coded annual information on regime characteristics for all independent states (with a population greater than 500,000) and covers the years 1800-2004.

In our baseline specification, we define a country as being democratic if it has a Polity index higher than 4;<sup>10</sup> countries with lower scores will be considered as being autocratic. In various robustness checks we will experiment with alternative definitions of democracies.

Based on these two types of regimes, we can distinguish three possible political dyads: pairs of autocracies ( $AA$ ), pairs of democracies ( $DD$ ), and mixed dyads ( $AD$ ). Independently of how restrictive the definition of democracy is, democratic dyads (i.e.,  $DD$ ) are a minority: they account for 13.54 percent or 9.25 percent of all dyads, depending on whether democracies are defined as those countries with a Polity score above 4 or above 6, respectively. Instead,  $AA$  and  $AD$  dyads account for a very similar share of our observations. Simple descriptive statistics are already suggestive of the democratic peace phenomenon: the likelihood of conflicts within  $DD$  dyads is less than half (i.e., 0.28) than the corresponding probability for dyads which include at least one autocratic regime.<sup>11</sup>

## Term limits

One of the main contributions of this paper is the construction of a dataset on executive term limits. This allows us to perform a systematic analysis of the impact of restrictions on the tenure of leaders on interstate conflicts.

We collect information on the existence of term limits for all the 177 countries in our dataset. However, in our empirical analysis we restrict attention to the effects of term limits in democracies, which impose clear restrictions on electoral accountability.<sup>12</sup>

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countries can change year by year, often as a result of countries breaking up (e.g., the Soviet Union, Yugoslavia) or gaining independence (e.g., former colonies).

<sup>10</sup>For example, following our definition, Britain becomes a full democracy only in 1880. Before that date, Britain had a Parliament, but even after the Great Reform Act of 1832, only about 200,000 people were allowed to vote, and those who owned property in multiple constituencies could vote multiple times. In the Polity dataset, Britain has an index of  $-2$  before 1836, an index of  $3$  from 1837 till 1879, and an index of  $7$  from 1880.

<sup>11</sup>If democracies are identified by a Polity index above 4, a randomly selected pair of countries should be a  $DD$  at war with a probability of 0.073. Given that there are 207 conflicts between democracies out of a total of 547,972 observations, the actual probability of two democracies being in conflict out of the full sample is 0.038, roughly half of the theoretical probability based on uniform distribution of conflicts among dyads.

<sup>12</sup>In some instances, countries that are classified as being autocratic according to the Polity dataset officially

We proceed in four steps:

1. For all countries included in our sample for the period 1816-2001, we identify those classified as being democratic in a given year, based on the Polity dataset described above.
2. We then identify democracies that have presidential or semi-presidential political systems. This information comes from the dataset provided by Golder (2005), supplemented by other sources for the years before 1946.
3. We then collect information on which of these countries have term limits and of which type (one-term or two-term limits). This Information comes from various sources (e.g., countries' constitutions and various amendments).<sup>13</sup>
4. Finally, for countries with two-term limits, we determine whether, in a given year, the executive is in his first or second mandate. To this end, we collect information about the identity of the executives in a given year and the length of their tenure.<sup>14</sup>

Table 2 below provides some summary statistics on democratic countries. In particular, our dataset includes 112 countries classified as democratic for at least one year during the sample period. Within this set, 60 countries have had a presidential or semi-presidential regime during their democratic experience. As shown in Table 2, 11 countries prohibited at some point in time their president to stand for more than one term, while a larger number of democracies (i.e., 24) limited the time in office to two terms. The residual category ("Others") consists of various arrangements. Most often, it refers to the possibility of multiple, but not consecutive, terms in office (e.g., a third term is allowed after skipping one or two terms). Notice though, that the same country may be counted in more than one category, since provisions concerning term limits can change over time.<sup>15</sup>

On the basis of the information collected, we construct two term-limit variables. The first variable, denoted with  $Term_{it}^T$ , is a dummy variable which takes a value of 1 if the executive of

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restrict the number of mandates that the executive can serve, but these term limits are often ignored. For example, Paraguay introduced two-term limits in 1940. General Alfredo Stroessner came to power in a coup d'état in 1954 and remained in power until 1989, after eliminating term limits in 1967. He was re-elected eight times, appearing alone on the ballot on some occasions, and winning by implausibly high margins in others. During his entire tenure, the Polity index of Paraguay ranges between -9 and -5.

<sup>13</sup>As an illustration, South Korea is recorded as democratic since 1988; two-term limits were introduced in 1963 and removed altogether in 1973; since 1987, the executive is subject to one-term limit.

<sup>14</sup>For example, in the case of United States, two-term limits were introduced in 1951, when the XXII Amendment of the U.S. Constitution was ratified in Congress. Since then, only four presidents have served two four-year terms: Dwight D. Eisenhower, Ronald Reagan, Bill Clinton, and George W. Bush.

<sup>15</sup>For example, Panama never allowed immediate re-election of its president, and since 1994 it requires that two terms be skipped before an outgoing president can stand for election again.

Table 2: Number of democracies and term limits

Democracies	112
Presidential/semi-presidential democracies	60
Presidential/semi-presidential democracies with term limits	
One-term limit	11
Two-term limit	24
Others	24

Notes: democracy defined as Polity > 4; statistics based on 547,972 observations; sample period:

1816-2001; a country may be counted more than once if political system/term limits change over time.

country  $i$  is in his last possible mandate in office in year  $t$ . We also construct a variable denoted by  $Term_{it}^{T-1}$ , which takes a value of 1 if country  $i$ 's executive is in his penultimate mandate. Notice that for countries that never allow the executive to be re-elected, the variable  $Term_{it}^T$  is always equal to 1; in the case of countries with two-term limits, it takes a value of 1 only for executives who are in their second mandate.

## Other control variables

In our empirical analysis, we include all the standard controls used in the empirical literature on the determinants of bilateral conflicts (e.g., Martin *et al.*, 2008). A first set of these variables is available for the entire period of our sample (1816-2001) and is mostly taken from the COW dataset (see Table 3 for a detailed description of the variables and sources):

Since geographic factors are known to play an important role in conflicts, we include the log of the distance between capital cities, *Ln distance*, as well as a dummy variable, *Border*, which indicates whether the country pair shares a common border.

Major powers may have a big incentive to engage in MIDs, if they think they can escape retaliation. We thus include the dummy variable *Major power*, which equals one if at least one of the two countries in a dyad is a major power, as defined by the COW.<sup>16</sup>

An imbalance of military power may also foster conflicts. To capture the difference in military capabilities between countries, we use the variable *Military balance*. This is given by the absolute difference between the military capability of the two countries in each dyad. Military capability is a composite of six indicators (i.e., military expenditure, military personnel,

<sup>16</sup>These include the United States (1898-2001), the United Kingdom (1816-2001), France (1816-1940, 1945-2001), Germany (1816-1918, 1925-1945, 1991-2001), Austria (1816-1918), Italy (1860-1943), Russia (1816-1917, 1992-2001), USSR (1922-1991), China (1950-2001), and Japan (1895-1945, 1991-2001).

energy consumption, iron and steel production, urban population, and total population) and is constructed by Singer (1987).

We also include the dummy variable *Alliance*, which is equal to 1 if two countries are formally allied by a non-aggression or neutrality treaty. This variable is also taken from the COW dataset.

In some regressions, we also include a second set of controls commonly used in the literature. Unfortunately, since these variables are only available on a large scale for the period 1950-2000, their inclusion substantially reduces our dataset:

In order to take into account the level of development of the countries, we include the variable *GDP*, defined as the absolute difference in their per capita GDP.

Since various studies have emphasized the importance of trade in deterring recourse to force, we include the variable *Trade* to capture the extent of trade flows between country pairs. This variable is defined as the lower between the two ratios of bilateral trade over GDP.

It is also well known that colonial relationships are particularly important. Thus, we include the dummy variable *Colony* that takes the value of 1 if the country pair has ever been involved in a colonial relationship.

Finally, since the likelihood of interstate conflicts may increase with the extent of the “exploitation gains”, we include the dummy variable *Oil*, which takes a value of one if at least one country in the dyad is an oil exporter, as defined by the IMF (i.e., 11 countries for the post 1949 period).

## 4 Empirical Methodology and Results

Our empirical analysis is divided in two parts. We first compare the conflict patterns of different political dyads. The results of these estimations, reported in Section 4.1 below, confirm the main finding of the democratic peace literature, i.e., that democratic pairs of countries are more likely to maintain peaceful relations with each other than autocratic and mixed dyads.

We then examine the effects of term limits on the likelihood of interstate conflicts. The results reported in Section 4.2 show that the democratic peace result disappears for democracies in which the leaders face binding term limits. We also find that, for democracies with term limits, the likelihood of being involved in a military conflict is higher when the executive is in the last mandate than in the penultimate mandate.

Table 3: Definition of variables and sources

Variable	Definition	Source
$MID_{ijt}$	Dummy variable equal to 1 if Militarized Interstate Dispute greater than 2	Maoz (2005)
$DD_{ijt}$	Dyad composed of two democracies. A country is democratic if it has a Polity IV score higher than 4 (on the -10/+10 scale); autocratic otherwise	Monty and Jagers (2002)
$AA_{ijt}$	Dyad composed of two autocracies	As for $DD_{ijt}$
$AD_{ijt}$	Dyad composed of one democracy and one autocracy	As for $DD_{ijt}$
$Term_{it}^T$	Dummy variable equal to 1 if $i$ 's executive is in his last mandate	Various sources
$Term_{it}^{T-1}$	Dummy variable equal to 1 if $i$ 's executive is in his penultimate mandate	Various sources
$\ln distance_{ij}$	Log of one plus the great circle distance between capital cities	Gleditsch and Ward (2001) and other sources
$Border_{ijt}$	Dummy equal to 1 if the countries share a common border	Stinnett <i>et al.</i> (2002)
$Major\ power_{ijt}$	Dummy equal to 1 if at least one country is a major power	Major power defined by COW (2005)
$Military\ balance_{ijt}$	Log of absolute difference of National Capability scores	Singer (1987)
$Alliances_{ijt}$	Dummy equal to 1 if the countries are in an alliance	Gibler and Sarkees (2004)
$GDP_{ijt}$	Absolute difference of GDP per capita	Barbieri (2002) and WDI
$Trade_{ijt}$	Minimum of ratios of bilateral trade (i.e., sum of bilateral imports) over GDP	Barbieri (2002) and IMF DOT statistics
$Colony_{ij}$	Dummy equal to 1 if countries have ever been in a colonial relationship	CEPII
$Oil_{ij}$	Dummy equal to 1 if at least one country is an oil exporter	IMF
$Presidential_{ijt}$	Dummy equal to 1 if at least one democracy is (semi) presidential	Golder (2005) and other sources

## 4.1 The Democratic Peace

To compare the likelihood of conflicts in different political dyads, we estimate the probability that a militarized dispute occurs in a pair of countries  $i$  and  $j$ , in a given year  $t$  by estimating the following logit regression model:<sup>17</sup>

$$Pr(MID_{ijt} = 1) = G(\beta_0 + \beta_1 DD_{ijt} + \beta_2 AD_{ijt} + \beta_3 \mathbf{X}_{ijt} + \beta_4 \mathbf{M}_{ij}), \quad (1)$$

where  $G$  is the logistic distribution and the omitted category is the dyad type  $AA$ .  $\mathbf{X}_{ijt}$  is a matrix of dyad-specific and time-varying controls (e.g., *Major power*, *Military balance*, *Alliance*, *Border*, *Trade*, *GDP*),  $\mathbf{M}_{ij}$  is a matrix of dyad-specific but time-invariant controls (e.g., *Ln distance*, *Colony*, *Oil*), and the  $\beta$ s are the parameters to be estimated. In many specifications, we also include dyad and year fixed effects.

Table 4 reports the results of alternative specifications of (1). The first column presents our baseline specification. The well-known democratic peace result is clearly confirmed in the data, as the estimated coefficient for  $\beta_1$  is negative and significant at 1 percent level. Notice that this result carries through in all the alternative specifications reported in columns (2)-(7). In columns (2)-(4), we include country-pair fixed effects, year fixed effects, or both. The inclusion of dyad fixed effects accounts for unobserved heterogeneity between the various country pairs and exploits the time variation within each dyad.<sup>18</sup> Year fixed effects account for time varying factors common to all country pairs, such as global economic shocks.

We also experiment with alternative definitions of what constitutes a democracy, using both a more stringent definition (column (5)), and a less stringent definition (column (6)). Finally, in column (7), we add the variables *GDP*, *Trade*, *Colony* and *Oil* to our baseline set of controls; notwithstanding the fact that we lose many observations since the sample is now restricted to the period 1950-2000, the estimated coefficient for democratic dyads remains negative and highly significant. Therefore, in line with what has been documented by previous empirical studies on the democratic peace, we find that democratic dyads are significantly less conflict prone than autocratic or mixed dyads.

Notice that the comparison between autocratic and mixed dyads is not robust: the estimated coefficient for  $\beta_2$  is insignificant in some specifications, and significantly positive or negative in

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<sup>17</sup>To take into account the fact that MIDs, even when defined more broadly than wars, are rare events, we have also tried using a relogit regression model (see King and Zeng, 2001). The qualitative results of our analysis remained unchanged.

<sup>18</sup>Columns (2) and (4) report the results of conditional logit estimations. Notice that including a separate effect for each dyad implies dropping all country pairs that never fight. This explains the much smaller number of observations.

Table 4: Results for the Democratic Peace

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Baseline	Dyad FE	Year FE	Dyad & Year FE	Polity > 6	Polity > 2	1950-2000
$DD_{ijt}$	-0.779*** (0.169)	-0.440*** (0.105)	-1.062*** (0.203)	-0.760*** (0.125)	-0.736*** (0.183)	-0.542*** (0.155)	-0.913*** (0.264)
$AD_{ijt}$	0.392*** (0.101)	0.093 (0.063)	0.200* (0.106)	-0.144** (0.073)	0.431*** (0.102)	0.436*** (0.102)	0.554*** (0.144)
$\ln \text{ distance}_{ij}$	-0.541*** (0.054)		-0.658*** (0.063)		-0.539*** (0.055)	-0.532*** (0.054)	-0.722*** (0.095)
$\text{Border}_{ijt}$	2.149*** (0.166)	0.239 (0.177)	2.126*** (0.170)	0.125 (0.177)	2.157*** (0.167)	2.171*** (0.165)	2.476*** (0.238)
$\text{Major power}_{ijt}$	1.295*** (0.171)	0.867*** (0.124)	1.528*** (0.174)	0.617*** (0.129)	1.261*** (0.171)	1.314*** (0.171)	1.482*** (0.287)
$\text{Military balance}_{ijt}$	4.367*** (0.867)	1.565*** (0.579)	4.028*** (0.913)	0.588 (0.608)	4.511*** (0.856)	4.136*** (0.869)	4.386*** (1.959)
$\text{Alliance}_{ijt}$	-0.333** (0.135)	-0.456*** (0.071)	-0.587*** (0.138)	-0.877*** (0.079)	-0.331** (0.133)	-0.333** (0.134)	-0.562** (0.200)
$\text{GDP}_{ijt}$							0.006 (0.009)
$\text{Trade}_{ijt}$							0.000 (0.000)
$\text{Colony}_{ij}$							0.184 (0.388)
$\text{Oil}_{ij}$							1.545*** (0.405)
Dyad fixed effects	no	yes	no	yes	no	no	no
Year fixed effects	no	no	yes	yes	no	no	no
Observations	547,972	58,450	546,248	58,450	547,972	547,972	335,828
Log likelihood	-14,531.04	-8,707.14	-13,812.64	-8106.38	-14,552.78	-14,544.68	-6,575.90
Pseudo R <sup>2</sup>	0.21	0.25	0.25	0.30	0.21	0.21	0.26
$\chi^2$	1,598.76***	159.33***	4,041.49***	1,360.85***	1,473.89***	1,535.29***	1,580.51***

Notes: dependent variable =1 if  $MID_{ijt} > 2$  and 0 otherwise; standard errors clustered by dyad in parenthesis; \*\*\* denotes significance at 1% level; \*\* 5% level; \* 10% level. Column (2) and (4) report the results of conditional logit estimations.



others.<sup>19</sup> This finding, which has already been noted in the literature (e.g., Maoz and Abdolali, 1989), suggests that the democratic peace is a *dyadic* rather than a monadic phenomenon: while democratic pairs of states rarely fight each other, conflicts between a democracy and an autocracy are generally not less likely than conflicts between autocracies.

The democratic peace result continues to hold in a series of other regressions that we have performed, following alternative specifications suggested in the literature.<sup>20</sup> In particular, the coefficient on democratic dyads remains negative and highly significant when we use a more stringent definition of military conflicts, focusing only on MIDs which are coded with a hostility level of 5 (i.e., wars). To allow for the possibility of diversionary motives for conflicts, we have introduced as an extra control the variable  $Growth_{ijt}$ , defined as the minimum of the two-year growth rate of GDP (lagged one period) of the countries in the dyad. In line with previous studies, our results show that economic conditions do affect the likelihood that two democracies experience a conflict (i.e., bad economic conditions are more conducive to conflicts), while autocratic and mixed dyads are unaffected by economic conditions. However, this does not invalidate the finding that conflicts in democratic dyads are much less likely than conflicts in other dyads (see also Oneal and Tir, 2006).

Concerning other determinants of conflicts, the coefficients for the main controls are all significant and have the expected signs: countries that are contiguous and closer in distance tend to fight more; the likelihood of a military conflict between two countries increases if at least one of the two is a major power; similar military capabilities and joint membership in a military alliance tends to reduce the likelihood of a military conflict. Of the remaining controls, only *Oil* is significant; its positive coefficient suggest that oil-rich countries might frequently be the target of military attacks and that appropriation motives might drive many interstate conflicts.

When it comes to the economic significance, calculating the marginal effects reveals that the estimated coefficient for  $\beta_1$  in the baseline specification of Table 4 implies a 60 percent decrease in the average predicted probability of conflict for a democratic dyad (DD) in comparison to an autocratic dyad (AA). If compared to some of the control variables included in the same specification, this impact is double than the role played by alliances, but much smaller, in absolute terms, than the effect of two countries sharing a border or of one of them being a major power, which lead to a seven-fold and a 225 percent increase in the probability of conflict, respectively.

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<sup>19</sup>Even when the  $\beta_2$  coefficient is negative and significant (see column (4)), it is statistically different from  $\beta_1$ , showing that democratic pairs are always less conflict prone than both autocratic and mixed dyads.

<sup>20</sup>These results are not reported to save space, but are available upon request.

## 4.2 The Impact of Term Limits

The results presented above confirm that democratic pairs of states are less likely to fight each other compared to pairs of autocratic states and mixed dyads. In this section, we empirically verify whether politicians' fear of losing office is the reason behind this democratic peace phenomenon. To do so, we exploit the fact that in many democracies the executive is subject to term limits, which restrict or even completely eliminate electoral accountability.<sup>21</sup>

As discussed in the previous section, we have constructed two term-limit variables,  $Term_{it}^T$  and  $Term_{it}^{T-1}$ , which indicate whether in year  $t$  a given country  $i$  is a democracy in which the executive is in the last or penultimate mandate, respectively. In what follows, we use these variables to compare the conflict patterns of democratic dyads (with and without term limits) with those of all dyads involving autocracies.

We consider first the effects of binding term limits, focusing on democracies in which the leaders cannot be re-elected (i.e., for which  $Term_{it}^T = 1$ ).<sup>22</sup> The analysis of the determinants of conflicts in all democratic country pairs reveals that the only systematic difference is between democratic dyads in which one or both leaders are subject to binding term limits (i.e.,  $DD_{ijt}^T$  dyads, in which  $Term_{it}^T = 1$  for at least one of the two countries) and all other democratic dyads (i.e.,  $DD_{ijt}$  dyads). We thus compare the conflict patterns of these dyad types with those of autocratic and mixed dyads (i.e., the omitted category) by estimating the following logit model:<sup>23</sup>

$$Pr(MID_{ijt} = 1) = G(\gamma_0 + \gamma_1 DD_{ijt} + \gamma_2 DD_{ijt}^T + \gamma_3 \mathbf{X}_{ijt} + \gamma_4 \mathbf{M}_{ij}), \quad (2)$$

where the matrices  $\mathbf{X}_{ijt}$  and  $\mathbf{M}_{ij}$  include all the controls used in our estimation of (1). The results are presented in Table 5 below. Notice, in the absence of binding term limits, the democratic peace result still holds, since the estimated coefficient for  $\gamma_1$  is always negative and significant at the 1 percent level. However, in all specifications,  $\gamma_2$  is positive and significant (at least at the 5 percent level) and the  $\chi^2$  tests reveal that the sum of the coefficients  $\gamma_1$  and  $\gamma_2$  is never statistically

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<sup>21</sup>An alternative empirical strategy to verify whether re-election incentives deter policymakers from breaking peaceful relations would be to examine how the use of force affects the likelihood that a leader remains in office. In line with this idea, various studies summarized in Bueno de Mesquita (2006) find that "defeat in war, for instance, is costly for society and therefore for accountable democratic leaders more so than for nonaccountable autocrats, monarchs, or junta leaders" (p. 640). Notice, however, that these studies are likely to suffer from an important selection bias: democratic leaders are unlikely to engage in conflicts, if they anticipate that this would lower their chances of retaining power.

<sup>22</sup>In this case, there are three possible types of  $DD$  country pairs, depending on the value taken by the dummy variable  $Term_{it}^T$  for each country in the dyad.

<sup>23</sup>The results of specifications in which we distinguished between mixed and autocratic dyads confirm our earlier result that autocratic and mixed dyads do not systematically differ in terms of likelihood of conflicts.

Table 5: Results for term limits (final mandate)

	(1)	(2)	(3)	(4)	(5)
	Baseline	Dyad FE	Year FE	Dyad & Year FE	1950-2000
$DD_{ijt}$	-1.062*** (0.167)	-0.588*** (0.104)	-1.312*** (0.196)	-0.716*** (0.112)	-1.452*** (0.268)
$DD_{ijt}^T$	0.848*** (0.267)	0.417** (0.207)	1.061*** (0.288)	0.513** (0.207)	1.340*** (0.363)
$\ln \text{ distance}_{ij}$	-0.533*** (0.054)		-0.671*** (0.064)		-0.741*** (0.105)
$\text{Border}_{ijt}$	2.104*** (0.165)	0.234 (0.177)	2.092*** (0.168)	0.136 (0.177)	2.325*** (0.237)
$\text{Major power}_{ijt}$	1.323*** (0.174)	0.839*** (0.123)	1.567*** (0.176)	0.637*** (0.128)	1.577*** (0.326)
$\text{Military balance}_{ijt}$	4.193*** (0.901)	1.370** (0.570)	3.990*** (0.924)	0.636 (0.607)	4.892** (2.225)
$\text{Alliance}_{ijt}$	-0.397*** (0.136)	-0.458*** (0.071)	-0.633*** (0.139)	-0.877*** (0.079)	-0.588** (0.200)
$\text{GDP}_{ijt}$					-0.001 (0.010)
$\text{Trade}_{ijt}$					0.000 (0.000)
$\text{Colony}_{ij}$					0.312 (0.398)
$\text{Oil}_{ij}$					1.357*** (0.410)
Dyad fixed effects	no	yes	no	yes	no
Year fixed effects	no	no	yes	yes	no
$\chi^2 \text{ test: } DD_{ijt} + DD_{ijt}^T = 0$	0.89	0.83	1.12	1.09	0.03
Observations	547,972	58,450	546,248	58,450	335,828
Log likelihood	-14,568.20	-8,706.32	-13,813.39	-8,105.51	-6,680.19
Pseudo $R^2$	0.21	0.25	0.25	0.30	0.25
$\chi^2$	1,598.76***	160.97***	3,983.22***	1,362.59***	1,007.97***

Notes: dependent variable =1 if  $MID_{ijt} > 2$  and 0 otherwise; standard errors clustered by dyad in parenthesis; \*\*\* denotes significance at 1% level; \*\* 5% level; \* 10% level. Column (2) and (4) report the results of conditional logit estimations.

different from zero. This indicates that the presence of binding term limits in at least one of the two countries is enough to *invalidate* the democratic peace result, suggesting that politicians' fear of losing office is the reason why democracies are able to sustain more peaceful relations with each other. Notice that this finding holds in our baseline specification (column (1)), but also when we introduce dyad and year fixed effects (columns (2)-(4)), and when we perform our estimation on the reduced sample period, including the second set of controls (column (5)). All other controls are always significant and have the expected sign.

Next, we turn our attention to the impact of different types of term limits. Comparing the conflict patterns of all dyad types, we find that the only systematic difference is between country pairs with no term limits and democratic dyads in which at least one of the leaders is subject to term limits of a given type.<sup>24</sup> We thus estimate the following logit model:

$$Pr(MID_{ijt} = 1) = G(\lambda_0 + \lambda_1 DD_{ijt} + \lambda_2 DD_{ijt}^T + \lambda_3 DD_{ijt}^{T-1} + \lambda_4 \mathbf{X}_{ijt} + \lambda_5 \mathbf{M}_{ij}), \quad (3)$$

where the omitted category comprises both autocratic and mixed dyads, and  $DD_{ijt}^{T-1}$  indicates dyads in which the variable  $Term_{it}^T = 1$  for one or both countries. The results for this set of estimations are presented in Table 6. In all specifications, the point estimate of  $\lambda_2$  is always positive and larger than that of  $\lambda_3$ , and the results of the  $\chi^2$  tests reject the null hypothesis that  $\lambda_2 = \lambda_3$ , at least at the 5 percent significance level. We thus find strong evidence that conflicts are more likely to occur when democratic leaders are in their last possible mandate, compared to the penultimate one.

Notice that, contrary to Hess and Orphanides (1995), our results suggest that military disputes are not driven by diversionary motives: if democratic leaders used conflicts as a way to improve their electoral success, we would expect military disputes to be *more* likely in their penultimate term, when they can still get re-elected, compared to their last one.<sup>25</sup> It is also interesting to compare our findings with those of the literature on "military political cycles". In particular, the paper by Gaubatz (1991) shows that democracies are more likely to become involved in conflicts *early* in the electoral cycle, when the leader faces a low risk of losing power. This result suggests that electoral incentives act as a discipline device, and is thus consistent with our finding that military disputes are more likely to occur when leaders are in their *last* possible term in office.

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<sup>24</sup>In this case, there are six possible democratic country pairs, depending on the value taken by the dummy variables  $Term_{it}^T$  and  $Term_{it}^{T-1}$  for each country in the dyad.

<sup>25</sup>The results of Table 6 continue to hold if we control for economic conditions when policymakers can be re-elected: to check for possible diversion motives, we have tried including an interaction term between the variable  $Growth_{ijt}$  defined above and the dummy variable  $DD_{ijt}^{T-1}$ ; the coefficient on this term was always insignificant, the estimates for  $\lambda_2$  were always positive and significant, and significantly larger than the estimates for  $\lambda_3$ .

Table 6: Results for term limits (penultimate and final mandate)

	(1)	(2)	(3)	(4)	(5)
	Baseline	Dyad FE	Year FE	Dyad & Year FE	1950-2000
$DD_{ijt}$	-1.067*** (0.187)	-0.535*** (0.111)	-1.333*** (0.217)	-0.683*** (0.117)	-1.478*** (0.303)
$DD_{ijt}^T$	0.850*** (0.270)	0.380* (0.209)	1.067*** (0.291)	0.488** (0.210)	1.415*** (0.376)
$DD_{ijt}^{T-1}$	0.038 (0.269)	-0.307 (0.237)	0.172 (0.287)	-0.209 (0.240)	0.151 (0.356)
$\ln \text{ distance}_{ij}$	-0.533*** (0.054)		-0.671*** (0.064)		-0.742*** (0.105)
$\text{Border}_{ijt}$	2.104*** (0.165)	0.233 (0.177)	2.092*** (0.168)	0.136 (0.177)	2.326*** (0.237)
$\text{Major power}_{ijt}$	1.323*** (0.174)	0.847*** (0.123)	1.569*** (0.176)	0.642*** (0.128)	1.583*** (0.330)
$\text{Military balance}_{ijt}$	4.189*** (0.905)	1.376** (0.569)	3.971*** (0.931)	0.643 (0.607)	4.835** (2.270)
$\text{Alliance}_{ijt}$	-0.397*** (0.136)	-0.455*** (0.071)	-0.634*** (0.138)	-0.875*** (0.079)	-0.589** (0.200)
$\text{GDP}_{ijt}$					-0.001 (0.008)
$\text{Trade}_{ijt}$					0.000 (0.000)
$\text{Colony}_{ij}$					0.312 (0.398)
$\text{Oil}_{ij}$					1.357*** (0.410)
Dyad fixed effects	no	yes	no	yes	no
Year fixed effects	no	no	yes	yes	no
$\chi^2 \text{ test: } DD_{ijt}^T = DD_{ijt}^{T-1}$	6.87***	5.42**	7.72***	5.49**	11.54***
Observations	547,972	58,450	546,248	58,450	335,828
Log likelihood	-14,568.18	-8,705.43	-13,813.09	-8,105.12	-6,680.04
Pseudo $R^2$	0.21	0.25	0.25	0.30	0.25
$\chi^2$	1,614.13***	162.74***	4,001.44***	1,363.37***	1,015.32***

Notes: dependent variable =1 if  $MID_{ijt} > 2$  and 0 otherwise; standard errors clustered by dyad in parenthesis; \*\*\* denotes significance at 1% level; \*\* 5% level; \* 10% level. Column (2) and (4) report the results of conditional logit estimations.

Table 7: Results for democratic dyads only

	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline	Dyad FE	1950-2000	Baseline	Dyad FE	1950-2000
$DD_{ijt}^T$	0.728*** (0.290)	1.251*** (0.377)	0.802** (0.363)	0.735** (0.299)	1.658*** (0.426)	0.812** (0.379)
$DD_{ijt}^{T-1}$				0.063 (0.277)	0.860** (0.380)	0.060 (0.357)
$\ln \text{ distance}_{ij}$	-0.853*** (0.121)		-0.716*** (0.204)	-0.857*** (0.124)		-0.719*** (0.205)
$\text{Border}_{ijt}$	1.353*** (0.378)	14.698 (895.103)	1.775*** (0.576)	1.350*** (0.383)	14.632 (895.095)	1.773*** (0.579)
$\text{Major power}_{ijt}$	0.205 (0.380)	-1.543*** (0.575)	-0.419 (0.521)	0.209 (0.383)	-1.725*** (0.593)	-0.419 (0.522)
$\text{Military balance}_{ijt}$	7.338*** (2.253)	5.747** (2.972)	10.649*** (3.246)	7.299** (2.322)	6.641** (3.058)	10.544*** (3.492)
$\text{Alliance}_{ijt}$	-0.010 (0.304)	-0.268 (0.280)	0.552 (0.483)	-0.014 (0.305)	-0.333 (0.282)	0.549 (0.485)
$\text{GDP}_{ijt}$			-0.007 (0.019)			-0.007 (0.019)
$\text{Trade}_{ijt}$			0.000 (0.000)			0.000 (0.000)
$\text{Colony}_{ij}$			1.577*** (0.589)			1.579*** (0.587)
Dyad fixed effects	no	yes	no	no	yes	no
$\chi^2 \text{ test: } DD_{ijt}^T = DD_{ijt}^{T-1}$				4.29**	3.67*	3.11*
Observations	74,215	3,422	53,909	74,215	3,422	53,909
Log likelihood	-1,174.64	-458.28	-629.89	-629.0	-455.77	-629.87
Pseudo $R^2$	0.18	0.41	0.24	0.18	0.41	0.24
$\chi^2$	277.18***	27.84***	582.83***	318.85***	32.86***	585.42***

Notes: dependent variable =1 if  $MID_{ijt} > 2$  and 0 otherwise; standard errors clustered by dyad in parenthesis; \*\*\* denotes significance at 1% level; \*\* 5% level; \* 10% level. Columns (2) and (4) report the results of conditional logit estimations. The regressor ‘Oil’ is dropped in columns (3) and (6) because it perfectly predicts the outcome.

In our analysis so far, we have examined the likelihood of conflicts in all types of political dyads. In a last set of regressions, we focus on the impact of term limits on the likelihood of conflicts in democratic dyads only. We thus estimate the following logit model:

$$Pr(MID_{ijt} = 1) = G(\mu_0 + \mu_1 DD_{ijt}^T + \mu_2 DD_{ijt}^{T-1} + \mu_3 \mathbf{X}_{ijt} + \mu_4 \mathbf{M}_{ij}), \quad (4)$$

where the omitted category comprises all democratic dyads. Notice that this exercise leads to a much smaller sample (i.e., 74,215 versus 547,972 observations). The inclusion of dyad fixed effects further reduces the sample, since the observations for all country pairs that were never in conflict are dropped. However, these specifications allow us to capture the impact of (changes in) term limits on the likelihood of conflicts within each (democratic) country pair.

The results of these estimations are reported in Table 7 above. Notice that the estimated  $\mu_1$  is always positive and significant, confirming that democratic pairs of countries are more likely to fight each other when their leaders are subject to binding term limits. The last three columns of the table also show that conflicts involving democracies with term limits are more likely to arise in the executives' last mandate (i.e., the  $\chi^2$  test always rejects the null hypothesis that  $\mu_1 = \mu_2$ ).<sup>26</sup>

### 4.3 Robustness Checks

We now discuss the results of a series of additional estimations, which demonstrate the robustness of our empirical findings.<sup>27</sup>

#### Different Samples

We first show that our results are unaffected when using different samples, either in terms of country coverage or type of conflicts considered.

Some studies on interstate conflicts have focused on “politically relevant” dyads, defined as pairs of contiguous states and pairs of states in which at least one is classified as a major power. Columns (1) and (2) of Table A.1 in the Appendix focus on this narrower sample and confirm that democracies in which leaders can be re-elected are less conflict prone than autocracies, while the same is not true for democracies in which the leaders faces binding term limits. Once again, we find that democracies with term limits are more likely to be involved in military disputes during the executive's last mandate.

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<sup>26</sup>When focusing on democratic dyads, we do not estimate specifications with year fixed effects, since for many years there is only one observation where the dependent variable is equal to 1.

<sup>27</sup>Most of these results are reported in the Appendix. The results that are omitted are available upon request.

We also show that our results are not driven by democracies with weak institutions, which may be particularly prone to conflict (e.g., Baliga *et al.*, 2007). To this end, in columns (3) and (4) we report the results of estimations based on a more stringent definition of democratic countries (i.e., having a Polity index higher than 6). We have also tried (columns (5) and (6)) excluding dyads involving “limited democracies” (i.e., countries with a Polity index between  $-4$  and  $4$ ). In both cases, the results confirm our previous findings on the effects of term limits on interstate conflicts.

Columns (7) and (8) refer to specifications in which we have excluded “young democracies” (i.e., less than ten years since the transition from autocracy to democracy), since these may be inexperienced in the functioning of the checks and balances of democratic systems, and thus more prone to violence.<sup>28</sup>

## Term limits

It could be argued that our results may be due to an omitted variable, driving both the fact that some countries adopt term limits and that they are more belligerent. A first argument to dismiss this concern comes from the comparison between  $DD_{ijt}^T$  and  $DD_{ijt}^{T-1}$  dyads: the results of Table 6 indicate that electoral calendars have a crucial impact on interstate conflicts; if countries with term limits were intrinsically more bellicose, we would not expect any difference between the executive’s last and penultimate mandate.<sup>29</sup>

Further arguments against the spuriousness of our results on term limits come from a series of additional robustness checks (see Table A.2 in the Appendix). First, since term limits are only present in countries with presidential or semi-presidential political systems, we want to rule out that our findings on democracies with term limits are driven by the centralization of power in the hands of the executive. To do so, we have included in our regressions the variable  $Presidential_{ijt}$ , which is equal to 1 if at least one of the two countries in a democratic dyad has a presidential or semi-presidential political system (see columns (1) and (2)). The results on term limits are unaffected, even after controlling for the type of political system in which they arise.

Reverse causality is another possible concern, i.e., military conflicts leading to the adoption of term limits.<sup>30</sup> To address this issue, in columns (3) and (4) we have eliminated all dyads

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<sup>28</sup>Our results were also unaffected when excluding the following: recent young democracies (i.e., young democracies born after 1960); dyads involving the United States; conflicts classified as seizures; observations before 1939 or after 1989 (i.e., the Cold War period); and “general wars” (i.e., the two World Wars).

<sup>29</sup>Alternatively, an instrumental variable approach could be used. However, finding an instrument for term limits is extremely hard, since there is no apparent factor driving their adoption in different countries. Moreover, even if a valid instrument were to be found, it could not be used to distinguish between an executive’s penultimate and last term in office.

<sup>30</sup>For some countries, this concern can be easily dismissed, since the introduction of term limits was arguably



involving democracies with “young” term limits (i.e., less than ten years since their introduction).<sup>31</sup> Although there is no statistical difference between the executive’s penultimate and last mandate, we still find strong support for the result that democracies are less conflict prone than autocracies, but only if their leaders can be re-elected.

As a final robustness check on term limits, we have also estimated specifications considering only countries that impose one-term limits on their executives (e.g., Mexico since 1917). This is to rule out that the results concerning the effects of binding term limits are not simply driven by leaders who are in their second term, who may have “warmed up” to the use of violence. The point estimate for  $DD_{ijt}^T$  is positive and significant, and offsets the effect of  $DD_{ijt}$ . This confirms that, in the absence of re-election incentives, democracies are as conflict prone as autocracies.

## Methodology

Given the long time-span of our panel, one may be concerned about the possibility of temporal dependence within each dyad. In order to take this issue into account, we have included a cubic spline of the number of years since the last conflict occurred (e.g., Beck *et al.*, 1998). The results of these specifications, reported in columns (5) and (6) of Table A.2, show no qualitative change, with the exception of the alliance variable that becomes insignificant.

A further concern refers to the specifications with dyadic fixed effects. Their inclusion implies that all country pairs that never experienced a conflict are automatically dropped, so that we are left with samples that contain only about ten percent of the original observations. This methodology has two advantages: it allows to control for unobserved heterogeneity between the country pairs, and it restricts the attention to countries that have actually had a conflict. However, it also implies ignoring possible important information from the other dyads. An alternative is to estimate a linear probability model (i.e., OLS) with the inclusion of dyad fixed effects. The results of such specifications, reported in columns (7) and (8) of Table A.2, do not show any qualitative difference with respect to their logit counterparts.

In all the regressions discussed so far, standard errors have been clustered at the level of each dyad. We also tried clustering errors within each year to allow arbitrary time correlations. The

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driven by domestic political motives. For example, as mentioned above, in the United States term limits were put in place in 1951, after President Roosevelt had occupied the presidency for four consecutive terms. Congressional debates at the time show that the introduction of the XXII Amendment was meant to guarantee rotation in office (see Grimes (1978) for a discussion). Glaeser (1997) argues that the ban imposed with the XXII Amendment can be rationalized in a framework in which term limits reduce the risk that any individual voter must face of being governed by a legislator with an opposing ideology for a very long time.

<sup>31</sup>This implies, for example, dropping all dyads involving the United States for the period 1951-1961 (unless the other country in the dyad is a democracy in which term limits have been introduced more than ten years before).

significance of the results is unchanged by this alternative strategy.

## Conflict initiation and targeting

One could argue that “lame duck” presidents may be perceived to be weaker opponents. In this case, the higher likelihood of conflicts found for  $DD_{it}^T$  country pairs could simply be due to the fact that democracies in which the leaders face binding term limits are more often targeted. To address this concern, we have used the information provided in the COW dataset about conflict initiation (e.g., Reiter and Stam, 2003), though the use of this variable is somewhat problematic (see Gowa, 1999). In order to verify whether the existence of term limits makes a country more likely to initiate or be targeted in a conflict, we have created a “directed” dataset, in which we keep track of the identity of challenger and responder. Using this new dataset, we have estimated two sets of specifications: in the first case, the dependent variable is equal to 1 if a country is initiating a conflict; in the second case, the dependent variable is equal to 1 if a country is targeted. We find that democratic countries with term limits are *both* more likely to initiate a conflict and to be targeted by other countries. This is consistent with a model in which democratic leaders facing binding term limits are more bellicose, and conflict involve simultaneous attacks, as the one discussed below.

## 5 A Simple Model of Interstate Conflicts

Our empirical analysis shows that the well-known democratic peace result holds only for democratic pairs in which *both* leaders can be re-elected: conflicts in democratic dyads in which even only one of the leaders faces binding term limits are as likely as conflicts in autocratic and mixed dyads. We also find that electoral calendars matter: democracies with term limits are less likely to be involved in conflicts when the executive can still be re-elected once than when he cannot be re-elected at all. These findings suggest that the fear of losing office deters politicians from engaging in costly conflicts, and that electoral accountability is the reason why conflicts between democracies are so rare.

In what follows, we develop a simple model of international cooperation and conflicts, which provides a theoretical rationale for the democratic peace phenomenon and can also explain the empirical results on the effects of term limits. The game is a repeated security dilemma as initially introduced by Jervis (1978). The key feature of our model is the interaction between a country’s domestic institutions—and in particular whether or not its leader is subject to periodic elections—and the leader’s incentives to engage in military conflicts. We introduce a tension between the

interests of the citizens and those of the leaders, who are more prone to break peaceful relations. In democracies, leaders can be kept in check by the desire to be re-elected; this is not the case in autocracies.<sup>32</sup>

## 5.1 International Cooperation and Conflicts

International security relations are modeled as a repeated prisoners' dilemma game between two countries, 1 and 2. As in any standard prisoners' dilemma game, each country can choose between two strategies: either cooperate ( $C$ ), that is, not using military force against the other country, or defect ( $D$ ), that is, deploying military force. We assume that each country  $i$  has wealth of  $W_i$ . Independently of the outcome of the conflict, waging a war costs a country a fraction  $K > 0$  of its wealth.<sup>33</sup> The parameter  $G$  captures the extent of the spoils obtained from attacking the other country. Thus, in a peaceful situation (when both countries play  $C$ ), each country  $i$  keeps all its wealth, without wasting any resources deploying military forces, achieving a payoff of  $\Pi_i^C = W_i$ . If country  $i$  plays  $D$  while country  $j$  plays  $C$ , the attacking country obtains a payoff equal to  $\Pi_i^D = (1 - K)W_i + GW_j$ , while the other country gets  $\Pi_j^P = (1 - G)W_j$ . In a conflict situation, in which both countries play  $D$ , there is no appropriation, and both countries lose the resources employed in the conflict,  $\Pi_i^N = (1 - K)W_i$ . Our setup is close to the one described by Jackson and Morelli (2007), who also assume that military conflicts are driven by the desire to appropriate a portion of the other country's wealth and that the probability of winning a war depends on the countries' respective wealth levels. Crucially, however, they rule out the possibility of costly stalemates, assuming that wars are always desirable for one of the two countries involved.

The goal of our analysis is to explain how politicians' re-election incentives—rather than countries' relative power—affect the likelihood of conflicts. In our empirical analysis, we have isolated institutional differences between countries from other types of asymmetries (e.g., controlling for differences in military capabilities or GDP per capita). In a similar fashion, in the theoretical analysis that follows, we shall focus on countries that have the same initial wealth and access to the same military technology, so as to focus on the role of elections and term limits.

Table 8 summarizes the payoffs in a such symmetric setup. Assuming  $G > K$ , each country is tempted to use force against the other to obtain a portion of its wealth and resources. However, both countries find it desirable to be at peace rather than being involved in a war, in which they

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<sup>32</sup>Recent studies by McGillivray and Smith (2008) and Conconi and Sahuguet (2009) have also examined the role of electoral incentives on the sustainability of international cooperation.

<sup>33</sup>Reflecting the empirical literature, the term “war” should be interpreted broadly, to include conflicts of different degree of hostility (e.g., threats of use of force, border violations, military attacks, and wars).

simply waste a fraction  $K$  of their wealth, without gaining any resources from the other country. This implies that the following inequalities must hold:  $\Pi^D > \Pi^C > \Pi^N > \Pi^P$ .

Table 8: Prisoners' dilemma (countries' payoffs)

		1	
		C	D
2	C	$\Pi^C = W$	$\Pi^D = (1 - K + G)W$
	D	$\Pi^P = (1 - G)W$	$\Pi^N = (1 - K)W$

The prisoners' dilemma described above constitutes the stage game, which is repeated indefinitely. We denote the current period by  $t$ , ( $t = 0, 1, 2, \dots, \infty$ ) and the actions taken at period  $t$  by  $a^t = (a_1^t, a_2^t)$ , where  $a_i^t \in A = \{C, D\}$ . The payoffs to country  $i$  are the stage payoffs of the stage game and are denoted by  $\Pi_i^t(a_i^t, a_{-i}^t)$ , where  $a_{-i}^t$  refers to the action taken at time  $t$  by the other country. The main difference with a standard repeated prisoners' dilemma game between two countries is that the actual players at each date are the political leaders, whose incentives differ from those of their countries.

## 5.2 Leaders' Objectives

To focus on the role of electoral accountability, we make two main assumptions on the preferences of the leaders. First, we assume that, independently of the political regime, the utility of a leader depends on whether or not he is in power and on the actions played in the security dilemma game.<sup>34</sup> The second assumption is that leaders have different preferences from their citizens: in line with the literature on office-motivated politicians (e.g. Rogoff, 1990), we assume that leaders derive “ego rents” equal to  $Z$  while in power; to capture Kant's idea that politicians need to be “disciplined” because they do not fully internalize the costs of military conflicts, we also assume that leaders only take into account a fraction  $\alpha$  of the total costs incurred by their country when deploying military force. From their point of view, the payoffs of the stage game are thus different from those of Table 8, and are given by  $\pi^D = (1 - \alpha K + G)W > \pi^C = W > \pi^N = (1 - \alpha K)G > \pi^P = (1 - G)W$ . Country leaders are thus “biased” in their evaluation of the consequences of the use of force, and citizens want to discipline them toward more peaceful behavior.

<sup>34</sup>Our model thus belongs to the institutional explanations of the democratic peace: in the absence of any constraint on them, democratic leaders would be as conflict prone as autocratic leaders.

To incorporate the fact that countries are run by leaders whose identity may change overtime, we assume that in each country there is a pool of identical leaders. We denote by  $l_i^t$  the identity of the leader of country  $i$  at time  $t$ , with  $l_i \in L_i = \{1, 2, 3, \dots\}$ . The payoff of policymaker  $l$  of country  $i$  can then be written as

$$U_i^l = \sum_{\substack{t=0 \\ l_i^t=l}}^{\infty} \delta^t Z + \sum_{t=0}^{\infty} \delta^t \pi_i^t(a_i^t, a_{-i}^t) \quad (5)$$

where  $\delta \in (0, 1)$  is the common factor by which leaders discount future payoffs.

### 5.3 Political Regimes

We introduce a recursive process that describes which leader is in power in a given country at any point in time. We denote by  $e^t = (e_1^t, e_2^t)$  the results of this process at time  $t$ . The result  $e_i^t = 0$  corresponds to a situation in which the identity of the leader in power in country  $i$  at time  $t$  does not change. This could be the case either because there is no election in that period, or because the incumbent is re-elected. The result  $e_i^t = 1$  corresponds instead to situations in which there is an election and the incumbent leader  $l$  loses office and is replaced by  $l_i^t + 1$ . In democracies, changes in the identity of the leaders result from an exogenous electoral process. We do not explicitly model voters as players of the game; however, we describe a voting process that implicitly reflects their interests and is allowed to depend on the history of the game.

Let us denote with  $h^t = (a^0, a^1, a^2, \dots, a^t; e^0, e^1, e^2, \dots, e^t)$  the history of the game up to time  $t$ . The space of all possible histories at time  $t$  is given by  $H^t$  and the space of all histories is  $H = \cup_{t \geq 1} H^t$ . For each possible history up to time  $t$  and given the actions in that period, the incumbent stays in power if  $e_i^t = 0$ . The function  $p_i^t : H^t \times A^2 \rightarrow [0, 1]$  captures a leader's probability of retaining office.

We consider first the case of autocracies, which we define as regimes in which leaders are not subject to periodic elections. This is equivalent to a setting in which incumbents stay in power with certainty:

**Assumption 1** *Autocratic leaders cannot be removed from office:  $p_i^t(h^t, a^t) = 1$  for any  $h^t, a^t$ .*

In autocracies, citizens have no way to discipline their leaders. In democracies, periodic elections allow instead voters to deter leaders from breaking peace. For simplicity, we will focus on one-period mandates, though our analysis can be readily extended to more general electoral calendars. We assume that politicians are rewarded if they are able to sustain peaceful relations and

are punished if they behave aggressively:<sup>35</sup>

**Assumption 2** *Democratic leaders have higher chances of being re-elected in peaceful periods than when they use force:  $p_i^t(h^t, (C, C)) \equiv \bar{p} > p_i^t(h^t, (D, \cdot)) \equiv \underline{p}$ .*

Notice that Assumption 2 is in line with the interests of the voters, who want to deter politicians from engaging in costly conflicts.<sup>36</sup> It would instead be against the interests of the voters if their leader behaved cooperatively when the other country defects. We thus assume the following:

**Assumption 3** *When faced with aggressive behavior by the other country, democratic leaders have higher chances of being re-elected if they use force:  $p_i^t(h^t, (D, D)) > p_i^t(h^t, (C, D))$ .*

Finally, consider the case of democracies that restrict the number of mandates that can be served by a given leader. The following assumption applies to leaders of countries with one-term limits, as well as to leaders serving their second term in countries with two-term limits:

**Assumption 4** *Democratic leaders facing binding term limits cannot be re-elected:  $p_i^t(h^t, a^t) = 0$  for any  $h^t, a^t$ .*

## 5.4 Equilibrium

A strategy for the leader of country  $i$  is a function  $\sigma_i : H \rightarrow A$ . Note that there is no explicit mention of the identity of the leader playing at each period in the strategies. This is not necessary, since the recursive formulas take into account the election results which are incorporated in the history. Hence, the strategies take into account the identity of the leader, which depend on histories.

The main idea of sustaining cooperation in repeated games is that, when players are patient enough, short-run opportunism is more than compensated by the long-run gains of maintaining peaceful relationships. It is well known that in repeated games many equilibria are possible. In what follows, we examine the sustainability of the efficient equilibrium, along which the two countries are always at peace with each other. By comparing conditions under which international peace can be sustained in different political regimes, we will show that electoral incentives can

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<sup>35</sup>The re-election chances of a democratic leader who deploys force are assumed to be independent of the behavior of the other country's leader. Allowing  $p_i^t(h^t, (D, D))$  to differ from  $p_i^t(h^t, (D, C))$  would not affect the main results of our analysis (see Conconi *et al.*, 2008).

<sup>36</sup>Assumption 2 is also in line with the finding that democracies with term limits are more conflict prone during the executive's last mandate. This suggests that breaking peaceful relations tends to reduce the chances that democratic leaders remain in office: if breaking peace improved a leader's electoral success (or had no impact on it), we would expect military disputes to be more likely (as likely) in the penultimate mandate.

provide a simple theoretical explanation for the fact that democracies almost never fight each other, and that binding term limits eliminate differences in the incentives of democratic and autocratic leaders.

Equilibrium strategies must satisfy incentive constraints that involve a comparison between short-run defection gains and long-run punishment losses. The easiest way to enforce the cooperative equilibrium is to punish deviations as harshly as possible. In the context of a prisoners' dilemma, maximal punishments take a simple form: they correspond to the infinite repetition of the static Nash equilibrium. We thus focus on Nash-reversion punishment strategies.<sup>37</sup>

## 5.5 Electoral Incentives and Conflicts

We examine the conditions under which cooperation can be sustained as a subgame perfect equilibrium in trigger strategies. We find that the critical discount factor is lower for democracies, implying that cooperation is easier when two democracies are involved. We then introduce term limits and show that, when binding, they decrease the sustainability of cooperation to the level of autocracies.

In the case of autocracies, the relevant incentive constraint is the following:

$$\pi^D - \pi^C \leq \delta \Omega_A, \quad (6)$$

where

$$\Omega_A \equiv \frac{\pi^C - \pi^N}{1 - \delta}. \quad (7)$$

From (7) we can derive the critical discount factor,  $\delta_A$ , which allows autocratic leaders to sustain international peace. This represents a measure of the difficulty to sustain international cooperation: the lower is  $\delta_A$ , the less weight leaders need to attach to future periods for peace to be sustainable.

It is straightforward to show that larger costs of deploying military force and smaller benefits from attacking the other country make it easier to sustain peace ( $\partial \delta_A / \partial K < 0$ ,  $\partial \delta_A / \partial G > 0$ ). The incentives of an autocratic leader to break peace do not depend instead on the extent of the office rents derived from being in office ( $\partial \delta_A / \partial Z = 0$ ). Therefore, when leaders are not subject to re-election, the extent of their “opportunism” does not affect their incentives to enter a military

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<sup>37</sup>Starting from Dixit (1987), these strategies have been studied extensively in the context of self-enforcing international cooperation. As stressed by Farrel and Maskin (1989), although Nash reversion represents a credible threat—since playing noncooperatively indefinitely is always an equilibrium strategy in the continuation game—it may be considered implausible. As shown in Conconi *et al.* (2008), the main results of our analysis carry through if we consider renegotiation-proof punishment strategies as in Van Damme (1989).

conflict. As shown below, this is not the case for democratically-elected leaders, who can lose office and the associated rents.

The incentive constraint of democratic politicians can be written as:

$$\pi^D - \pi^C \leq \delta \Omega_D, \quad (8)$$

where

$$\Omega_D \equiv \frac{\pi^C - \pi^N}{1 - \delta} + Z \left( \frac{\bar{p}}{1 - \bar{p}\delta} - \frac{\underline{p}}{1 - \underline{p}\delta} \right). \quad (9)$$

Equation (8) yields a critical discount factor,  $\delta_D$ , above which democratic leaders can sustain peace. It can be shown that, as in the case of autocracies, higher costs of deploying military force and higher gains to be achieved from attacking another country make it easier to sustain peace between democracies ( $\partial \delta_D / \partial K < 0$ ,  $\partial \delta_D / \partial G > 0$ ). However, the incentives of democratic leaders to break peace depend crucially on the extent of the office rents  $Z$ . In particular, under Assumption 2, costly conflicts reduce leaders' chances to hold on to power. To verify this, notice that breaking peace at time  $t$  lowers the chances of being re-elected from period  $t + 1$  onwards from  $\bar{p}$  to  $\underline{p}$ , implying a loss in terms of expected rents.

Hence, the punishment faced by democratic leaders who break peaceful relations is unambiguously more severe than the corresponding punishment faced by autocratic leaders, i.e.,  $\Omega_D > \Omega_A$ . In turn, this implies that the critical discount factor above which peace can be sustained ( $\delta_D$ ) is lower than the corresponding discount factor for autocracies ( $\delta_A$ ). It follows that conflicts between pairs of democratic countries will be less likely than conflicts between non-democratic countries.

Consider next pairs of democratic and autocratic countries (mixed dyads). In this case, the likelihood of conflicts will depend only on the incentives of the autocratic leader, and the probability of conflicts will be the same as for autocratic dyads.<sup>38</sup> Notice that our model also predicts that democratic and autocratic leaders will *simultaneously* defect.<sup>39</sup>

**Result 1** *Democratic dyads are less likely to fight each other than autocratic and mixed dyads.*

This result is in line with the two key empirical findings of the literature on the democratic peace: first, democratic pairs of state almost never fight other democracies; second, democracies regularly fight non-democracies.<sup>40</sup>

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<sup>38</sup>If leaders draw the common discount factor from a distribution  $F(\delta)$ , the probability of conflicts in autocratic and mixed dyads will be given by  $F(\delta_A)$ , while the probability of conflicts in democratic dyads will be  $F(\delta_D) < F(\delta_A)$ .

<sup>39</sup>A democratic leader has always incentives to respond to aggressive behavior by an autocratic leader: compared to being "cheated" upon, this leads both to a higher period payoff and a higher probability of being re-elected.

<sup>40</sup>Our model predicts that, in equilibrium, two countries will always be either at war or at peace with each other.



In our model, electoral accountability drives democratic leaders toward peaceful action. However, since this disciplining effect works through the threat of losing power, it can be limited or even eliminated by the presence of executive term limits. We thus consider the case of democracies in which the leaders face restrictions on the number of mandates they can serve, and examine the effect of different types of term limits on the likelihood of conflicts in different dyads.

The incentive constraint of a democratic leader at  $T$  can be written as:

$$\pi^D - \pi^C \leq \delta \Omega_D^T, \quad (10)$$

where

$$\Omega_D^T = \frac{\pi^C - \pi^N}{1 - \delta}. \quad (11)$$

Comparison of (11) with (7) reveals that the punishment faced by democratic policymakers at  $T$  coincides with that faced by autocratic leaders. This implies that the critical discount factor above which a democratic leader at the end of his last mandate is able to sustain peace is equal to  $\delta_D^T = \delta_A$ . Hence, a democratic leader in his final period in office has the same incentives to break international peace as an autocratic leader. The intuition behind this result is that, in both cases, incumbent politicians are not accountable to the electorate: autocratic leaders, no matter what they do, retain office and continue to receive rents  $Z$ ; democratic leaders at  $T$ , no matter what they do, lose office and the associated rents. We can thus state the following:

**Result 2** *Conflicts between democracies in which the executives face binding term limits are as likely as conflicts involving autocracies.*

It is worth stressing that this result relies solely on the assumptions that politicians are office motivated and that autocratic leaders cannot be removed from office. It does not depend on Assumptions 2 and 3 above, since re-election chances play no role when leaders face binding term limits.

Let's now consider a leader who is in his first mandate in a country with two-term limits. His incentive constraint at  $T - 1$  can be written as

$$\pi^D - \pi^C \leq \delta \Omega_D^{T-1}, \quad (12)$$

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Conconi *et al.* (2008) shows that, by introducing a stochastic component in the countries' payoffs, it is possible to generate the democratic peace result, while at the same time allowing for the possibility of fluctuations between war and peace along the equilibrium path.

where

$$\Omega_D^{T-1} = \frac{\pi^C - \pi^N}{1 - \delta} + \delta Z(\underline{p} - \bar{p}). \quad (13)$$

Comparing (13) with (11), it is straightforward to verify that a democratic leader who is in his penultimate mandate is less tempted to break peace than a leader who is in his last possible term. It follows that

**Result 3** *Conflicts involving democracies with term limits are more likely to arise in the executive's last mandate.*

The model described above provides a simple rationale for Kant's original idea that electoral accountability can act as a discipline device. Compared to alternative theoretical explanations of the democratic peace, it has two main appealing features: it emphasizes the key institutional difference between democratic and autocratic political regimes, i.e., the presence or lack of periodic elections; and is able to explain the empirical findings discussed in Section 4 on the effects of executive term limits.

## 6 Conclusions

In this paper, we have analyzed the impact of electoral accountability on security relations, by examining the impact of executive term limits on the likelihood of interstate disputes. In line with previous studies, our empirical analysis shows that democracies are less likely to fight one another than autocracies or mixed pairs of states. However, this “democratic peace” result does not hold for democracies in which leaders face binding term limits, which are as conflict prone as autocracies. Moreover, disputes involving democracies with term limits are more likely to arise during the executive's last mandate than in the penultimate one. To explain these findings, we have developed a simple theoretical model in which electoral incentives act as a discipline device, deterring democratic leaders from breaking peaceful relations.

The general result is that domestic political institutions can have a crucial impact on international security relations, since they determine how leaders gain and retain office. In democracies without term limits, periodic elections allow citizens to hold opportunistic political leaders accountable for their foreign policy decisions. Conversely, in autocracies and democracies with term limits, politicians are freer to adopt unpopular policies, knowing that this will have no repercussion on whether or not they are able to stay in power.

Some caution is clearly warranted in interpreting the results of this paper. Though our analysis shows that political systems in which the leaders are subject to re-election are good for peace,

this should not be taken to imply that democratization of dictatorships will automatically lead to peace, as often argued by politicians.<sup>41</sup>

Many issues remain to be addressed to fully understand the links between domestic politics and conflicts. First, it would be interesting to examine the role of political parties, which we have abstracted from in this paper. Party loyalty may extend the time horizon of policymakers and mitigate the effects of term limits. Our empirical findings show that policymakers who cannot be re-elected behave very differently with respect to conflicts from policymakers who can still run for office, suggesting incomplete party discipline. As argued by Besley and Case (1995), if party loyalty matters, then our coefficients can be interpreted as a lower bound for the effects of executive term limits.

Another interesting avenue for further research is the comparison between different types of political systems. From a theoretical point of view, it is far from clear whether presidential or majoritarian parliamentary systems—which tend to be characterized by a strong executive—may be more or less conflict prone than proportional parliamentary systems—which tend to be more fractionalized.<sup>42</sup>

More attention should also be devoted to study how the information available to the public can affect policymakers’ incentives to sustain international cooperation. In this respect, it would be interesting to explore the impact of media coverage of conflicts on electoral accountability. Finally, our dataset on term limits could be used to investigate the impact of electoral accountability on other policy dimensions.

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<sup>41</sup>For example, in his 1994 State of the Union address, former President Bill Clinton stated that “the best strategy to ensure our security and to build a durable peace is to support the advance of democracy elsewhere. Democracies don’t attack each other.” More recently, President George W. Bush argue that “the reason why I’m so strong on democracy is democracies don’t go to war with each other. And the reason why is the people of most societies don’t like war, and they understand what war means.... I’ve got great faith in democracies to promote peace. And that’s why I’m such a strong believer that the way forward in the Middle East, the broader Middle East, is to promote democracy” (White House Press Release “President and Prime Minister Blair Discussed Iraq, Middle East”, November 12, 2004).

<sup>42</sup>The paper by Howell and Pevehouse (2005) is a first step in this direction. Focusing on the United States, they find a connection between the partisan composition of Congress and the frequency of major uses of force between 1945 and 2000. Extending their analysis to different countries and a longer time period would require collecting more information on different types of political systems.

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Appendix: List of countries included in our dataset

Afghanistan	Ecuador	Liberia	Sierra Leone
Albania	Egypt	Libya	Singapore
Algeria	El Salvador	Lithuania	Slovakia
Angola	Equatorial Guinea	Macedonia	Slovenia
Argentina	Eritrea	Madagascar	Solomon Islands
Armenia	Estonia	Malawi	Somalia
Australia	Ethiopia	Malaysia	South Africa
Austria	Fiji	Mali	South Korea
Austria-Hungary	Finland	Mauritania	Spain
Azerbaijan	France	Mauritius	Sri Lanka
Baden	Gabon	Mexico	Sudan
Bahrain	Gambia	Modena	Swaziland
Bangladesh	Georgia	Moldova	Sweden
Bavaria	German Dem. Rep.	Mongolia	Switzerland
Belarus	German Fed. Rep.	Morocco	Syria
Belgium	Germany	Mozambique	Taiwan
Benin	Ghana	Myanmar	Tajikistan
Bhutan	Greece	Namibia	Tanzania
Bolivia	Guatemala	Nepal	Thailand
Bosnia and Herzegovina	Guinea	Netherlands	Togo
Botswana	Guinea-Bissau	New Zealand	Trinidad and Tobago
Brazil	Guyana	Nicaragua	Tunisia
Bulgaria	Haiti	Niger	Turkey
Burkina Faso	Honduras	Nigeria	Turkmenistan
Burundi	Hungary	North Korea	Tuscany
Cambodia	India	Norway	Two Sicilies
Cameroon	Indonesia	Oman	Uganda
Canada	Iran	Pakistan	Ukraine
Central African Republic	Iraq	Panama	United Arab Emirates
Chad	Ireland	Papal States	United Kingdom
Chile	Israel	Papua New Guinea	United States of America
China	Italy	Paraguay	Uruguay
Colombia	Ivory Coast	Parma	Uzbekistan
Comoros	Jamaica	Peru	Venezuela
Congo	Japan	Philippines	Vietnam
Costa Rica	Jordan	Poland	Wuerttemberg
Croatia	Kazakhstan	Portugal	Yemen
Cuba	Kenya	Qatar	Yemen Arab Republic
Cyprus	Korea	Republic of Vietnam	Yemen People's Rep.
Czech Republic	Kuwait	Romania	Yugoslavia
Czechoslovakia	Kyrgyzstan	Russia	Zambia
Dem. Rep. of the Congo	Laos	Rwanda	Zimbabwe
Denmark	Latvia	Saudi Arabia	
Djibouti	Lebanon	Saxony	
Dominican Republic	Lesotho	Senegal	

Table A.1: Robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Politically relevant dyads		Polity > 6		Excluding limited democracies		Excluding young democracies	
$DD_{ijt}$	-1.190*** (0.166)	-1.162*** (0.183)	-0.990*** (0.207)	-1.023*** (0.207)	-1.106*** (0.175)	-1.111*** (0.195)	-1.641*** (0.266)	-1.727*** (0.293)
$DD_{ijt}^T$	0.917*** (0.283)	0.906*** (0.288)	0.796*** (0.314)	0.808*** (0.318)	0.884*** (0.273)	0.886*** (0.276)	1.462*** (0.371)	1.487*** (0.367)
$DD_{ijt}^{T-1}$		-0.190 (0.357)		0.253 (0.288)		0.041 (0.273)		0.675 (0.414)
Ln distance <sub>ij</sub>	-0.262*** (0.064)	-0.261*** (0.064)	-0.527*** (0.054)	-0.527*** (0.054)	-0.587*** (0.072)	-0.587*** (0.071)	-0.490*** (0.055)	-0.491*** (0.055)
Border <sub>ijt</sub>	0.999*** (0.234)	0.999*** (0.234)	2.106*** (0.166)	2.106*** (0.166)	1.922*** (0.204)	1.922*** (0.204)	2.066*** (0.173)	2.067*** (0.173)
Major power <sub>ijt</sub>	-0.262 (0.204)	-0.265 (0.204)	1.294*** (0.175)	1.296*** (0.175)	1.401*** (0.219)	1.402*** (0.220)	1.394*** (0.175)	1.397*** (0.175)
Military balance <sub>ijt</sub>	2.400*** (0.730)	2.415*** (0.732)	4.387*** (0.891)	4.366*** (0.896)	4.733*** (1.376)	4.726*** (1.387)	3.890*** (0.914)	3.850*** (0.921)
Alliance <sub>ijt</sub>	-0.465*** (0.116)	-0.463*** (0.116)	-0.390*** (0.135)	-0.392*** (0.135)	-0.452*** (0.166)	-0.453*** (0.166)	-0.392*** (0.145)	-0.399*** (0.146)
$\chi^2$ test: $DD_{ijt} + DD_{ijt}^T = 0$	0.26		0.49		0.85		0.30	
$\chi^2$ test: $DD_{ijt}^T = DD_{ijt}^{T-1}$		7.54***		2.66*		7.16***		3.77*
Observations	78,150	78,150	547,972	547,972	347,305	347,305	424,022	424,022
Log likelihood	-10,022.82	-10,022.53	-14,603.51	-14,602.98	-8,764.67	-8,764.66	-12,266.04	-12,264.29
Pseudo R <sup>2</sup>	0.07	0.07	0.20	0.20	0.20	0.20	0.20	0.20
$\chi^2$	265.74***	269.51***	1,503.22***	1,518.50***	1,485.16***	1,490.58***	1,485.16***	1,490.58***

Notes: dependent variable =1 if  $MID_{ijt} > 2$  and 0 otherwise; standard errors clustered by dyad in parenthesis; \*\*\* denotes significance at 1% level; \*\* 5% level; \* 10% level. Politically relevant dyads are defined as those involving contiguous states or major powers. Young democracies are defined as countries that have been democratic for less than ten years. Limited democracies are defined as those countries that have a Polity index between -4 and 4.



Table A.2: Robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Presidentialism		Excluding young term limits		Spline		Linear probability model	
$DD_{ijt}$	-1.202*** (0.181)	-1.102*** (0.196)	-1.046*** (0.174)	-1.053*** (0.186)	-0.952*** (0.128)	-0.940*** (0.141)	-0.004*** (0.001)	-0.002*** (0.001)
$DD_{ijt}^T$	0.814*** (0.266)	0.814** (0.271)	0.720** (0.334)	0.717** (0.332)	0.814*** (0.214)	0.808*** (0.220)	0.002*** (0.001)	0.002** (0.001)
$DD_{ijt}^{T-1}$		0.004 (0.277)		0.088 (0.346)		-0.088 (0.230)		-0.0003 (0.001)
$\ln \text{ distance}_{ij}$	-0.537*** (0.054)	-0.537*** (0.054)	-0.527*** (0.054)	-0.527*** (0.054)	-0.496*** (0.049)	-0.496*** (0.049)		
$\text{Border}_{ijt}$	2.104*** (0.165)	2.104*** (0.165)	2.118*** (0.166)	2.118*** (0.166)	1.753*** (0.132)	1.754*** (0.132)	0.009 (0.003)	0.009 (0.003)
$\text{Major power}_{ijt}$	1.327 (0.380)	1.327 (0.383)	1.314 (0.204)	1.315 (0.204)	1.516*** (0.145)	1.515*** (0.145)	0.009*** (0.003)	0.009*** (0.003)
$\text{Military balance}_{ijt}$	4.125*** (0.899)	4.125** (0.901)	3.883*** (0.913)	3.877*** (0.918)	3.601*** (0.759)	3.610*** (0.761)	0.060** (0.029)	0.060** (0.029)
$\text{Alliance}_{ijt}$	-0.401*** (0.137)	-0.401*** (0.137)	-0.410*** (0.139)	-0.411*** (0.139)	-0.093 (0.112)	-0.092 (0.112)	-0.008*** (0.002)	-0.008*** (0.002)
$\text{Presidential}_{ijt}$	0.095 (0.146)	0.095 (0.147)						
$\chi^2$ test: $DD_{ijt} + DD_{ijt}^T = 0$	1.40		0.25		0.52		0.13	
$\chi^2$ test: $DD_{ijt}^T = DD_{ijt}^{T-1}$		6.93***		1.83		12.20***		5.60**
Observations	547,972	547,972	523,747	523,747	547,972	547,972	547,972	547,972
Log likelihood	-14,566.37	-14,566.37	-14,124.95	-14,124.90	-12,990.30	-12,990.22		
Pseudo $R^2$	0.21	0.21	0.20	0.20	0.29	0.29	0.14	0.14
$\chi^2$ (or F test)	1,609.65***	1,616.13***	1,591.10***	1,593.92***	2,545.55***	2,570.23***	8.25***	7.54***

Notes: dependent variable =1 if  $MID_{ijt} > 2$  and 0 otherwise; standard errors clustered by dyad in parenthesis; \*\*\* denotes significance at 1% level; \*\* 5% level; \* 10% level. Term limits are classified as young if they have been adopted in the previous ten years. Cubic spline terms included in columns (5) and (6). Country-pair fixed effects included in columns (7) and (8).