Political stability and trade agreements: Evidence for 'end-game FTAs'[*]

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Abstract

This paper empirically examines the idea that Free Trade Agreements (FTAs) are more likely to be signed by governments playing 'end games'; that is, when governments are likely to lose power. Two identifying strategies are used to estimate how the change in the probability of an FTA is linked to the likelihood of government turnover. One relies on unexpected events that height the probability of political turnover, the other relies on term limits. I find that countries are more likely to sign FTAs after the unexpected exit of their leaders, when the probability of political turnover is high. This effect is more pronounced where leaders are more critical, i.e., in autocracies and in weak 'checks and balances' polities. The key finding is confirmed by results from the term-limits strategy. Governments are significantly more likely to sign trade agreements when they are in their last term in office. Estimation results under both empirical strategies support the 'rent-destruction' argument formalized by Ornelas (2005, 2007).

Keywords: Trade agreements, Political Rents, Incumbent Stability.
JEL Classification: F13, F53.

1 Introduction

Trade liberalization in recent decades has been transformed by Free Trade Agreements (FTAs). Despite opposition from import-competing special interest groups, their number has mushroomed (WTO, 2011). This paper provides empirical evidence for a new political economy mechanism explaining the formation of some FTAs - what might be called 'end-game FTAs' since they are signed when governments face a higher than usual probability of losing power. Estimation results support a political economy argument initially proposed by Ornelas (2005, 2007) and that turns on the FTAs' effect on the time profile of political contributions. The standard Grossman-Helpman approach to endogenous trade policies has governments trading off social welfare losses against the 'sale' of tariffs for political contributions. A government on its way out will be less interested in future contributions and so may sign a binding, end-game FTA.

Two distinct empirical strategies shed light on this mechanism. First, I follow recent work by Besley et al. (2011b) and use unexpected exits of leaders from office (e.g., due to natural death or ill health) as source of exogenous variation in the probability that the successors will be replaced. The identifying assumption, which I confirm empirically, is that the unexpected exit creates political instability in the sense that the probability of government turnover is higher after the event than it was before. Evidence from this approach supports the end-game FTA hypothesis since governments are found to be more likely to form trade agreements after a leader's unexpected exit than before. Critically, the estimation results show that the effect comes via higher political instability. The FTA probability increases more after the unexpected exit of leaders in regimes where they are critical in the policy-making process, namely in weak 'checks and balances' polities and in autocracies.

My second empirical approach relies on 'binding' term limits. In such cases, the timing of the end-game is clear and suggesting an identification strategy based on the incumbent's time left in office. Using this identifying variation, I find that countries (or country-pairs) are significantly more likely to sign FTAs when the executive cannot stand for re-election. The effect is strongest when the FTA probability is compared between the most similar groups, namely presidents in binding terms within political systems with a fixed term length and president not in their last terms within the same system. Estimates from this empirical specification suggest that the likelihood of an FTA is 50% higher when the incumbent is a 'lame duck'.

My empirical analysis finds no evidence for alternative theories that would justify the signing of end-game FTAs. There is no evidence that the higher political instability observed after the unexpected exit of the leader affects FTA formation through the probability of other events such as regime changes and participation in conflicts. Similarly, the effect of political instability on FTAs is not mediated by economic growth or institutional reforms,

which have been found to be affected by leaders' unexpected exits (Besley et al., 2011a;Jones and Olken, 2005). In the analysis that makes use of term limits, the higher FTA probability observed when the president is a lame duck doesn't seem to be related to electoral motivations, differently from what Conconi et al. (2011) find looking at the US case.

My work contributes to the burgeoning literature on the determinants of FTAs. A first strand of this literature deals with the 'static' explanations for trade agreements, namely with the characteristics that make countries more likely to sign FTAs. Key references within this strand are Baier and Bergstrand (2004) and Egger and Larch (2008), which show that economic aspects such as market size, differences in factor endowments and distance play a major role in explaining the world configuration of FTAs.

Other work has stressed the importance of static political economy factors. Previous research has found a positive relationship between being a democratic country and participating in trade agreements (see, e.g., Mansfield et al., 2002; Mansfield and Milner, 2010). The basic argument is that political leaders in democratic systems have less room for rent-extracting policies because of more effective and widespread public scrutiny. However, none of these papers investigate explicitly the role of expected political turnover (i.e., political instability) on the incentives the incumbent government has to sign an FTA[1]. Hence, my empirical evidence speaks to this type of literature by showing that the likelihood of political turnover is possibly an important channel whereby democratic regimes are more inclined than autocracies to sign FTAs.

Another static political economy motivation for signing FTAs is proposed by Maggi and Rodriguez-Clare (1998, 2007), which show theoretically that if the government has limited capacity to extract rents from the policy-making process, it might prefer to commit to free trade and remove the distortions related to misallocations of resources. Arcand et al. (2011) confirm empirically that this credibility argument is a significant driver of trade agreements. As for other non-economic forces behind the proliferation of FTAs, Martin et al. (2012) show that countries with past experience of conflicts are more likely to sign FTAs in order to avoid the trade disruption costs of another war.

The other strand of the literature on the determinants of FTAs examines what can be called 'dynamic' explanations; that is, exogenous events shifting the probability of FTA formation over time. Within this area of research, Baldwin and Jaimovich (2012) find supportive evidence for the 'domino' theory of FTAs, whereby countries join existing trade agreements or form new ones to reduce discrimination created by third-nation FTAs.

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[1]In the democracy literature, a political system is democratic if competitive elections are fair and have regular occurrence (see, Mansfield et al., 2002). Democratic countries are generally characterised by higher political competition than autocratic ones, all other factors being equal. This may ultimately affect the probability of political turnover. I will control for the possible confounding effect of democracy in the empirical analysis.

Ornelas and Liu (2011) identify another dynamic factor explaining the formation of FTAs, namely the probability of regime change from democracy to autocracy. Their analysis is closely linked to mine as the 'rent-destruction' argument is also at the core of their empirical findings. Specifically, my evidence on end-game FTAs can be seen as a generalization of their results. I find that incumbent governments fearing to be replaced are more likely to sign an FTA, even if there are no expectations that the political turnover could lead to a regime shift.

As for the empirical strategy that I use in this paper, its two components have been applied to other policy contexts as well. Besley et al. (2011b) have already employed unexpected exits of the leader as determinants of political turnover, which is in turn showed to affect institutional reforms. I thus borrow this identifying assumption from them to link the political instability created by these unexpected exits with FTA formation[2].

A number of studies have investigated the effect of term length and limits on economic outcomes (see, e.g., Besley and Case, 1995) and politicians' behavior (Ferraz and Finan, 2011; Dal Bó and Rossi, 2008). More important, Conconi et al. (2011) exploits the peculiar structure of the US Congress, with different term lengths for US Senators and House representatives, to show that politicians, when facing electoral competition, are less likely to vote in favour of trade liberalisation. While all these studies leverage the institutional framework of a specific country, my empirical analysis relies on a cross-country study, for which I use a new database on national constitutions from the Comparative Constitution Project (CCP).

The remainder of the paper is organized as follows. Section 2 discusses the rent-destruction theory of Ornelas (2005, 2007) to identify the key empirical challenges in testing the presence of end-game FTAs. Section 3 describes the two-pronged empirical strategy and the data, Section 4 presents the results of the event-study approach based on the unexpected leaders' exit and Section 5 discusses the results of the term limits analysis. Finally, Section 6 concludes and points out possible extensions of this work.

2   Theoretical Framework

This section presents a simple model that helps clarify the choices made in the empirical section. The model is intentionally kept simple and as close as possible to the well-known model by Ornelas (2005, 2007) and Ornelas and Liu (2011). Before outlining the model, I describe the basic political economy mechanism at work.

The standard approach to endogenous trade policy (Grossman and Helpman, 1994) views tariffs as chosen by governments that balance social welfare against contributions from special interest groups, import competing firms in particular. The approach predicts a systematic

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[2]In previous work, Jones and Olken (2005) and Besley et al. (2011a) use the same type of event-study approach to show that leaders matter for economic growth.

bias towards protection when import-competing firms are better organised than consumers. That is, governments choose tariffs in excess of the social-welfare level because they share the rents generated by the higher tariff.

The balance may shift, however, if the government believes it may not be in power the next period. Once it is out of power, the government no longer shares the rents but still suffers the consequences of excessive protection. In anticipation of this, governments may sign what might be called an end-game FTAs. The idea is that by doing so, they constrain the next government to maintain free trade with the FTA partner.

At the heart of such end-game FTAs are two assumptions: governments view tariffs less favourably when they are out of office[3] either because they care about their own welfare, or because they wish to deny the rents to their successor for strategic political reasons; and FTAs have some ability to constraint tariff choices of future governments[4].

While the basic logic is so simple that it might not need a model (especially given the previous work of Ornelas (2005, 2007) and Ornelas and Liu, 2011), the interactions between the signing of the FTA and the endogenous choice of tariffs on the third nation can be complex given the resulting trade diversion. To clarify these and inform my empirical choices, I summarize the model of Ornelas (2007), which can be seen as a generalization of the theoretical framework of Ornelas and Liu (2011).

The model works with three non-atomistic competitive economies, each of which is a 'natural' importer of a distinct subset of goods such that each nation competes with one other nation in a third market[5]. The standard simplifying assumptions of the 'Protection for sale' framework are made to eliminate general equilibrium feedbacks (Grossman and Helpman, 1994)[6].

When a government is in power, it cares about social welfare and political contributions. Its one-period objective function is: $G \equiv W^M + W^X + bC$ where W^i is the sum of consumers' surplus, tariff revenue and producers' surplus in the import sectors ($i = M$) and the export sector ($i = X$), C is the contributions and $b > 0$ is a parameter governing the politicisation of tariffs. The incumbent government and the domestic lobbies Nash bargain over tariffs and division of the resulting rents. The payoff of the incumbent government can be written as

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[3]Ornelas (2007) discusses at length how this assumption can be rationalized by a situation where politicians are able to extract rents mainly through the enactment of policies rather than campaign financing. Alternatively, politicians, when out of office, have to seek for new (and broader) electoral support to gain power again and hence might want to focus on the welfare of the society at large.

[4]The assumption of exogenously enforced FTAs can be seen as an endogenous outcome in the presence of (high) cost of negotiations and withdrawal from the agreement (Ornelas, 2007). Moreover, the assumption is empirically plausible given the very few cases of countries that have withdrawn from FTAs or Customs Unions (CUs) (e.g., the Central American Common Market (CACM) in the mid-1980s).

[5]See Ornelas (2005, 2007) for details and micro-foundations of the model.

[6]Tastes are quasi-linear to eliminate income effects, there is a single factor of production with a costless trade outside good to eliminate economy-wide terms of trade effects, and each sector has specific capital to generate rents that can be shared with the government via contributions.

follows (see Ornelas, 2005):

$$G^I = W^M[\tau^s] + W^X + \alpha b PR[\tau^s, \tau^p] \qquad (1)$$

where the PR term stands for 'political rents':

$$PR \equiv \frac{1}{b}(W^M[\tau^p] + b\Pi^M[\tau^p] - (W^M[\tau^s] + b\Pi^M[\tau^s]))$$

τ^s and τ^p are, respectively, the socially optimal and politically optimal tariffs[7].

When the government is out of power, it has no control of the tariff so its equilibrium one-period payoff is (1) with $b = 0$ if no FTA has been signed, namely:

$$G^O = W^M[\tau^p] + W^X \qquad (2)$$

If an FTA is signed with either symmetric partner, tariffs on exports between the partners are zero but the tariff on the third nation is chosen as before. Following a well-known approach (Ornelas, 2005; Maggi and Rodriguez-Clare, 1998) that applies when the incumbent is expected to hold power forever, the FTA is signed if it improves the incumbent's payoff, namely if:

$$G_\Delta^I > 0 \Leftrightarrow W_\Delta^M[b = 0] + W_\Delta^X + \alpha b PR_\Delta > 0 \qquad (3)$$

where the Δ subscript indicates that variables are in differences between the FTA and the non-FTA scenario (e.g.,$G_\Delta = G_{FTA} - G$). The term $b = 0$ shows that in the incumbent's payoff function social welafe in the import sector is evaluated at the tariff (different before and after the FTA) that maximizes social welfare. Due to Viner's ambiguity, welfare may not rise with the FTA. Ornelas (2005) shows, however, that the FTA unambiguously reduces political rents since trade diversion dilutes the rents created by higher tariffs on the third nation. The net result is that the incumbent will only find the FTA worthwhile if the social welfare gains from the liberalisation outweigh the reduced political rents.

Ornelas (2007) extends the model to two periods with two potential parties so the incumbent is not permanently entrenched. The party in power receives a payoff given by (1) in each period; the party out of power receives (2)[8]. In the simplest model, the probability of losing power, denoted as σ, is exogenous to the incumbent's choice on tariffs and the FTA. In the empirical analysis, a high σ is associated with the political instability created by exogenous events such as the death or incapacitation of the sitting leader.

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[7]Namely, τ^s maximizes social welfare (i.e., when $b = 0$) while τ^p is the outcome of the Nash bargaining game (i.e., when $b > 0$).

[8]In this simple formalization, I assume that parties attach the same weight to social welfare and have the same bargaining power vis-à-vis domestic lobbies. In an endogenous characterization of the probability of government turnover, Ornelas (2007) assumes a one-to-one mapping between constituencies' size and the parameter b, which leads to different $b's$ for the incumbent and opposition parties.

The incumbent's decision to sign the FTA is only slightly modified by the uncertainty. It signs the FTA if doing so increases the expected present value of its payoff, knowing that the tariff will be the politically optimal tariff under each regime (FTA or no FTA). The condition is now:

$$\Gamma_\Delta > 0 \quad \text{with} \quad \Gamma_\Delta = G_\Delta^I + \delta((1-\sigma)G_\Delta^I + \sigma G_\Delta^O) \qquad (4)$$

where $\delta \in [0,1]$ is the politicians' discount factor.

The novel issue raised by uncertainty is whether a government facing more uncertainty (i.e., likely to be in an 'end game') is more likely to sign an FTA. To parametrise this in a way consistent with the ensuing empirical analysis, consider a government facing a probability of losing power equal to σ_H versus a probability of $\sigma_L < \sigma_H$. Evaluating (4) for these two values:

$$\Gamma_\Delta^H - \Gamma_\Delta^L = \delta(\sigma_H - \sigma_L)(W_\Delta^M[b>0] - W_\Delta^M[b=0] - b\alpha PR_\Delta) \qquad (5)$$

As discussed above in the deterministic case, the last term, PR_Δ, is negative while the difference between the first two W^M terms is ambiguous. Here the trade agreement destroys political rents creating an extra source of welfare gains. These extra gains are absent in an initial situation where politics had no role, that is, when the government does not value contributions (i.e., $b = 0$) and the import tariff is the socially optimal τ^s. Consequently, $W_\Delta^M[b>0] > W_\Delta^M[b=0]$ and (5) is unambiguously positive ($\sigma_H - \sigma_L$ by assumption). In short, a sitting government is more likely to sign an end-game FTA if it is more like to lose power. To put it differently, a potential FTA that is infeasible in a low-instability state can turn into a politically viable FTA in a high-instability state (i.e., it becomes an end-game FTA).

The result is confirmed for all values of the 'political' parameters b and α. In particular, the likelihood of political turnover enhances the prospects of FTA formation even if the incumbent is not able to extract any rents from the policy-making process (see (5) when the parameter $\alpha = 0$). In this situation, the incumbent would still like to tie the hands of its successor since, when out of office, there is no compensation for the welfare distortions caused by trade protection.

2.1 Model extensions and implications for empirical work

The basic framework presented here can be easily extended to allow for several realistic considerations. Frequently, politicians view the loss of power as a temporary situation and in many political regimes out-of-power parties still wield some power and so get some of the political rents. The key results would go through as long as the parties care more about the rents when they are in power. The political game in the simple set up ignores many real-world considerations that might link the probability of losing office to the choice of the tariff level,

the decision to sign an FTA, or even to the way that a flow of rents could help keep the opposing party in power[9].

As far as the empirical strategy is concerned, these considerations suggest that identification of the effect requires a shock to the probability that is fully exogenous from the political system and the endogenous policy choices. In any of the extended models, an association between political instability and FTA signing could be due to reverse causality (the FTA signing leading to the change in government rather than vice versa).

As a result of this reverse causality, incumbents may decide whether to sign an FTA on the basis of the effect that these can have on the probability of re-election. Following this line of argument, Conconi et al. (2011) find that US legislators are more likely to vote in favour of trade agreements when they don't have to face electoral competition. The results are rationalized by a theoretical framework where individuals have loss aversion with respect to trade policy outcomes and suffer from a 'recency bias' in assessing politicans' performance, resulting in a negative electoral effect of FTAs. Therefore, the incumbent may want to sign an FTA when it is likely to exit from office (e.g., when it is in its the last term in office) and hence doesn't have to face the electoral penalty that the agreement would bring about. In the empirical analysis using term limits, I thus assess the validity of this alternative theoretical channel.

Furthermore, the theoretical argument links directly the likelihood of political turnover to the probability of FTA formation. This effect can however be mediated by other events that have been shown to be important determinants of trade agreements. For instance, a higher political instability may fuel internal and international conflicts that have been found to deter FTA formation in the short-run (Martin et al., 2012). If anything, this channel should go against the prediction that higher political instability increases the likelihood of an FTA. Additionally, a higher political instability can be associated with a higher likelihood of regime shift, for instance from a democratic to an autocratic regime, which itself increases the probability of an FTA, as shown in Ornelas and Liu (2011). I control for these confounding events in the empirical analysis.

3   Empirical Strategy and Data

The political economy mechanism discussed in the theoretical section asserts that governments that are more likely to lose power are also more likely to sign FTAs. Testing this is difficult

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[9]When political contributions are used to increase political support from the electorate (see, e.g., Grossman and Helpman, 1996), the incumbent, expecting to be replaced, may sign an FTA so as to limit the capability of its competitor to raise contributions that are used for future elections. This type of forward-looking behaviour would result in the same prediction of the simple framework presented above, namely the formation of end-game FTAs.

since the causality can easily run the other way. As discussed above, signing an FTA could affect the probability of losing office. To identify an exogenous shock to this probability, I employ two different empirical strategies.

One relies on the political instability created by unexpected leader exits (i.e., due to natural death or ill health). Following the work of Besley et al. (2011b), I show that any government taking power right after the unexpected events is less likely to be re-elected than an officeholder before the event. In other words, these successors face an exogenous increase in their likelihood of losing office. The idea is that sudden changes of the chief executive create a power vacuum and hence shift exogenously the level of political instability.

The other strategy relies on presidential term limits. Here the idea is that presidents in their last term in office face a shorter time horizon in office than presidents who are not in their last terms. While term limits automatically affect the probability of holding power (i.e., it drops to zero after the limit), using the unexpected exit of leaders requires I empirically demonstrate that such events actually do increase political instability. To this end, in the following subsection I test the relationship between these unexpected leader's exits and subsequent political instability, i.e. the likelihood that the successors are replaced in office.

3.1 Unexpected exit of leaders

Leader turnover. To test whether the unexpected exit of a country's leader shifts the probability of political turnover, I estimate the following 'event-study-like' regression:

$$Pr(Turn_{i,t} = 1) = \beta^{PRE}PRE_{i,t} + \beta^{POST}POST_{i,t} + \gamma_i + \delta_t + \epsilon_{i,t} \tag{6}$$

where $Turn$ equals one if there is one (or more) change of the chief executive in country i during year t (this is my proxy for political turnover). PRE and $POST$ are sets of dummy variables for the period before and after each unexpected exit, respectively.

If the unexpected exits spur political instability, the sample probability of leader turnover should be higher after the event than before, i.e. $\beta^{POST} - \beta^{PRE}$. The specification includes country and year fixed effects and a linear probability model is used in the estimation.

This approach is valid if the unexpected events are 'random', i.e. uncorrelated with the error term $\epsilon_{i,t}$. One of my identifying assumptions is thus that unexpected are really exogenous. To make this assumption as plausible as possible, I limit the unexpected events to things that seem beyond the control of the political system. Following practices in the related literature on the effect of political leaders on economic outcomes (Besley et al., 2011a; Jones and Olken, 2005), I define a leader's exit as unexpected (and thus random) when it is due to death from natural causes or accidents, or due to retirement for health problems. I

purposefully exclude assassinations and suicides since these are clearly not unexpected for some players in the political arena.

I deviate from the practice followed by the leaders-and-growth studies of Besley et al. (2011a) and Jones and Olken (2005) by not keeping occurrences where more than one unexpected event occur in a single time window (5-year or 10-year windows)[10]. As for the work of Besley et al. (2011b), the reason is that keeping such events might artificially inflate the expectations of political turnover during the $POST$ period in my setting.

The list of such unexpected exits is created from the Archigos database of political leaders (Goemans et al., 2009), which records the name of the chief executive of all countries[11] along with the manner of entry and exit over the 1875-2004 period[12]. From this database, I take the country-year observations where there was an unexpected exit (i.e., codes 2 and 2.1 in the original $EXIT$ variable). I then cross-check this list with the one in Besley et al. (2011a) to end up with a final list of unexpected leaders' exit[13]. In the baseline specification (6), the time window around the event is defined as including five years after and before each event (see, e.g., Besley et al., 2011b). Consequently, the PRE and $POST$ variables cover the five years before and after the non-overlapping events respectively, excluding the event year. This procedure yields 89 events from 1945 to 2004; these are used to construct 5-year event windows for the 1950 to 2004 sample period.

Estimates of the PRE and POST β's in (6) on the whole sample do not yield significant results. These are shown in Column (1) of Table (1). Focusing on the difference in the β's as this gauges the change in the likelihood of leader turnover in the window following an unexpected event versus the preceding window, we see that the 'post' probability is higher (on average by 3 percentage points), but the difference is not statistically different from zero.

These findings on the whole sample are identical to those of Besley et al. (2011b), which estimate the same regression in (6) on the entire period of the database on leaders, from 1875 to 2004. Following their lead, I next investigate whether the unexpected exits lead to significant changes in the chances of losing office in regimes where leaders matter for the policy-making process. Results show that in the sample of autocratic systems, where leaders are more likely to play a pivotal role, political instability increases after the unexpected exit

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[10]All event-study specifications include an indicator for the overlapping event windows, i.e. those that are created around two or more occurrences that are less than five (or ten in the robustness checks) years apart.

[11]Goemans et al. (2009) follow the 'de facto' rulers of a country. In general, these are the prime minister in parliamentary systems, the president in presidential systems and the king in monarchies.

[12]I follow Campante et al. (2009) and exclude Switzerland from the analysis because of its unique rotating system of presidency for which political turnover as measured by the alternation of the chief executive would have no meaningful interpretation.

[13]From 1945 to 2004, which is the period relevant to the estimation sample, only the case of Mokhele from Lesotho in 1998 isn't classified as random exit in Archigos, but was included in the list of Besley et al. (2011a). The exits of Nasir from the Maldives in 1978, Herzog from Bolivia in 1949 and Viola from Argentina in 1981 are dropped from the list of unexpected exits after cross-checking with Besley et al. (2011a) and Jones and Olken (2005).

of an incumbent but not in a statistically significant manner (see Column (2)). Conversely, the probability of leader turnover decreases after an unexpected leader's exit in democratic regimes, but the change is again not significantly different from zero.

To pursue the idea that instability depends upon the leader's role in policy, I interact the PRE and $POST$ dummies with a more specific measure of the extent to which leaders can affect policies that I create from the $XCONST$ variable of the Polity IV database (Marshall et al., 2010). Specifically, the variable codes the bindingness of institutional constraints on the chief executive (e.g., presence and application of term limits) on a scale from 1 to 7. As in Besley et al. (2011b), I define the random leaver as being in a 'constrained' institutional environment if $XCONST$ is at least equal to 5 (i.e., "substantial limitations on executive authority" - Marshall et al., 2010) in the year of exit.

The results of these interactions are presented in Column (3). The main finding is that unexpected exits do raise instability by a statistically significant amount in those systems where leaders really matter. In polities with weak checks and balances on the executive, the unexpected events increase the probability of political turnover by 5 percentage points with respect to the period before the random exits. This represents a 32% increase from the average probability of leader turnover during the event window and in institutional environments with weak constraints on the executive. Intriguingly, governments become significantly more stable after the random exit of leaders if this occurs within political institutions that place binding constraints on the chief executive. Again, these results confirm the findings of Besley et al. (2011b) obtained on a longer time period.

To investigate further the heterogeneity of the effect on political turnover, I test whether the unexpected exit of a leader matters more or less depending on the age of the random leaver. To this end, I define as 'old' leaders who are older than the median age of unexpected leavers. The idea here is that, as Besley et al. (2011b) argue, the exit by natural death or health problems of old leaders might be less of a random event than the exit of young leaders. As shown in Column (4), I find that the probability of leader turnover is actually larger after the unexpected exit of an old leader than before, although the effect is once again not significant.

This finding that the unexpected exit of old leaders increases political instability could be due to the fact that old leavers are likely to have been in office for a long time. The idea being that such leaders are more likely to have changed the political and institutional settings in a way that magnifies their policy influence so that their unexpected exit creates power vacuum and hence political instability. To check if this line of reasoning is relevant, I interact the PRE and $POST$ dummies with an indicator for the time the unexpected leaver has been in office. Specifically, leaders are classified as having had a long tenure if they sat in office more than the median tenure of random leavers. The idea is strongly confirmed by the estimates reported in Column (5). After the random exit of long-tenured leaders, the expectations of

political turnover are twice the average probability, increasing it by 20 percentage points from the period before the random exit. This effect is statistically different than zero.

As robustness checks on my key identifying assumption that unexpected departures of leaders raise subsequent turnover probabilities, I estimate the same specification of (6), but with a 20-year window (i.e., 10 years after and 10 year before) rather than a 10-year window around the event. With longer windows, the number of event windows that overlap and that are excluded from the event-study inevitably increases, reducing the number of events in the estimation sample to 67.

These robustness checks broadly confirm the baseline results of Table (1), but now the effect of unexpected exits on the likelihood of leader turnover is higher and statistically significant in the entire sample (see Column (1) of Table (2)). Furthermore, the random exits have a significant effect on political instability throughout a longer period than the initial 5-year period after the event. This is shown in Column (2), where the difference between the coefficients on the PRE and $POST$ variables that are defined on 10-year windows around the events used in the sample of Column (1) is not statistically significant.

The unexpected exit of leaders has now a significant and positive effect on the likelihood of political turnover in autocracies (Column (3)), while the heterogeneity of the effect across the level of executive constraints, the age and the tenure of the exiting leader is confirmed under the specification using the 20-year window (Columns (4), (5) and (6)).

To summarise, the evidence so far supports the identifying assumption that unexpected exits of leaders raise the probability of political turnover (i.e., higher political instability) for successors - at least in situations where the exiting leaders should play a key political role, i.e. when constraints on the executive are weak, when the random leaver is an autocrat and when he had been in office for a long time. In the following, I take this identifying assumption as given.

FTA formation. The basic empirical strategy is straightforward. I test whether governments are more likely to sign FTAs when the probability of turnover is higher â€“ using the identifying assumption linking unexpected leaders' exit and the probability of political turnover to identify periods when the turnover probability is higher than normal[14].

Apart from this event-study-like set up (i.e., with PRE and $POST$ event dummies), the FTA formation regression has the standard dyadic setup introduced by Baier and Bergstrand

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[14]If the events are completely random, there shouldn't be any interaction between their occurrence in the two countries of the pair. In a robustness check, I nevertheless show that the results are confirmed if the PRE and $POST$ indicators for each country are replaced with a dummy equal to one if at least one country in the pair is in the post period and a dummy equal to one if at least one country is in the pre period.

(2004). Specifically, I estimate:

$$Pr(NewFTA_{ij,t} = 1) = \beta_i^{PRE} PRE_{i,t} + \beta_i^{POST} POST_{i,t} + \beta_j^{PRE} PRE_{j,t} + \quad (7)$$
$$+ \beta_j^{POST} POST_{j,t} + \alpha_{ij} + D_{ij}[T] + \epsilon_{ij,t}$$

where $NewFTA$ is an indicator variable equal to one if countries i and j sign an FTA in year t and α_{ij} are dyadic fixed effects that control for all time-invariant determinants of FTAs. PRE and $POST$ are sets of country-specific dummy variables defined as in (6).

The regression equation is meant to mimic a duration model in discrete time where the 'failure' event is the signing of an FTA between the two countries in the pair. Therefore, I follow each dyad in the sample until the FTA deal is signed (i.e., $NewFTA$ switches from zero to one). If no FTA is signed, the dyad stays in the sample. To capture the baseline hazard of FTA signing, the term D collects natural cubic splines of time before an FTA is signed. To better handle the dyadic fixed effects and possible interaction terms, the baseline estimations are based on a linear probability model[15].

The FTA signing data are from Baier and Bergstrand (2004, 2007). They record the year when a trade agreement between two countries entered into force during the 1950-2005 period. Each trade agreement is classified on a 6-point scale, according to the depth of economic integration, from no trade agreement to "Economic Union", i.e. the strongest form of economic integration.

This characteristic makes the database particularly suitable for my analysis, given that the theoretical arguments should apply to trade agreements that actually destroy of rents related to trade policies. The idea is that shallow forms of integration whereby only one country grants trade preferences ("Non-reciprocal preferential trade arrangements", such as the African Growth and Opportunity Act - AGOA - or the Everything but Arms - EBA - initiatives) or trade is only partially liberalized ("Preferential trade arrangements") should not lead to an important reduction of rents available from protectionist policies and hence are not effective means of binding future trade policies. To bring out these features, my regression analysis is based solely on the FTAs consisting of "Free Trade Agreements" and deeper ("Customs Unions", "Common Market" and "Economic Unions"). For simplicity, I call these both 'FTAs'.

3.2   Presidential term limits

To explore further the formation of end-game FTAs as suggested by the theoretical framework, I develop an alternative empirical strategy based upon the existence of term limits.

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[15]The empirical results are broadly confirmed when using a conditional logit estimator (results not reported).

Unlike the unexpected exit of a leader, being in the last term in office does not necessarily affect the yearly probability of leader turnover, but it shifts upward political turnover regarded as the replacement of the chief executive between terms. To build intuition around the empirical strategy, I consider the case of an incumbent that stays in office for two consecutive terms and then has to be replaced because of a two-term limit. Within the simple theoretical framework described above, this can be seen as a situation where the two periods correspond to the two terms. At the end of the second term, the incumbent is automatically replaced, so $\sigma \equiv \sigma_H = 1$. At the end of the first term, the incumbent can be re-elected, so $\sigma \equiv \sigma_L < 1$. The theoretical argument predicts that the incumbent is more likely to sign an FTA in its last term, when it will soon be out of the political game, than in its first term.

To test for this relationship between term limits and end-game FTA, I use the same dyadic setting of (7) and estimate the following:

$$Pr(NewFTA_{ij,t} = 1) = \beta_i Tbind_{i,t} + \beta_j Tbind_{j,t} + \alpha_{ij} + D_{ij}[T] + \epsilon_{ij,t} \tag{8}$$

where $Tbind$ is an indicator variable that takes on value one if the incumbent is in its last term in office. Therefore, a positive sign on the coefficients of interest, the β's, would provide empirical support for the idea of end-game FTAs, namely that the propensity to sign an FTA is higher when the leader faces a binding term than when the leader is not in its last term.

To control for country-pair specific unobservables, the regression equation includes also dyadic fixed effects. As in the event-study-like regression (7), I follow dyads until they sign an FTA and add cubic splines of time before FTA formation.

Unlike most of the existing literature on the effect of term limits (see Section (1), my empirical strategy requires data on constitutional term limits across countries and time. To this end, I use data from the Comparative Constitution Project (CCP), which is described in Elkins et al. (2009) and records the characteristics of written constitutions for all independent countries since 1789. The variables of interest to this paper are the ones on the length of the term (in years; variable $HOSTERM$) and the maximum number of terms the leader can stay in office (variable $HOSTERML$). To construct the indicator of interest, $Tbind$, I then combine this information with the actual timeline of leaders for each country, available from the Archigos database (Goemans et al., 2009)[16].

The indicator variable should, ideally, define a 'treatment' group composed of countries that in a given year have a leader in his binding term and a 'control' group that includes the same countries when their leaders are not in their last term. However, in a reality of countries with different institutional settings, the comparison between these two groups is not as straightforward.

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[16]Since the constitutions data are in a country-year format, I take in each country-year case the leader that served the highest number of days.

First, term limits apply only to presidential systems, where the head of state is the chief executive. While they might apply to presidents in parliamentary systems, these are not considered the effective leaders of their countries. Using the classification of political regimes provided by Cheibub et al. (2010), I thus apply the variables on term limits from the CCP database to countries that in a given year were not a parliamentary system[17]. The same reasoning applies to royal dictatorships, where the term in office usually overlaps with the life of the officeholder. As a result, the control group includes prime ministers in parliamentary system and monarchs in royal dictatorships that, by construction, could not be in a binding term.

Furthermore, countries where the head of state is the effective leader might be democracies or dictatorships. In the sample period from 1950 to 2004, about 80% of the country-year observations with presidential and semi-presidential democratic systems have also a limit in the number of terms the president can sit in office (see Table (3)). The share falls dramatically for dictatorships, both civilian and military ones, where around 32% of country-year cases in each political regime have a fixed term length and a limit on the number of terms. Few cases (no more than 2% of their respective sub-sample) are classified by Cheibub et al. (2010) as presidential or semi-presidential democratic regimes but do not have a fixed term length according to the CCP data.

An additional feature of the constitutional data is that it provides 'de jure' term limits, while in reality term limits do not always turn out to be binding. As shown in Elkins et al. (2011), in a number of cases leaders overstayed in office, either by tweaking the constitution right before the scheduled end of the term or by simply ignoring the constitutional limit[18]. To record the actual binding or non-binding status of a term in office, I consider presidents 'non-compliers' only if they stayed in office more than what the constitution allowed in the last year of their supposedly binding term. Consequently, the group of non-complying leaders does not include presidents who managed to amend the constitution before the end of their binding term in order to stay in office longer, by increasing the number of terms or by lengthening the term itself.

To shed more light on the heterogeneity of term limits provisions across countries and leaders, Table 4 provides some descriptive statistics about the manners of exit of leaders in presidential regimes under non-binding and binding terms. Following the Archigos database

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[17]In the CCP database, a term length and a term limit are reported for the constitutions that design the head of state or both the head of state and the head of government as executives. In some cases, while the head of state is constitutionally part of the executive power, it has a purely ceremonial role and hence it is not considered the leader subject to term limits.

[18]In line with the evidence of Elkins et al. (2011), the practice of tweaking the constitution before the elections to stay in office longer has recently become a common practice among 'young' democracies, often leading to public protests. A recent and illuminating example is the one of Ismaïl Omar Guelleh, President of Djibouti, who made the National Assembly approve in 2010 an amendment to the constitution that allowed him to stay in office for an extra term.

([Goemans et al., 2009](#)), leaders can exit from office in a "regular" manner (i.e., in accordance with explicit rules of conventions - e.g., elections, vote on no confidence by the parliament), for natural death or ill health or in an "irregular" manner (e.g., coups, assassinations)[19]; or, they can be still in office as of 31st December 2004.

Most of leaders who face a term with a fixed length exit through regular means, while the majority of heads of state without a fixed term length exit irregularly. For leaders who face a fixed term length, some stay until the end of the term whereas others exit before, i.e., they are "understayers" ([Elkins et al., 2011](#)). The fraction of understayers is particularly high (around 80%) for leaders in institutional systems without term limits and for leaders who exit before reaching their binding term. Crucially, the share of understayers falls for leaders who exit during their binding terms, suggesting that term limits, if respected, are indeed binding and represent a major manner of regular exit. Moreover, 32% of those who exit before the end of their binding term do so irregularly, a higher share than that of irregular understayers during non-binding terms.

This descriptive evidence shows how the bindingness of term limits varies substantially across political regimes and leaders, creating fuzziness in the treatment and control groups as defined by the *Tbind* indicator. To isolate cases where term limits couldn't be binding (e.g., in parliamentary systems and in presidential systems with term limits and non-complying leaders), I progressively modify the baseline specification in (8) and include indicators for such cases. By doing so, I end up focusing on the closest comparison groups, namely complying lame ducks (i.e., presidents in their binding term) in systems with fixed term length and complying presidents within the same country who are not in their last term.

4   Results using unexpected exit of leaders

Table (5) reports the results for the baseline FTA regression (7), which should be thought of as an event-study analysis with leaders' exit due to natural death or ill health as the random event. This allows me to follow closely the type of event-study analysis performed in the previous section where leader turnover was the outcome variable. Column (1) presents the estimates when I adopt a 10-year window around the unexpected exits. The findings imply that the likelihood of FTA formation is 0.2% higher after the unexpected exit of the leader than before. While this may seem like a small number, it is statistically different from zero and rather large compared to the unconditional probability of an FTA (about 6% of the dyads in the sample sign a trade agreement at some point). Indeed, given the 'survival' structure of the estimation sample (dyads are dropped after an FTA is signed), the unconditional probability

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[19]Cases of suicides and deposition from another state, which are coded separately in Archigos, are considered irregular types of exit.

of an FTA event is only 0.2% for a given country-pair-year. In this light, the +0.2% means the FTA probability is doubled in the years following the unexpected exit of a leader.

Of course this does not directly test the mechanism suggested in the theory section (unexpected exit heightens the probability of political turnover and thus in turn produces more end-game FTAs). To get finer resolution on the mechanism, I try to see whether the effect is strong when the unexpected exit of the leader occurs in institutional settings where he or she is more likely to play a pivotal role. As shown in the previous Section (3.1), it is in these cases that the unexpected leader's exit spurs political instability. Therefore, I interact the PRE and $POST$ dummies with an indicator for democracies at the time of the unexpected event, for each country in the pair. The results for the democracy interaction show that the probability of an FTA increases significantly in the five years after the unexpected exit of an autocratic leader. Conversely, the unexpected exits have a zero or negative impact on the likelihood of an FTA when they occur in democracies. While not conclusive, this result is supportive of the interpretation discussed, namely that the effect is working through the political instability following the unexpected exit of an important leader rather than, say, a more general realignment of political economy forces in the wake of the unexpected change.

A second similar check comes when I interact PRE and $POST$ with the $XCONST$ variable, which takes on value one when there are weak constraint on the chief executive at the time of the unexpected event. The results, shown in Column (3), go in the same direction; the likelihood of an FTA is higher after the unexpected exit of a leader who is not subject to strong institutional constraints, while is lower in countries with strong checks and balances on the incumbent.

Perhaps more important, these results are also in line with the patterns of the effect of unexpected leaders' exit on the probability of political turnover (see Table (1)). In other words, I observe a higher probability of FTA formation when the political instability is significantly higher, namely after those unexpected exits that occur within institutions where the chief executive is more likely to affect the political situation (i.e., in institutional setting with weak constraints on the executive and in autocracies). The evidence thus supports the end-game interpretation of FTA formation.

A slightly different line of attack comes from the Section (3.1) reasoning that the effect of unexpected leaders' exit on political instability should depend also on the leader's age. To investigate this I interact PRE and $POST$ in (7) with an indicator for random leavers that are older than their peers at the time of exit. Quite intriguingly, I find that the unexpected exit of old leaders has a positive and significant effect on the likelihood of an FTA (Column (4)), while for young leaders the effect is nil.

This evidence seems to imply that the death of an old leader creates more political instability (see Table (1), Column (4)) and a higher probability of FTA formation, although

the event might be less unexpected than the death of a young leader. The results reported in Column (5) show that also the unexpected exit of leaders who had a long tenure in office increases the probability of FTAs, although the effect is less robust than the one on the expectations of leader turnover.

These findings are confirmed when I adopt a 20-year window around the event (i.e., 10 years before and 10 years after). Starting from the average of the dependent variable in the event window (0.17% for both countries in the pair), the likelihood of an FTA increases by 60% or 80% following the unexpected exit of the leader. The results on the regime-type, weak-controls, age and tenure interactions also go through with the longer event window.

To summarise, the evidence from the baseline FTA regression shows that the likelihood of an FTA is significantly higher after the unexpected exit of a country's leader than before. While the proposed end-game mechanism is virtually impossible to test directly (it turns on the leader's subjective evaluation of his or her time horizon in office), the interaction findings are generally supportive of the idea that the FTA probability is changing because leaders feel that they could soon be replaced in office. That is, the impact is more pronounced in situations where the exiting leader is likely to matter the most in the political arena (i.e., in institutional setting that pose weak constraints on the executive and in autocracies) so that his or her unexpected exit fuels political instability. As a validation of this empirical evidence, I perform a number of robustness tests.

4.1 Robustness checks

To link the higher probability of FTA formation after the unexpected exit of a leader to higher political instability, I need to check that these unexpected exits do not increase the probability of other events that are likely to affect FTA formation.

Figure (6) represents how the political instability created by the unexpected leaders' exit could affect the likelihood of an FTA through a higher probability of leader turnover (i.e., political instability) or through the probability of other major events, such as wars and regime changes. As these other events are country-specific, I temporarily go back to the country-year setting of regression (6) and I replace the leader turnover indicator $Turn$ with other outcome variables.

A type of event that could be associated with political instability and has been found to influence the decision to sign FTAs is regime changes. Ornelas and Liu (2011) show that the likelihood of FTA formation increases with the probability of a switch from a democratic to an autocratic regime. If the random exit of a leader facilitates the end of democracy, this could be a confounding factor with political instability. In Table (6), I thus report the results from the event-study regression where the dependent variable is an indicator ($ENDDEMO$)

equal to one if a country transitioned to an autocratic system in a given year and taken from the Cheibub et al. (2010) database. Given the rarity of the event in the dependent variable (only 58 transitions), I model time dependence with four cubic splines rather than with year fixed effects. The results (Columns (1) to (4)) show that there is no relationship between the unexpected exit of the leader and the likelihood of a switch from democracy to autocracy. This implies that the higher probability of an FTA observed after the unexpected exit of a leader and associated with higher political instability is not simply due to a higher risk of a democracy collapse.

Looking at the role of regime changes from another angle, a large literature has shown a positive relationship between being a democratic country and the propensity to sign trade agreements (see Section (1)). The higher political instability and probability of an FTA observed after the unexpected exit of a leader might thus be due to a higher probability of regime change from autocracy to democracy. To test for this different channel, I thus use as outcome variable an indicator for the end of autocracy. Results reported in Columns (4) to (8) show that there is no clear and robust effect of unexpected leaders' exits on the probability of becoming a democratic country, ruling out also this alternative explanation for the evidence on political instability and FTA formation.

Finally, participation in international conflicts has been shown to have a negative impact on the likelihood of signing trade agreements, at least in the short-run (Martin et al., 2012). At the same time, domestic political forces may affect a country's decision to go to war (see, e.g., Baliga et al., 2011). While the possible confounding role of the propensity to enter international conflicts is indirectly accounted for also in the FTA dyadic regression (see below), here I test whether, at the country level, the random exit of the leader affects participation in conflicts. To this end, I define the variable $INTWAR$ as equal to one if a country in a given year has a score greater or equal to 4 (i.e., "Serious Warfare") in the level of international warfare as classified by the Major Episodes of Political Violence (MEPV - Marshall, 2010) database. As shown in Columns (9) to (12), there is no systematic difference between the likelihood of being involved in international conflicts after and before the unexpected exit of the country's leader. Consequently, the probability of wars cannot be behind the higher political instability and likelihood of FTA formation that is observed after the unexpected exit of leaders.

In sum, this first set of robustness tests show that other important country events, namely regime changes and wars, are not affected by the unexpected exit of leaders that instead increases political instability and the likelihood of FTAs. This piece of evidence supports therefore the rent-destruction mechanism described in the the theory Section (2) as an explanation for the higher probability of FTA formation after the unexpected exit of the leader, when also political instability is increased.

To further explore the robustness of baseline results in Table (5), I put the baseline dyadic

FTA regression (7) through a number of further robustness tests in order to strengthen the evidence on FTA formation and unexpected leaders' exit (estimation results are in Table (7)).

To check whether the timing of the unexpected exits is really random, I shift the exit event 5 years back in time. As shown in Column (1), the effect of these 'placebo' events is zero, supporting the empirical strategy linking the specific event of leaders' exit due to natural death or ill health to FTA formation.

So far, the positive and significant difference in the FTA probability between the periods after and before the unexpected exit of a leader has been attributed to the higher political instability created by this random event. However, unexpected leader turnover has been found to affect other economic and political variables, namely economic growth, the inflation rate (Jones and Olken, 2005) and institutional reforms (Besley et al., 2011b), which may potentially affect the probability of FTA formation. To control for these alternative channels, I add to the baseline regression and for each country in the pair the growth rate of real purchasing-power-parity GDP per capita, the inflation rate and the $XCONST$ indicator for strong institutional constraints on the executive. All these control variables are lagged one year to attenuate any simultaneity bias[20]. As shown in Column (2), the difference between the $POST$ and PRE coefficients does not change from the baseline estimates. These results imply that the effect of higher political instability on FTA formation is not channelled through these other outcome variables, besides the regime change and war events.

To substantiate the theoretical prediction that incumbent governments may want to sign end-game FTAs, it is assumed that the incumbent decides autonomously whether to sign or not an FTA. This may not be the case in the European Union (EU), for both accession and third party agreements, where negotiations have largely been managed at the supranational level. In Column (3), I therefore re-estimate the baseline regression dropping pairs where at least one country is a member of the EU. The difference in the likelihood of an FTA between the post and pre periods remains positive and significant, suggesting that the EU case is not driving the result.

The dyadic setup employed so far relates two country-specific indicators, PRE and $POST$, to a bilateral outcome, i.e., FTA formation between two countries. As a further robustness, I replace the PRE and $POST$ dummies specific to each country in the dyad with two indicators, one for cases where at least one country is in the post period, and the other for cases where at least one country is in the pre period[21]. The difference between the coefficients gives a 'bilateral' estimate of the difference in the probability of an FTA between the period after the unexpected exit of at least one leader in the dyad and the period before. As reported in Column (4), dyads where the leader of at least one country leaves office because of unexpected

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[20]Using the contemporaneous values instead of lagging does not alter the estimates (results not reported).

[21]To isolate cases of 'bilateral' overlapping event-windows, the specification includes a dummy variable that takes on value one if at least one country in the pair is in an overlapping-window period.

reasons are significantly more likely to form an FTA after the random event than before. Furthermore, the magnitude of the effect is in line with the one found when I use the POST and PRE dummies for each country in the pair.

To further minimize any potential omitted variable bias, I add other (time-varying) bilateral covariates that have been found to be important determinants of FTAs. Bilateral market sizes and differences in GDP and GDP per capita should capture the economic motives behind FTAs (Baier and Bergstrand, 2004; Egger and Larch, 2008). I also include dummies for the similarity of the political regime and for WTO membership. The United Nations Affinity index from Gartzke (2010) and an indicator for the presence of an agreement of military alliance are included to proxy for the latent probability that the two countries do not engage in a conflict against each other. The estimates of the bilateral $POST - PRE$ difference is virtually unchanged, confirming that the unexpected exit of leaders is an exogenous event shifting the likelihood of FTA formation through higher political instability.

As a final robustness check on the identification, I test directly whether the exit of leaders due to natural death or ill health is truly exogenous to participation in FTAs. More specifically, I regress the indicator for the 83 non-overlapping exit events in the sample onto a country-level measure of involvement in FTAs. I use a simple dummy equal to one if a country enters an FTA with one or more countries in a given year and a more refined measure given by the yearly difference in the share of imports coming from FTA partners. As argued by Ornelas and Liu (2011), this measure is a reasonable proxy for the extent to which a country changes its participation in FTAs. All explanatory variables are lagged one year. As shown in Columns (1) and (2) of Table (8), none of these measures predicts leaders' exit from office due to natural death or illness health. Adding further explanatory variables does not alter the results (Columns (3) and (4))[22], providing further evidence in support of the identification strategy.

All these robustness tests validate the initial finding that the probability of an FTA increases significantly after the unexpected exit of the leader. They also rule out a number of alternative interpretations of this correlation and thus provide further evidence that the effect is coming via the end-game logic discussed in the theory section. Moreover, the fact that other events usually associated with political instability (e.g., regime changes and wars) are not affected by the unexpected exit of leaders lends some preliminary support to the rent-destruction argument explaining the formation of end-game FTAs. The subsequent empirical analysis based on term limits aims to dig further in testing alternative explanations for these end-game FTAs.

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[22]As in Jones and Olken (2005), I find that changes in the nominal exchange rate (weakly) predict random leaders' exit.

5 Results using presidential term limits

A second and quite separate identification strategy looks at term limits rather than unexpected events. The idea is that leaders in their last term in office are very likely to have different objective functions concerning the impact of long-lasting policy changes such as FTAs. In this section, I discuss the results from the term limits regression (8) and its extensions.

As explained in Section (2), if the incumbent wants to sign an end-game FTA to foreclose the opportunity of adopting future protectionist and welfare-distorting trade policies, it would be more likely to sign trade agreements in its last term in office, i.e. when the term limit is binding. Consequently, the coefficients β_i and β_j in equation (8) are expected to be positive and significant.

The empirical analysis is carried out through steps. I first estimate the most preferred empirical specification of equation (8), where the treatment and control groups are adjusted in order to make the comparison as close as possible. In particular, the following adjustments are applied.

To make sure that the coefficient on the term binding indicator does not pick up some systematic differences between presidential and non-presidential systems (where there are no term limits by definition), I include dummies for the country-year observations where a royal or parliamentary system is reported.

Furthermore, there are cases of presidents who did not comply with the existing term limits regime and over-stayed in office. Normally, these country-year observations would be included in the reference group, whereas it is not clear whether those leaders aren't somehow bound during their extra time in office. To take into account this possibility, I add to the baseline specification (8) an indicator for these problematic observations.

In a similar vein, non-complying leaders may contaminate the treatment group so long as they expect to stay in office notwithstanding the limit on the number of terms. Therefore, I isolate the country-year observations of leaders that didn't comply with the term limits and adjust the term binding indicator *Tbind* accordingly.

Having a fixed term length is another institutional feature that determines the composition of the treatment and the control groups. Only countries with a fixed term length can adopt term limits and hence have lame-duck leaders. To focus only on situations where the leader can potentially face a binding term, I therefore exclude from the control group those observations where presidential systems do not have a fixed term length (see the first row in Table (4) for the number of leaders in this situation).

All these fine-tunings on the empirical design brings me to the baseline and most compelling specification where I compare the probability of an FTA during a president's binding term

with the same probability during a non-binding term, within presidential systems with fixed term length (i.e., that could impose term limits on the chief executive).

The estimates, reported in Column (1) of Table (9), do not show robust results. The likelihood of an FTA is significant higher during a leader's binding term, but this is true only for one country of the pair. To see whether all the aforementioned data adjustments make a difference, in Columns (2) to (4) I progressively move away from the preferred specification. More specifically, In Column (2), the specification is defined so that the control group includes also presidents in political systems without a fixed term length and hence that could never face a binding term limits. In Column (3), I flag only countries with a non-presidential government system and years where the incumbent did not comply with the term limits. In Column (4), the term binding indicator is used without any adjustment, creating therefore heterogeneity in the control and treatment groups across political regimes and leader's compliance with the term limit system. Overall, the results become weaker as the comparison becomes less precise, confirming the importance of 'cleaning up' the treatment and control groups. In particular, the coefficients on the *Tbind* variable decreases but stay significant for one country, while it remains not significant for the other country in the pair.

The fact that the effect of the term binding indicator on FTA formation is positive and significant for only one country in the pair suggests that there might be some significant interaction between the term limit status in the two countries that in turn affects the likelihood of a trade agreement. In other words, using two separate indicators at the country-level to explain a bilateral outcome might not be an appropriate strategy when there is some cross-country correlation in the variation of the explanatory variable. To correct for this possibility, I thus replace the country-specific indicators with a bilateral dummy variable taking on value one if at least one the two countries in the pair has a lame duck. Consequently, all the data adjustments that are required to achieve the most preferred specification are also done at the bilateral level (e.g., I tag country-pair-year observations where at least one country has non-presidential system).

Column (5) reports the estimates of the 'refined' specification. The probability of an FTA is almost 0.1% higher in presidential dyads with a fixed term length where at least one of the two complying leaders is serving its last term in office than in the same type of dyads where both complying leaders are not in a binding term. From an average probability of 0.18% in the relevant sample, the likelihood of an FTA between two countries is 50% higher in dyads where at least one leader has to leave office at the end of his term. Similarly to the specification with country-level indicators, the effect of term limits on FTA formation is weaker when I use a more vague comparison between leaders in their binding and non-binding terms (see Columns (6) to (8)).

To summarise, the empirical evidence supports the end-game mechanism, namely that incumbents are more likely to sign trade agreements when they are in their last term, as

imposed by constitutional term limits. However, results are less robust than the ones obtain with the first empirical strategy (see Section (4)), the effect being significant for only one country in the pair when I use country-level indicators. This might be due to interactions of term limits provisions across countries or to the fact that a restricted group of countries adopt term limits. The effect of being in a binding term on FTAs is nevertheless positive and significant when I adopt a bilateral indicator for dyads where at least one leader is a lame duck.

In the remainder of this section, I explore some additional empirical tests to validate the finding on the effect of term limits on FTAs and try to pin down the theoretical mechanisms behind these results.

5.1 Robustness checks

To control for possible omitted variable bias, I add to the regression a set bilateral explanatory variables. This is a particularly important test for the validity of the empirical strategy as, for a president, being in its binding term is not an unexpected event like the exit from office due to natural death or ill health. First, a country's decision to adopt certain constitutional arrangements is likely to be endogenous to societal and economic factors, as shown in Aghion et al. (2004). Second, given a term limits provision, the fact that the chief executive is in its last term is itself not a random event, especially if the constitution provides for more than one term. Therefore, I include in the regression the set of time-varying controls that I use in Table (7) and that are likely to affect FTA formation. The results do not change substantially from those for the bilateral *Tbind* indicator without controls, with the probability of an FTA increasing significantly when at least one country in the pair has a lame duck in presidential systems with fixed term length (see Column (1), Table (10)). As I abandon the tightest and hence most convincing comparison between treatment and control groups, the evidence for end-game FTAs becomes much less robust (see Column (2) to (4)).

As outlined above for the strategy linking the unexpected exit of leader to trade agreements, EU countries may represent a particular case that does not fit well with the proposed theoretical argument because of its institutional arrangements. In Column (5) I thus drop pairs where at least one country is an EU member and the results are confirmed and even strengthened.

The empirical evidence on term limits on FTAs suggests that leaders are more likely to form FTAs when serving their last term in office. This is in line with the theoretical mechanism whereby incumbents, when faced with the prospects of leaving office soon, may want to adopt trade agreements to prevent their successors from reducing future welfare through protectionist policies.

However, this is not the only possible explanation behind the observed empirical patterns.

Specifically, if trade policies are an important electoral issue at least for the protectionist segment of the electorate, the incumbent becomes more likely to adopt FTAs when it doesn't have to pay the subsequent electoral penalty (see Section 2.1)). This argument is convincingly supported by the empirical evidence on roll call votes of US Senators and Representatives (Conconi et al., 2011).

To delve into the distinction between this electoral motivations and the rent-destruction argument, I look at the propensity to form FTAs throughout binding and non-binding terms. If electoral motives are prevalent, one would expect the probability of an FTA to be higher during the last years of a binding term than during the last years of non-binding terms, when the incumbent can stand for re-election. Using the most preferred specification (Table (9), Column (1)), I thus interact the binding term indicators with dummies for the number of years in the term (e.g., a dummy for the first year, one for the second year, and so on). While the maximum length of a term in the sample is ten years, few leaders actually stay for more than six years, which is then set as the upper bound. The median length of a term is five years, but the median actual duration in office falls to four years, due to the non-negligible number of leaders who left office before the end of the term (see Table (4)).

Figure (6) plots the difference in the average of the FTA dummy along the duration of a term between binding a non-binding terms (i.e., the coefficients of the interaction terms) for the two countries in the pair, along with its confidence intervals. No clear pattern emerges as the differences are not significant for all years except the fourth one, when it is negative. This implies that FTAs are significantly more likely to be adopted in the fourth year of a non-binding term, when the median leader has to stand for re-election, than in the fourth year of a binding-term, when he cannot be re-elected.

The results seems to rule out any electoral motivation behind the positive effect of being in a binding term on the propensity to sign FTAs, leaving the rent-destruction argument as the only explanation for the formation of end-game FTAs that is consistent with the empirical evidence. Yet, this evidence is far from being conclusive.

First, the results can be affected by possible measurement error on the time dimension, for both the term binding indicator and the dummy for FTA formation. Second, leaders can (and actually do) leave office for other reasons than elections. In these cases, the comparison between years in non-binding terms and years in binding terms is not instrumental in uncovering possible electoral motives behind the adoption of trade agreements. Future research may thus be devoted to assess and quantify the role of rent-related and electoral factors that determine trade reforms and other types of policy having an impact on the availability of political rents in the future.

6   Concluding Remarks

This paper provides novel empirical evidence on the emergence of what might be called 'end-game FTAs'; i.e., FTAs signed by governments that are about to lose power. Plainly there can be no direct test of the end-game hypothesis as it turns on the government's perception of its own interests. The evidence presented here should thus be taken as suggestive rather than conclusive.

I find that countries where incumbents have shorter time horizons or face a higher probability of being replaced are also more likely to sign FTAs. The empirical evidence seems to rent-destruction story formalized by Ornelas (2005, 2007). Trade agreements, by removing the possibility of extracting rents from protectionist policies, limit the possibility of future welfare distortions related to trade policies. An incumbent government that faces a high probability of not being the one receiving rents in the next period might have more incentives to sign trade agreements, so that its successor will not have the opportunity of enacting welfare-reducing policies.

Two alternative empirical strategies - one based on a proxy for political instability, the other on term limits - provide support for this prediction. The strongest support comes from the first strategy. I find that countries are more likely to enter trade agreements after leader's exit due to unexpected reasons, such as natural death or illness health. I show that this type of event is associated with a higher probability of leader turnover, especially in institutional settings that place weak constraints on the chief executive. Importantly, the probability of an FTA increases significantly after the random exit of leaders who are likely to matter the most for the country's political setting (i.e., leaders that exit unexpectedly in autocracies and in institutional setting with weak constraints) and hence whose unexpected exit creates more political instability. Furthermore, the effect of the political instability created by the unexpected exit of the leader on FTA formation is not mediated by other events such as regime changes and wars.

The second strand of evidence, which is based on term limits, provides broad support for the end-game mechanism, although results are somewhat weaker probably because of the restricted sample of countries adopting term limits. Results show that the likelihood of signing an FTA is higher during the incumbent's last term in office, as dictated by constitutional term limits. Intuitively, being in a binding term shifts upward the term-by-term probability that the incumbent will be replaced. Estimates from the most compelling econometric specification suggest that the likelihood of an FTA is 50% higher when the incumbent is a lame duck in presidential system with a fixed term length than when it is not in its last term.

As for the broader implications of my results, this paper supports the idea that institutional arrangements limiting the time in office of the incumbent and favouring political turnover have a positive side effect, i.e., they enhance the prospects of trade liberalization. Yet, term

limits have their downsides, such as reducing voters' choice or precluding learning-by-doing by 'good' politicians. Further work is needed to weigh these pros and cons within different policy settings.

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Appendix

Table 1: Random exits and leader turnover

	(1) Baseline	(2) $x=1$ (demo=1)	(3) $x=1$ (xconst=1)	(4) $x=1$ (old=1)	(5) $x=1$ (tenure=1)
POST-PRE	0.0321 (0.0233)				
POST-PRE $(x=0)$		0.0416 (0.0261)	0.0548** (0.0262)	-0.0085 (0.0243)	-0.0097 (0.0360)
POST-PRE $(x=1)$		-0.118 (0.0886)	-0.189** (0.0777)	0.102 (0.0661)	0.194*** (0.0640)
$(POST-PRE)_{x=0}$-$(POST-PRE)_{x=1}$		0.159 (0.100)	0.240*** (0.0910)	-0.111 (0.0809)	-0.204** (0.0955)
Events (Tot.)	83	82	77	83	83
Events $(x=0)$		61	52	41	41
Events $(x=1)$		21	25	42	42
Countries	171	171	171	171	171
Obs	7,482	7,470	7,417	7,482	7,482
Within R2	0.014	0.028	0.032	0.047	0.054

Note: Standard errors clustered at the country level in parenthesis. All regressions include country fixed effects, year fixed effects and an indicator for overlapping event windows. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 2: Random exits and leader turnover. 10-year event window

	(1) Baseline	(2) 5-year window	(3) $x=1$ (demo=1)	(4) $x=1$ (xconst=1)	(5) $x=1$ (old=1)	(6) $x=1$ (tenure=1)
POST-PRE	0.0692*** (0.0219)	0.0423 (0.027)				
POST-PRE $(x=0)$			0.0729*** (0.0258)	0.0817*** (0.0281)	0.0132 (0.0197)	0.0349 (0.0322)
POST-PRE $(x=1)$			-0.0822 (0.0758)	-0.135** (0.0625)	0.109* (0.0601)	0.113* (0.0632)
$(POST-PRE)_{x=0}$-$(POST-PRE)_{x=1}$			0.155* (0.0893)	0.217*** (0.0796)	-0.0957 (0.0716)	-0.0785 (0.0902)
Events (Tot.)	67	67	67	61	67	67
Events $(x=0)$			51	41	32	32
Events $(x=1)$			16	20	35	35
Countries	171	171	171	169	171	171
Obs	7,482	7,482	7,467	7,378	7,482	7,482
Within R2	0.016	0.013	0.027	0.030	0.044	0.045

Note: Standard errors clustered at the country level in parenthesis. All regressions include country fixed effects, year fixed effects and an indicator for overlapping event windows. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 3: Term Limits and Political Regimes

	(1)	(2)	(3)	(4)
	No term length	Fixed term length		Total
Political Regime		No term limits	Term limits	
Semi-presidential democracy	15	104	433	552
	(2.7%)	(18.8%)	(78.4%)	(9.4%)
Presidential democracy	10	159	748	917
	(1.1%)	(17.3%)	(81.6%)	(15.6%)
Civilian dictatorship	715	789	740	2244
	(31.9%)	(35.2%)	(33.0%)	(38.1%)
Military dictatorship	603	402	482	1487
	(40.6%)	(27.0%)	(32.4%)	(25.3%)
Royal dictatorship	611	77	0	688
	(88.8%)	(11.2%)	(0.0%)	(11.7%)
Total	1,952	1,537	2,391	5888
	(33.2%)	(26.1%)	(40.6%)	

Note: Country-year observations with parliamentary democracies are excluded. Row percentages in parenthesis in Columns (1), (2) and (3). Column percentages in parenthesis in Column (4).

Table 4: Binding Terms and Mode of Exit

	(1)	(2)	(3)	(4)	(5)
		Mode of exit			
Leaders in:	In office	Regular means	Natural cause	Irregular means	Total
No fixed term length	10	57	21	98	186
	(5.4%)	(30.6%)	(11.3%)	(52.7%)	
Fixed term length:	102	412	47	125	686
	(14.9%)	(60.1%)	(6.9%)	(18.2%)	
a) No term limits:	22	117	26	39	204
	(10.8%)	(57.4%)	(12.7%)	(19.1%)	
1a) Understay		103	22	32	157
		(65.6%)	(14.0%)	(20.4%)	
2a) Exit on time		14	4	7	25
		(56.0%)	(16.0%)	(28.0%)	
b) Term limits - Non-binding term:	33	83	4	27	147
	(22.4%)	(56.5%)	(2.7%)	(18.4%)	
1b) Understay		68	3	23	94
		(72.3%)	(3.2%)	(24.5%)	
2b) Exit on time		15	1	4	20
		(75.0%)	(5.0%)	(20.0%)	
c) Term limits - Binding term:	40	191	12	46	289
	(13.8%)	(66.1%)	(4.2%)	(15.9%)	
1c) Understay		70	11	38	119
		(58.8%)	(9.2%)	(31.9%)	
2c) Exit on time		121	1	8	130
		(93.1%)	(0.8%)	(6.2%)	
Non-compliers	7	21	5	13	46
	(15.2%)	(45.7%)	(10.9%)	(28.3%)	
Total	112	469	68	223	872
	(12.8%)	(53.8%)	(7.8%)	(25.6%)	

Note: Leaders in parliamentary democracies and royal dictatorships are excluded. Row percentages in parenthesis.

Table 5: Random exits and Free Trade Agreements

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			5-year window					10-year window		
		x = 1	x = 1	x = 1	x = 1		x = 1	x = 1	x = 1	x = 1
		(demo=1)	(xconst=1)	(old=1)	(tenure=1)		(demo=1)	(xconst=1)	(old=1)	(tenure=1)
$\beta_i^{POST} - \beta_i^{PRE}$	0.0022***					0.0013***				
	(0.0004)					(0.0004)				
$\beta_j^{POST} - \beta_j^{PRE}$	0.0016***					0.0010***				
	(0.0004)					(0.0003)				
$\beta_i^{POST} - \beta_i^{PRE}$ (x=0)		0.0022***	0.0025***	0.0005	0.0011*		0.0013***	0.0019***	-0.0002	0.0002
		(0.0004)	(0.0005)	(0.0005)	(0.0006)		(0.0003)	(0.0004)	(0.0005)	(0.0006)
$\beta_j^{POST} - \beta_j^{PRE}$ (x=0)		0.0011***	0.0008**	0.0003	0.0016***		0.0004	0.0004	0.0001	0.0015***
		(0.0003)	(0.0003)	(0.0004)	(0.0006)		(0.0003)	(0.0003)	(0.0003)	(0.0005)
$\beta_i^{POST} - \beta_i^{PRE}$ (x=1)		-0.0012	-0.0046***	0.0045***	0.0028**		-0.0024	-0.0060***	0.0043***	0.0024**
		(0.0019)	(0.0015)	(0.0011)	(0.0012)		(0.0022)	(0.0017)	(0.0012)	(0.0012)
$\beta_j^{POST} - \beta_j^{PRE}$ (x=1)		0.0010	-0.0008	0.0040***	0.0008		0.0012	-0.0006	0.0024**	-0.0007
		(0.0016)	(0.0013)	(0.0011)	(0.0010)		(0.0015)	(0.0011)	(0.0010)	(0.0009)
$\left(\beta_i^{POST} - \beta_i^{PRE}\right)_{x=1} - \left(\beta_i^{POST} - \beta_i^{PRE}\right)_{x=0}$		0.0034*	0.0072***	-0.0040**	-0.0017		0.0037	0.0079***	-0.0044***	-0.0021
		(0.0020)	(0.0017)	(0.0015)	(0.0017)		(0.0023)	(0.0019)	(0.0015)	(0.0017)
$\left(\beta_j^{POST} - \beta_j^{PRE}\right)_{x=1} - \left(\beta_j^{POST} - \beta_j^{PRE}\right)_{x=0}$		0.0001	0.0016	-0.0037***	0.0008		-0.0007	0.0010	-0.0023*	0.0022*
		(0.0017)	(0.0014)	(0.0014)	(0.0015)		(0.0016)	(0.0012)	(0.0012)	(0.0013)
Events (Tot.)	79	78	73	79	79	63	63	57	63	63
Obs	495,598	494,113	485,993	495,598	495,598	495,598	494,456	480,826	495,598	495,598
Within R2	0.0029	0.0030	0.0029	0.0030	0.0030	0.0029	0.0029	0.0030	0.0029	0.0029

Standard errors clustered at the country-pair level in parenthesis. All regressions include country-pair fixed effects, four cubic splines of time until the dependent variables equals one, and indicators for overlapping event windows in country i and country j. *** significant at 1%, ** significant at 5%, * significant at 10%.

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Table 6: Random exits, regime changes and wars

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	enddemo				endautho				intwar			
Dep. variable	5-year window	x=1 (xconst=1)	x=1 (tenure=1)	10-year window	5-year window	x=1 (xconst=1)	x=1 (tenure=1)	10-year window	5-year window	x=1 (xconst=1)	x=1 (tenure=1)	10-year window
POST-PRE	-0.00156			0.00261	-0.00251			0.00927*	-0.0257			-0.0185
	(0.00494)			(0.00293)	(0.00598)			(0.00545)	(0.0160)			(0.0165)
POST-PRE ($x=0$)		-0.00569	-0.00271			0.00147	-0.00857			-0.0381	-0.0289	
		(0.00418)	(0.00979)			(0.00407)	(0.0107)			(0.0253)	(0.0255)	
POST-PRE ($x=1$)		0.0105	0.0057			-0.0549**	0.0223			0.0564	-0.00223	
		(0.0223)	(0.0166)			(0.0252)	(0.0192)			(0.0542)	(0.0639)	
(POST-PRE)$_{x=0}$-(POST-PRE)$_{x=1}$		-0.0162	0.00840			0.0563**	0.0309			-0.0945	0.0267	
		(0.0242)	(0.0260)			(0.0261)	(0.0291)			(0.0781)	(0.0849)	
Events (Tot.)	82	76	82	67	82	76	82	67	83	77	83	67
Events ($x=0$)		51	41			51	41			52	41	
Events ($x=1$)		25	41			25	41			25	42	
Countries	170	170	170	170	170	170	170	170	161	161	161	161
Obs	7,389	7,324	7,389	7,389	7,389	7,324	7,389	7,389	7,065	7,000	7,065	7,065
Within R2	0.002	0.002	0.002	0.002	0.011	0.012	0.011	0.011	0.014	0.016	0.015	0.013

Note: Standard errors clustered at the country level in parenthesis. All regressions include country fixed effects, four cubic splines of time until the dependent variables equals one, and an indicator for overlapping event windows. *** significant at 1%, ** significant at 5%, * significant at 10%.

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Table 7: FTA Regression. Robustness checks

	(1) 5 years back	(2) Cty controls	(3) No EU	(4) Bilateral	(5) Bilateral+ controls
$\beta_i^{POST} - \beta_i^{PRE}$	-0.0007**	0.0026***	0.0008***		
	(0.0002)	(0.0006)	(0.0003)		
$\beta_j^{POST} - \beta_j^{PRE}$	-0.0002	0.0015***	0.0012***		
	(0.0002)	(0.0005)	(0.0003)		
GDPpc_gr$_i$		0.0014*			
		(0.0008)			
GDPpc_gr$_j$		0.0003			
		(0.0009)			
Inflation$_i$		-0.0010***			
		(0.0003)			
Inflation$_j$		-0.0007**			
		(0.0003)			
XCONST$_i$		0.0019***			
		(0.0004)			
XCONST$_j$		0.0015***			
		(0.0004)			
$\beta_{bil}^{POST} - \beta_{bil}^{POST}$				0.0020***	0.0029***
				(0.0003)	(0.0004)
OneDemoc					-0.0006**
					(0.0003)
BothDemoc					0.0015***
					(0.0005)
GDPsum					-0.0011*
					(0.0006)
GDPdiff					-0.0012***
					(0.0004)
GDPpc_diff					0.0002
					(0.0003)
OneWTO					-0.0005
					(0.0005)
BothWTO					0.0042***
					(0.0006)
Alliance					0.0067***
					(0.0025)
Affinity					0.0031***
					(0.0006)
Events (Tot.)	70	65	77	79	57
Obs	430,070	320,783	434,592	495,598	311,102
Within R2	0.0022	0.0036	0.0020	0.0029	0.0040

Standard errors clustered at the country-pair level in parenthesis. All regressions include country-pair fixed effects and four cubic splines of time until the dependent variable switches to one. Columns (1) to (3) include dummies for overlapping event windows in each country in the pair. Columns (4) and (5) include a dummy for overlapping events. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 8: Does FTA participation predict random exits of leaders?

	(1)	(2)	(3)	(4)
FTAdummy	-0.00376		-0.00646	
	(0.00535)		(0.00505)	
FTAimpshare		0.0172		0.0190
		(0.0216)		(0.0217)
GDPpc_gr			0.00367	0.00184
			(0.0157)	(0.0162)
Inflation			-0.00234	-0.00202
			(0.00564)	(0.00572)
Exrate change			-0.00822*	-0.00813*
			(0.00419)	(0.00425)
Events (tot.)	80	74	67	63
Obs	7,167	6,604	6,282	6,010
Within R2	0.004	0.005	0.007	0.007

Standard errors clustered at the country level in parenthesis. All regressions include country fixed effects and four cubic splines of time until the dependent variable switched to one. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 9: Term limits and Free Trade Agreements

	(1) Only fixed term length	(2) No parl., royal, non-compl.	(3) No parl., royal, extra terms	(4) Base	(5) Only fixed term length	(6) No parl., royal, non-compl.	(7) No parl., royal, extra terms	(8) Base
$Tlim_i$	0.0015***	0.0014***	0.0011***	0.0008***				
	(0.0004)	(0.0004)	(0.0003)	(0.0003)				
$Tlim_j$	-0.0001	0.0002	-0.0002	-0.0002				
	(0.0004)	(0.0004)	(0.0003)	(0.0003)				
$Tlim_{bil}$					0.0008**	0.0008***	0.0005*	0.0004
					(0.0003)	(0.0003)	(0.0003)	(0.0002)
Obs	456,737	474,017	474,017	480,706	456,737	474,017	474,017	480,706
Within R2	0.0031	0.0031	0.0031	0.0028	0.0030	0.0030	0.0030	0.0028

Note: See main text for details on the econometric specification of each column. Standard errors clustered at the dyadic level in parenthesis. All regressions include country fixed effects and four cubic splines of time until the dependent variable switches to one. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 10: Term limits and Free Trade Agreements. Additional Results

	(1) Only fixed term length	(2) No parl., royal, non-compl.	(3) No parl., royal, extra terms	(4) Base	(5) No EU
Tlim$_{bil}$	0.0011***	0.0011***	0.0005	0.0004	0.0013***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
OneDemoc	-0.0010***	-0.0011***	-0.0009***	-0.0007**	-0.0002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
BothDemoc	0.0009	0.0008	0.0010*	0.0014**	0.0005
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
GDPsum	-0.0008	-0.0008	-0.0008	-0.0007	-0.0009
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
GDPdiff	-0.0013***	-0.0012***	-0.0012***	-0.0013***	-0.0007*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GDPpc_diff	0.0002	0.0002	0.0002	0.0002	0.0001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
OneWTO	-0.0004	-0.0004	-0.0004	-0.0004	0.0002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
BothWTO	0.0043***	0.0042***	0.0042***	0.0042***	0.0025***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Alliance	0.0065**	0.0062**	0.0062**	0.0062**	0.0011
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)
Affinity	0.0028***	0.0027***	0.0026***	0.0026***	0.0002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)
Obs	298,924	304,057	304,057	304,057	256,080
Within R2	0.004	0.004	0.004	0.004	0.003

Note: See main text for details on the econometric specification of each column. Column (5) has the same specification of Column (1). Standard errors clustered at the dyadic level in parenthesis. All regressions include country fixed effects and four cubic splines of time until the dependent variable switches to one. *** significant at 1%, ** significant at 5%, * significant at 10%.

Figure 1: Unexpected exit of leaders, political turnover and FTAs
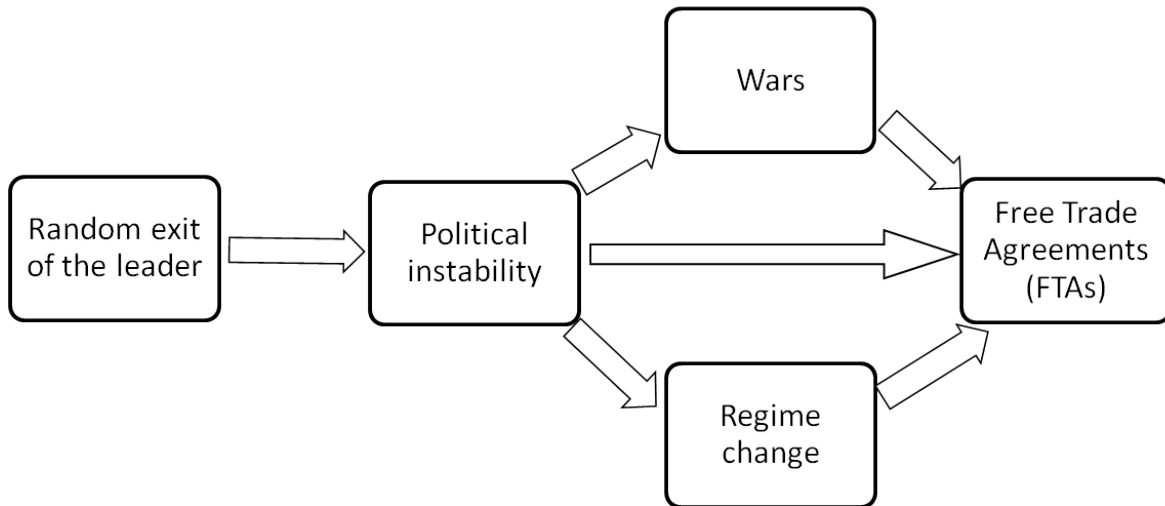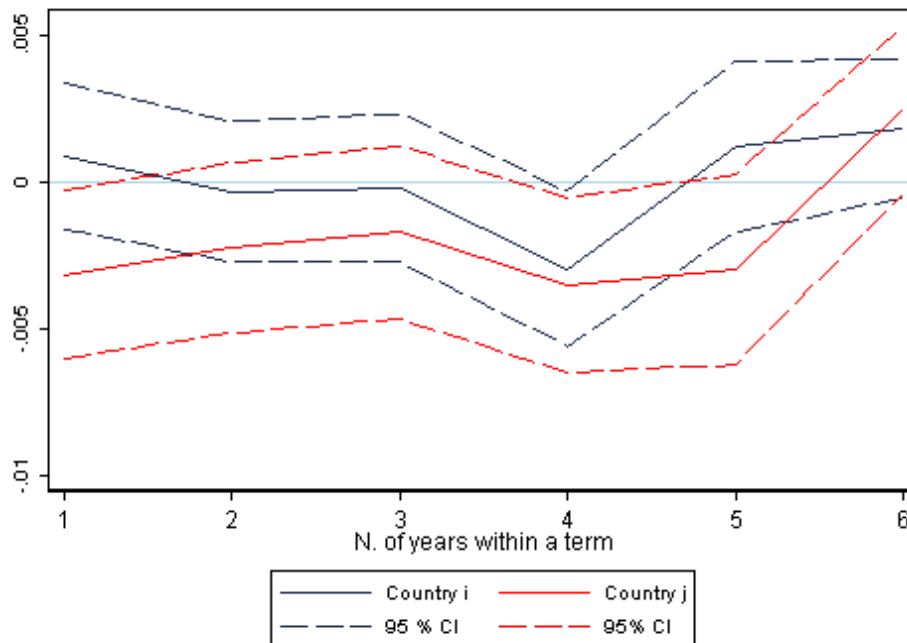

Figure 2: FTA probability throughout binding and non-binding terms

Note: Plot of coefficients on interactions of dummies for years within a term and an indicator for binding term, constructed as in Table 9, Column (1).