Political Instability and Institutional Reform: Theory and Evidence[*]

Timothy Besley
LSE and CIFAR

Torsten Persson
IIES, Stockholm University and CIFAR

Marta Reynal-Querol
Universitat Pompeu Fabra and ICREA

August 1, 2013

Abstract

Strengthening executive constraints is one of the key means of improving political governance. This paper examines how such reforms are related to threats to the tenure of ruling political incumbents. We formalize this idea theoretically and test it empirically, using data on leaders since 1875 and events that decrease the likelihood that political leaders remain in office. Three case studies and econometric results from event-study and instrumental–variables approaches are well in line with the theoretical predictions.

1 Introduction

Creating stable systems of government, where citizens enjoy political rights and rulers are constrained, is a major achievement in human history. In many places, monarchs and autocrats with few or no formal checks on their powers have been displaced by constitutionally constrained rulers. Yet, many of the world's citizens continue to live under regimes where this is not the case. Consequences are predictable: government by a detached elite group which often places little weight on collective interests. However, faced with the threat of losing power, such groups may be tempted to choose a path of reform by institutionalizing constraints on the power of future incumbents. Thus political instability can lead to an institutional transition like the one witnessed in the move from Communism in the late 1980s and early 1990s, and which the Arab spring may yet deliver.

Figure 1 gives a birds' eye view of how the world-wide prevalence of strong executive constraints has evolved using data from Polity IV.[1] The red line illustrates this evolution for the 50 countries for which we have uninterrupted data from 1875 to 2004, the sample period of our empirical study. The main variations broadly follow Huntington's three waves of democratization (Huntington, 1991). They reflect reforms in Europe at the beginning of the past century, a setback in the interwar period, followed by a return of strong constraints after World War II, and then a surge of institutional reforms in Latin America and the former Communist block from the 1980s onward. To lessen survivorship bias, the blue line shows the prevalence for all countries with available data. Although the proportion of countries with strong executive constraints is considerably lower at the end of the sample in this larger group, the pattern looks broadly similar with the exception of an additional dip from 1960 to 1975 driven by a number of newly established countries (mainly former colonies).

The challenge for researchers is to understand theoretically and empirically why reforms that strengthen constraints on executive power are passed given that they diminish the discretion of incumbents. While the existing literatures in economics and political science have generated insightful theory and creative evidence, progress which puts the two together remains relatively modest. In particular, few predictions from specific models have been taken to the data. Moreover, much of the literature has bundled together all aspects of institutional change into an overall democracy score, rather than attempting to unpack different aspects of political institutions and the forces that shape them.

The aim of this paper is to investigate a specific mechanism linking stronger constraints on the executive to political instability. The focus on executive constraints is motivated by Besley and Persson (2011a), who use this as a core measure of cohesive political institutions, i.e. those which encourage government to be run more in pursuit of common interests. They argue that a state run along common-interest lines is more likely to diminish the use of political violence and to promote economic development.

In our theoretical framework, an incumbent group makes a choice over future institutions. A

---

[1] The precise measure used is discussed in section 3.1.

threat to the survival of the ruling group creates a strategic incentive to reform institutions by imposing tighter constraints on the powers of the executive. Incumbent groups are headed by leaders who have different survival probabilities which we refer to as their *resilience.* Greater resilience increases the chances that the incumbent group stays in power. If a particularly resilient leader is replaced or dies, the prospect of his group of remaining in power diminishes. Following the exit from power of a resilient leader, the ruling group cares more about how policy will be determined if they lose power. This encourages the group to constrain future incumbents to act more in the common interest by strengthening executive constraints.

The basic idea behind the theory receives support from a first pass at the data. Leadership turnover is positively correlated with the adoption of stronger executive constraints. Conditional on country and year fixed effects, such reforms are about 9 percentage points more likely in the five years after a leadership transition than in the five years before the transition, a difference which is statistically significant. However, leaders turn over for many reasons and these may well be co-determined with the forces that shape institutional change; after all it may be necessary to remove a leader to make institutional reform possible. Thus, the direction of causation is far from clear.

Establishing a convincing empirical link between turnover and reform requires a source of exogenous variation. Following Jones and Olken (2005), we focus on leader exits due to death (or serious illness). Arguably, these events are exogenous to factors that shape the desire for reform. There are two reasons why such irregular exists from power can precipitate reform. Such deaths could be disruptive to the continuity of elite groups in power, thereby increasing political instability. The heart attack of North Korean leader Kim Jong-il in December 2011 is a case in point. So far, his son appears to have been safely installed in power, but there follows a period of uncertainty about the continuity of the dynasty or even of communist rule. Also, following the discussion above, surviving in power to the point of death is a sign of political resilience. It is unlikely, all else equal, that the leader who follows is equally resilient due to a standard reversion to the mean. This tends to increase expected instability following a random exit due to death or illness, a prediction which is confirmed in the data.

Broadly, this paper fits into the literature that examines links between development and democracy. Early studies were influenced by the modernization hypothesis of Lipset (1959), with more recent incarnations being Przeworski et al (2000) and Bueno de Mesquita et al (2003). However, the hypothesis that income drives democracy receives weak empirical support with, at best, ambiguous evidence – see, for example, Barro (1999), Acemoglu et al (2008), and Bruckner and Ciccione (2011). This finding is consistent with our approach. The timing of political change is often abrupt and linked to political circumstance rather than to slow moving variables like income or education, even though these variables may shape the wider context and citizens' aspirations.

Our approach is distinct from the strand of literature which argues that social and cultural factors promote democracy. This includes the ideas that having a strong and effective middle class or plentiful social capital may be important as hypothesized, for example, by Almond and

Verba (1963), Moore (1966), and Putnam (1993). In this general vein, Persson and Tabellini (2009) introduce the concept of democratic capital and find empirically that this consolidates rather than promotes transitions into democracy.

The ambition of our paper is to study a specific dimension of political reform. Although we focus on strengthening executive constraints, it has most in common with the literature on franchise extension, particularly the work by Acemoglu and Robinson (2000, 2006), who offer insightful case-study evidence. They also emphasize the role of political instability, particularly due to the threat of a revolution. Franchise extension is used a commitment device by the elite to guarantee more favorable treatment of the masses. Aidt and Jensen (2010) find econometric evidence in support of this view. Below, we show that the leader deaths we focus on do not predict changes in the franchise nor other moves towards greater openness.

Our argument is also related to that in Lizzeri and Persico (2004), where a ruling group voluntarily extends the franchise in order to reorient spending from transfers targeted to small groups to general broad-based programs. It also resembles a classic argument first made by Rokkan (1970) and extended by Boix (1999). This holds that fears of electoral losses explain the move from plurality to proportional representation as a means of protecting the center-right from a labor electoral landslide in those countries in early 20th-century Europe where landed and industrial elites had not forged their interests.

In a different vein, Lagunoff (2001) develops a model with a dynamic game between two groups, in which greater political turnover leads to greater constitutional support of civil liberties. Congleton (2007) discusses forces that promote the introduction of parliamentary oversight on royal power, focusing on instability due to preference shocks to the monarch. Acemoglu, Robinson and Torvik (2011) develop a model of endogenous checks and balances, stressing the way that these change the ability of special interests to influence policy. Jones and Olken (2009) exploits the difference between successful and unsuccessful assassination attempts to show that random leadership change causes democratic reform, as measured by a broad democracy index.

Our approach is one where institutional reform is "defensive" and undertaken when a group anticipates losing political power. This is different from the Acemoglu-Robinson approach, where institutional reforms are also defensive, but the incumbent group gives up political power in order to secure economic power. Our approach also differs from those based on revolutionary change, where institutional change is "offensive" and an incumbent is removed from power as a means of securing change. Of course, all these views have played a role in the real world. Our aim is to explore the theoretical and empirical validity on one specific approach, rather than trying to provide a general account of all aspects of institutional change.

In the next section of the paper, we develop a simple infinite-horizon model where an incumbent group facing high expected turnover may choose to undertake a reform that puts in place more binding executive constraints. Group leaders have different survival probabilities, such that the model makes specific empirical predictions regarding the effect of leader turnover. In Section 3, we describe our data on political institutions and random leader exits and present some illustrative

case-study evidence based on the democratic transitions in Spain, Taiwan and Nigeria. Section 4 presents our econometric results. We first rely on an event-study approach, which gives findings well in line with the theoretical predictions. Random exits from political office not only produce more political turnover, but also trigger reforms in the direction of stronger executive constraints, which are statistically and economically significant. We also use an IV-approach, where in the first stage random leader exits are used to instrument for leader turnover, conditional on leader age and tenure. In the second stage, higher predicted turnover does indeed induce a greater probability of higher constraints on the executive – in line with the theory as well as the event-study evidence. Section 5 discusses political reforms of electoral institutions. Theoretically, we show how the model can be extend to encompass this aspect of political reform. Empirically, we show that random leader exits do not seem to induce any reforms of electoral institutions. Thus, our results appear specific to reforms of executive constraints and not driven by general democratizations. Section 6 concludes the paper.

2   Model

The model extends the two-group, two-period model sketched in Besley and Persson (2011a, ch. 7) to an infinite-horizon, multiple-group setting, which explicitly distinguishes groups and their leaders. The incumbent government in power decides how to deploy a fixed tax revenue between transfers and public goods more or less constrained by current political institutions. In view of their prospect of surviving in office, incumbent groups choose the cohesiveness of political institutions (executive constraints) for the next period.

Basics and groups   There is an infinite horizon with time periods denoted by $t = 1, 2, ...$ The population is normalized to unity and divided into $\frac{1}{e}$ equal-sized groups indexed by J. The incumbent government in period t belongs to one of these groups, which is denoted by I_t. The other groups are in opposition and are indexed by the list O_t^J. If the incumbent government is thrown out at the end of period t, then one of the previous opposition groups is randomly chosen (with equal probability) to be in power in period $t + 1$. All decisions on behalf of the incumbent group are taken by a leader, with characteristics described below

Income, preferences, and private consumption   All individuals have an equal, exogenous and constant (net of tax) income y. The utility function of a member of group J in period t is linear in private and public goods

$$u_t^J = \alpha g_t + x_t^J \ .$$

Variable g_t is the provision of public goods by the incumbent. The value of public goods is given by α, with $1 < \alpha < \frac{1}{e}$.

Variable x_t^J denotes private consumption, which depends on the status of a group. For all

opposition groups, it is given by

$$x_t^J = y + r_t^J \ , \quad J \in O_t^J,$$

where r_t^J is a *per-capita* transfer payment to all group J members. For simplicity, we work with the case $r_t^J = r_t$, so that all non-governing groups are treated in the same way. Any member of the incumbent group, including the leader, has private consumption

$$x_t^J = y + b_t \ , \quad J = I_t,$$

where b_t are the *per-capita* rents, extracted by the period-t leader on behalf of his group – these rents could be generated endogenously through predatory activities, as in Besley and Persson (2011a, ch. 3). Thus, all members of the incumbent group get the same share of rents.

Everybody discounts the future with discount factor $\delta \in (0,1)$. There are no savings in the model.

Government budget constraint The incumbent leader has access to some exogenous revenue of size T. This income can be spent on three items: public goods g_t, transfers to members of all other groups r_t, and transfers to members of the incumbent group b_t.

The government budget constraint is therefore

$$T = g_t + r_t \left(1 - e\right) + eb_t \ .$$

Within-group leader turnover In each period t, the incumbent group I_t starts out with a specific leader in power. We use $\xi_{t-1} \in [\xi_L, \xi_H]$ to denote this leader's "resilience". Higher resilience positively affects two things: (i) the likelihood that the leader will remain as the leader of the incumbent group, and (ii) the incumbent group's probability of staying in power.

Let $s\left(\xi_{t-1}, \nu_t\right) (\in \{0,1\})$ denote the event that a leader with resilience ξ_{t-1} survives as leader of the incumbent group in period t, where ν is a random shock. We assume that $s\left(\xi_{t-1}, \nu_t\right)$ is increasing in ξ, i.e., more resilient leaders are less likely to lose the leadership of their group. Anticipating the empirical analysis to follow, a realization of ν could be thought of as capturing whether a leader dies. However, it encompasses a wider range of random influences on leadership transitions within a group.

If a leader is replaced within the incumbent group, there is a random draw from the pool of potential leaders with mean resilience $\bar{\xi}$. Thus the evolution of expected leader resilience conditional on ν given by:

$$E(\xi_t) = \begin{cases} \xi_{t-1} & \text{if } s\left(\xi_{t-1}, \nu_t\right) = 1 \\ \bar{\xi} & \text{otherwise .} \end{cases}$$

We will use $\overline{s}\left(\xi\right) = E\left\{s\left(\xi, v\right)\right\}$ to denote expected within-group turnover for a leader of resilience ξ.

Turnover between groups The probability that the incumbent group remains in power until the next period also depends on its current leader. Denoting this ex post (conditional) probability by q_t, we assume that it is simply equal to its leader's resilience:

$$q_t = \xi_t .$$

Before the realization of the random shock ν_t, the ex ante (unconditional) probability that the incumbent *group* survives in power when the resilience of the leader is ξ_{t-1} is given by

$$Q_t = Q(\xi_{t-1}) = \bar{s}\left(\xi_{t-1}\right)\xi_{t-1} + \left[1 - \bar{s}\left(\xi_{t-1}\right)\right]\bar{\xi} , \tag{1}$$

which we assume is increasing in ξ.[2]

Once the random shock, ν_t, is realized and the resilience of the leader is determined, then the probability that the period t incumbent group loses its power at the end of the period is thus $1 - q_t = 1 - \xi_t$. If the incumbent group loses power, each opposition group has an equal probability to take over, namely $\frac{e}{1-e}$. If a new group enters into power, the leader of that group (with resilience drawn at random) becomes the new leader of the country.

Political institutions Political institutions are more or less cohesive. We model this very simply, as a constraint on just how badly an incumbent group can treat the other groups in the population. In terms of the model, this constrains the rents that an incumbent group can extract at the expense of others in society. Thus, we assume that the incumbent leader must give a fixed share, $0 \leq \theta_t \leq 1$, to every other citizen, for any unit of rents collected by members of its own group:

$$r_t \geq \theta_t b_t .$$

The parameter θ_t represents more or less cohesive institutions. We interpret a higher value of θ, as tighter executive constraints on the incumbent government, i.e., a form of institutional commitment. Concretely, this could represent stronger constitutional provisions limiting executive powers, which are enforced by a legislature and/or an independent judiciary.

To model the process of political reform, we follow the existing literature (e.g., Acemoglu and Robinson, 2006) in assuming limited commitment, with political institutions chosen at time t being binding on decisions at $t + 1$ (see further discussion below).

Timing To summarize the model laid out above, each period has the following timing:

1. The polity starts period t with an inherited incumbent group I_t, whose leader has resilience

---

[2] A sufficient condition for this is that:

$$1 > \frac{E\left\{s_\xi\left(\xi,\nu\right)\right\}\left[\bar{\xi} - \xi\right]}{E\left\{s\left(\xi,\nu\right)\right\}}$$

for all $\xi \in \left[\xi_L, \bar{\xi}\right]$.

ξ_{t-1}, and inherited institutions θ_t, which bind for that period.

2. The incumbent leader chooses policy $\{g_t, r_t, b_t\}$ for the current period, and political institutions, θ_{t+1}, for the next period.

3. Nature determines the period-t political stability shock ν_t. If the incumbent-group leader survives, then his resilience stays constant. If not, then a fresh draw from a pool of leaders determines ξ_t.

4. Group I_t is replaced with probability $1 - \xi_t$. Each opposition group have an equal probability of taking over the executive, namely $\frac{(1-\xi_t)e}{1-e}$. If a new group takes power, the resilience of its leader is chosen at random.

The model is recursive, which allows us to first study period t, $\{g_t, r_t, b_t\}$, taking θ_t as given. We then study the choice of political regime θ_{t+1}, a more involved problem. We look for a Markov-perfect equilibrium where the state variables are $\{\xi_{t-1}, \theta_t\}$. Given our structure, we show that the decision over future institutions does not depend on θ_t.[3]

Policy Beginning with public spending, the leader of the incumbent group in period t sets policy to maximize the group's own utility

$$u_t^I = \alpha_t g_t + y + b_t , \tag{2}$$

subject to the constraints on rents and transfers, and the government budget constraint. Policies do not depend on ξ and hence we write them solely as a function of θ. This recursive separability is key to the identification strategy that we pursue below, i.e., it is key that leader characteristics associated with political survival are uncorrelated with policy preferences.

It is easy to see that the two constraints will all be satisfied with equality: in particular, transfers to opposition group citizens are set to a minimum $r_t = \theta_t b_t$. The remaining choice is how much to spend on public goods and how much to spend on rents. Because of the linear utility function, the incumbent will always choose a "bang-bang" solution

$$
\begin{aligned}
\hat{g}(\theta) &= \begin{cases} T & \text{if } \alpha \geq \frac{1}{\theta + (1-\theta)e} \\ 0 & \text{otherwise,} \end{cases} \\
\hat{b}(\theta) &= \left[\frac{1}{\theta + (1-\theta)e}\right](T - \hat{g}(\theta)), \text{ and} \\
\hat{r}(\theta) &= \left[\frac{\theta}{\theta + (1-\theta)e}\right](T - \hat{g}(\theta)) .
\end{aligned}
$$

The incumbent leader either spends all available funds on public goods, or on rents to his own group (and necessary transfers to opposition groups), depending on the executive constraints he

---

[3]In effect, the problem will reduce to a static comparison of the effect of θ. The focus on Markov perfection rules out history-dependent strategies.

faces. Since $1 < \alpha < \frac{1}{e}$, by assumption, all residual spending is on public goods (rents) when θ is above (below) $\frac{1-\alpha e}{\alpha(1-e)}$. Cohesive institutions, or high executive constraints – i.e., $\theta \in [\frac{1-\alpha e}{\alpha(1-e)}, 1]$ – induce equality in outcomes in each period by guaranteeing that all spending is on public goods rather than transfers.

Choice of institutions   The choice of institutions depends on ex-ante political stability, which is fully captured by the incumbent group's leader expected resilience ξ. We can now state the following result, which is proved in the Appendix:

Proposition 1 *The choice of executive constraints depends on the probability that the incumbent group retains power as follows:*

$$\hat{\theta}(\xi) = \begin{cases} \frac{1-\alpha e}{\alpha(1-e)} & \text{if } Q(\xi) \leq \alpha e \\ 0 & \text{otherwise.} \end{cases}$$

The prediction in Proposition 1 is symmetric across the initial institutions in place at the beginning of the period. Thus it predicts transitions into or out of cohesive institutions depending on the current value of leader resilience. This mirrors the reality in the data that constraints on the executive move in both directions.

Even though we have allowed for a continuous choice of θ, the incumbent always pushes the choice of institutions to one corner or another. The value $\frac{1-\alpha e}{\alpha(1-e)}$ represents the point at which it becomes optimal to spend on public goods, i.e., institutions are sufficiently cohesive. The executive constraints needed to achieve this are lower when public goods are more valuable (α is higher) or the incumbent group is larger (e is larger).

Although we have an infinite horizon, the trade-off boils down to comparison of the effects of changing θ on the policy in the next period, factoring in the possibility of group turnover. A high probability of losing office leads incumbents to choose strong executive constraints. The choice is governed by a simple comparison of benefits and costs. The cost of strong constraints to the incumbent group are next period's rents when it remains in office. The benefit is an assurance that next period's spending will be on public goods if the incumbent group is ousted. Since expected group turnover $Q(\xi)$ in our model depends on the leader's individual resilience, this result ties the characteristics of leaders to the choice of political institutions; a more resilient leader is less likely to choose strong executive constraints.

Discussion of the model   The model has a number of specific features to enable us to focus on how leadership transitions affect incentives for political reform.

First, we have modeled political control as opportunities for grabbing a disproportionate share of government revenue. But the specific way of discriminating against the rest of society is not essential to the core argument. What we require is some policies on which there is a common agreement, while others have benefits which are particular to specific groups (as in Lizzeri and

9

Persico, 2004). The latter could include non-economic policies, e.g., some kinds of regulations of rights (as in Lagunoff, 2001) or specific kinds of public spending over which preferences diverge. This would be particularly relevant if the model were extended to allow for group heterogeneity in preferences, creating a role for fractionalization and polarization.

Second, the turnover probability could be made endogenous by allowing the incumbent to choose whether to repress opposition groups.[4] Shocks to repression costs would then provide another influence on political instability as in Acemoglu and Robinson (2006).

Third, the model does not allow for any means of disciplining incumbents beyond changing institutions. Thus, it rules out links between political turnover and incumbent policy choices. In a model with some form of accountability, incumbent groups could develop reputations which make policies more cohesive. Except in extreme cases, however, this would not fully replace the role of institutional constraints.

Fourth, as mentioned in the introduction, reforms are defensive and anticipate the possibility of a group losing power. However, they do not change the probability that a group remains in office. However, this would be a natural extension of the approach, and we take some steps towards such an extension in Section 5 by modeling the openness of access to power such as a widening of the franchise. Section 5 also presents some preliminary results on whether this other aspect of political reform correlates empirically with the reforms studied here.

Fifth, another natural extension of the model would be to allow for costs of changing institutions. The "ink and paper" costs of changing a constitution are probably not a significant factor. The appropriate foundations for costs beyond ink and paper are not self-evident. Perhaps constitutional reforms create stickiness by facilitating changes in informal institutions, changing inertial norms of behavior in the political system. Changes in norms might best be thought of as a further state variable, similar to what Persson and Tabellini (2009) call "democratic capital". Institutional choices would then be conditioned on this state variable. More generally, sources of state dependence that imply costs of institutional change would make an incumbent group weigh these costs against the benefits of reform, which could create a status-quo bias. Practically, this would result in θ_{t+1} becoming a function of the institutions in place θ_t. Partly to reflect such concerns, we will allow for state dependence in our empirical approach below.

Empirical predictions The model has a clear prediction about the effect of ex-ante expected turnover on the choice of institutions. The values of the product αe are not observed to us. However, as researchers, we postulate that this variable has some distribution, with c.d.f. F and p.d.f f.

Suppose then that country i has a leader of quality $\xi_{i,t-1}$ entering period t. Then, the model predicts that the conditional probability (likelihood) of observing cohesive institutions in that

---

[4]A previous version of the paper considered a two-period version with endogenous repression. Besley and Persson (2011a, ch.7) includes a two-period model that also allows for the possibility of civil war.

country the next period is then given by

$$P_{i,t} = \text{Prob} \left[\theta = \frac{1 - \alpha e}{\alpha (1 - e)} : \xi_{i,t-1} \right] = 1 - F(Q(\xi_{i,t-1})) \ .$$

Observe that this is decreasing in ξ, i.e., a group with a leader of higher resilience has a lower probability of introducing cohesive institutions.

Consider a random sample of the I countries labelled $i = 1, ..., I$ observed at two consecutive dates $t-1$ and t. Divide the sample into two groups: a treatment group, $\mathcal{T}$, of size $I_{\mathcal{T}}$ where there has been within-incumbent-group leader turnover due to political shocks, i.e. $s(\xi_{i,t-1}, \nu_t) = 0$, and a control group, $\mathcal{C}$, of size $I_{\mathcal{C}}$ where no such random turnover has occurred.

How does expected group turnover $E\{1 - Q_{i,t}\}$ differ across the two treatment group and the control group? Given the definition in (1), we have:

$$
\begin{aligned}
E\{1 - Q_{i,t} : i \in \mathcal{T}\} - E\{1 - Q_{i,t} : i \in \mathcal{C}\} &= \frac{1}{I_{\mathcal{T}}} \sum_{i \in \mathcal{T}} \overline{s}(\xi_{i,t-1}) \left[\xi_{i,t-1} - \overline{\xi} \right] \\
&= cov\left(\overline{s}(\xi_{i,t-1}), \xi_{i,t-1} : i \in \mathcal{T} \right) \ ,
\end{aligned}
$$

where we have used the fact that mean turnover in the control group is unchanged. We expect this covariance to be positive since $\overline{s}(\xi_{i,t-1})$ is increasing in $\xi_{i,t-1}$. In words, random events – such as deaths – should lead to greater instability on average. This is because they tend to select out leaders whose greater resilience, on average, has led them to serve longer in office.

Consider next the prediction for the adoption of cohesive institutions. Recalling the definition of $Q(\xi_{i,t-1})$ in (1), we get:

$$
\begin{aligned}
E\{P_{i,t} : i \in \mathcal{T}\} - E\{P_{i,t} : i \in \mathcal{C}\} &= \frac{1}{I_{\mathcal{T}}} \sum_{i \in \mathcal{T}} \{ F[\overline{s}(\xi_{i,t-1}) \xi_{i,t-1} + (1 - \overline{s}(\xi_{i,t-1})) \overline{\xi}] - F(\overline{\xi}) \} > 0 \\
&\simeq f(\overline{\xi}) cov\left(\overline{s}(\xi_{i,t-1}), \xi_{i,t-1} : i \in \mathcal{T} \right) \ ,
\end{aligned}
$$

where we have used a first-order expansion around $\overline{\xi}$ and the observation that there is no change in the likelihood of picking cohesive institutions in the control group. Thus, we predict the adoption of cohesive institutions – i.e., strong executive constraints – to be higher on average in the treatment group. This is the flip-side of the prediction on turnover.

The model also gives a steer on the two key "structural equations" from the theory and how a model based on these could be identified. These are:

$$P_{i,t} = 1 - F(Q_{i,t}) \text{ and } Q_{i,t} = Q(\xi_{i,t-1}) \ .$$

In words, the probability of a move towards strong executive constraints, $P_{i,t}$, is a function of the probability that the incumbent group is replaced; this, in turn, depends on the leader's resilience at $t-1$. Thus, we need a characteristic of the leader which measures resilience to estimate both

equations, since resilience by itself has no direct effect on the choice of institutions.

3   Data and Examples

This section presents our main data, focusing on our measures of executive constraints and leader turnover, especially random exits from office due to death or illness. We also present a brief account of three case studies, in each of which the death of a leader was followed by institutional reforms putting in place stronger executive constraints.

3.1   Data

Political institutions   Our core measure of cohesive political institutions is derived from the executive constraints variable in the Polity IV data, "xconst". It is available for a large number of countries over a long period of time, essentially when any country becomes an independent state. This variable takes on integer values between 1 and 7. As our core measure, we use a binary indicator denoting whether a country has a score which is greater than or equal to 5 on this 7 point scale in order to classify a country as having cohesive institutions.

We use this cutoff for two reasons. First, plotting the empirical distribution of scores over countries and years, has a distribution with a local minimum at 4. Second, according to the Polity IV codebook, a value of 5 is the first value of the variable at which there are "substantial limitations of executive power", where a "legislature or council often modifies or defeats executive proposals", or "sometimes refused funds to the executive", and "the accountability group makes important appointments to administrative posts" – see Marshall and Jaggers (2010, pp. 24-25).

Using this classification, we have 171 reforms in an unbalanced panel of 167 countries with annual observations since 1875. It is this measure that we used to construct Figure 1 in the introduction. Below, we will show that our results are robust to using the full discrete 1 through 7 classification, rather this binary approach.

Leader turnover   We do not observe turnover among groups in a large enough group of countries for a long enough time. Instead we focus on individual leader turnover, i.e., exits of leaders from office. We use several data sources for this purpose. The core data set is Archigos (Goemans, Gledtisch and Chiozza, 2009) that documents which leaders are in office at which dates. For random shocks to leader turnover, we use a particular subset of leadership transitions, following the death or serious illness of the incumbent leader. Here, we exploit data from Besley et al (2011), who extend the sample of Jones and Olken (2005) with years before the second world war. The main biographical sources are the *Encyclopedia of Heads of States and Governments* (Lentz, 1994, 1999) and the *Encyclopedia Britannica.* Many leaders left office due to electoral defeat, death due to assassination, removal in a *coup d'etat* or following a civil war. But, since 1875, 217 leaders – out of a total of 2095 – left office due to death or serious illness.

We refer to such events as *random exits*, where random refers to the timing being exogenous to the variable(s) of interests. For a full description of these specific leadership transitions see Besley et al (2011). Unlike previous work using such data, however, we do not interpret the exits as shocks to leader quality as such, but as shocks to leader resilience which can affect the prospect of future group turnover. For example, an incumbent elite may find it difficult to find an equally powerful (or legitimate) successor to the deceased leader, which reduces its probability of remaining in power.

Table 1 gives an excerpt from our random exit data. Consider, for example, the case of Croatia. Franjo Tudjman, was the first president of Croatia and leader of ultra-nationalist Croatian Democratic Union (HDZ). Tudjman and his party had dominated Croatian politics since independence in 1990 with authoritarian rule and a repressive regime without strong checks and balances (Polity IV codes "xconst" at 3 for the 1990s). In December 1999, however, Tudjman died of heart disease.

A possible concern with using leader deaths and illnesses as a source of exogenous variation is that some of those exits may not be completely unanticipated. For example, in a case of lingering illness, leader death may be less of a random event than, say, death by a sudden heart attack. We therefore propose two narrower groupings of leadership transitions by drilling down a bit further into the documented causes of death. These groupings offer a more narrow definition of a random leadership transition (see the final column of Table 1). One sub-sample of only 32 deaths picks out deaths which we are confident were both random and unexpected. These are cases such as stroke, brain hemorrhage, complications from surgery, drowning and/or other accidents. A less conservative sub-sample of 83 also includes cases where the cause of death is "unknown". We take the view that if biographers do not know the cause of death, it would presumably be hard to predict ex ante. These more conservative definitions of a leader's random exit from power will serve as a robustness check on our core results below.

Figure 2 plots the number of worldwide random deaths per year in our sample, marked in blue and measured along the left vertical axis, against time. We see a clear increase in the frequency of random exits after the second world war. But this largely reflects the increasing number of independent countries that enter the sample, marked in red and measured along the right vertical axis.

Summary statistics   Table 2 presents some summary statistics. We compare average values when turnover happens due to a random exit, labeled the "treatment group", with those where turnover occurs for other reasons, labeled the "control group". In the first two columns, we show summary statistics for the full sample, which is then disaggregated into cases with low executive constraints (columns 3 and 4) and high executive constraints (columns 5 and 6) using our binary indicator described above. The level of income per capita and country size (rows 1 and 2) are similar across the treatment and control groups, in the full sample as well as the sub-samples.

In the full sample, more countries in the treatment group have weak executive constraints (row

13

3). This feature, and the possible unobserved heterogeneity it reflects, is an additional reason to the unmodeled costs of constitutional change (see above) why we condition on initial institutions in the empirical approach to follow. A third reason to condition on initial institutions is that personal leader characteristics are presumably more important in more weakly institutionalized polities.

Leaders who exit randomly are considerably older than those who exit for other reasons (row 4), by about six years in the whole sample as well as the two sub-samples. Leaders in the treatment group also have longer tenure than those in the control group, with the starkest difference in the sub-sample with weak executive constraints (row 5). These two features suggest that the leaders who die in office may indeed have higher resilience, as the theory postulates. At the same time, expected turnover may also vary with age and tenure, so it is important to hold these constant when we predict expected turnover. We do this in the instrumental variables approach in Section 4.

Finally, the distribution across geographic regions is reasonably similar in the treatment and control groups (rows 6 to 14).

3.2   Illustrative Case Studies

We use three concrete examples of a response to a random leader exit in order to illustrate the narrative behind the theory.[5] These examples have in common the idea that a leader with high resilience is replaced by a less resilient leader who is motivated to initiate political reforms towards cohesive institutions (stronger executive constraints). They also illustrate cases where the reforms to institutions are achieved through explicit modifications of formal constitutional rules.

Spain   General Francisco Franco, as leader of the Movimiento, had governed Spain under unchecked authoritarian rule since the end of its Civil War. For the postwar period up until the year of 1974, Polity IV sets the executive constraints variable for Spain at the bottom score of 1 on its 1-7 scale. Franco died of heart disease in November of 1975, and eventually a leading figure from the Movimiento, its general secretary and former Franco minister, Adolfo Suárez González became prime minster. He soon announced plans for a comprehensive package of political reform, which would put in place a constitutional monarchy based on parliamentary democracy with a bicameral legislature. New laws permitting political parties – including a Communist Party – were passed by the Cortes in the spring of 1977, and general elections with proportional representation to a new legislature were held in the summer of the same year. A mere three years after Franco's death, the country had been through a remarkably peaceful democratic transition, adopting a number of horizontal checks on the executive, as well as provisions for regional autonomy. From 1978 onwards, Polity IV codes Spain's executive constraints with the top score of 7.

---

[5]See the on-line Appendix for more details of these case studies and for supporting references.

Taiwan Martial law in Taiwan was proclaimed in 1949 and gave extensive powers to the president and his government. This law was to remain in force for 38 years, during which Taiwan was effectively ruled by a powerful president and government – with support of the old Koumintang (KMT) elite from the mainland. Executive constraints are coded as 2 or 3 in Polity IV. Chiang Kai-shek resumed the presidency in 1950 and kept it until his death in 1978. He was succeeded in office by his son Chiang Ching-kuo who died in office from heart failure in January 1988. Chiang's presidential powers and chairmanship of the KMT were assumed by his protegee, Vice-President Lee Teng-hui. He embarked on a path of political reform on which Taiwan's constitution was amended in 1991, 1992, 1994 and 1997. As a result of the 1991 and 1992 changes, the basic institutions for a semi-presidential system with clear checks on the president were put in place. From 1992 the executive constraint score in Polity IV is lifted to a 5. Additional reforms in 1994 and 1997 further enhanced executive constraints by securing the independence of Judicial Yuan members and giving the Legislative Yuan the right to remove the prime minister by a constructive vote of confidence. The Polity IV executive constraint score is raised to 6 from 1997 (and subsequently to 7 in 2004).

Nigeria In 1993, General Sani Abacha came to rule Nigeria via a military coup. The scene was eventually staged for a pseudo election to extend Abacha's unchecked rule. Not only did the military express its support for Abacha, but all five state-recognized parties had nominated Abacha himself as the single candidate for the elections to be held in October 1998. Polity IV codes executive constraints during the Abacha period up until 1997, at their lowest value of 1. However, in June 1998 Abacha died of a sudden heart attack and Chief of Staff Abdulsalami Abubakar was placed in charge. He oversaw far-reaching political reforms that dissolved the five Abacha-controlled parties, abolished the compromised electoral commission replacing it with a new one, fired Abacha's cabinet, and finished earlier decrees banning union activities and political strikes. This resulted in new national elections in February of 1999 and a new constitution being adopted in May 1999. The latter provided checks on presidential powers through a bicameral legislature. It also gave a more important role to the judiciary, especially the Supreme Court. As of 1999, Polity IV codes Nigeria's executive constraints at 5, meaning that "substantial limitations" on its government are in place.

4   Results

In this section, we report econometric evidence on the predictions from the theory. We use two approaches. One is an event-study approach, estimating differences in political institutions and turnover of leaders before and after random exits from office. The other is an instrumental-variables approach, using random exits from office to instrument for expected turnover in the equation for political reform.

Event-study specification To study the outcomes around a random exit from office econo-metrically, we first rely on an event-study approach. Specifically, we define outcomes x (reform or turnover) around the events which are random exits from office. We are interested in comparing the average level of outcome x in the T year window before and after an event.

To estimate these averages we run the regression

$$x_{i,t} = \beta^{PRE} PRE_{i,t} + \beta^{POST} POST_{i,t} + \alpha_i + \gamma_t + \varepsilon_{i,t} \, , \tag{3}$$

where i and t denote countries and years, α_i and γ_t are country and year fixed effects (estimated over the full sample), and $\varepsilon_{i,t}$ is a general country-specific error term – in the estimation, we use robust standard errors clustered by country. The binary indicator variables $PRE_{i,t}$ and $POST_{i,t}$ are set equal to 1 in each of the T years before and after every event in country i, excluding the event years themselves. If we use a five year event window ($T = 5$) and eliminate overlapping periods, the number of independent events is 184. (We will also show some results for the case where $T = 10$.)

To estimate a causal effect of these events on outcome x, we require the timing of the events to be uncorrelated with $\varepsilon_{i,t}$. As usual, the fixed-country effects mean that we are only comparing outcomes within a given country. Given the general reform pattern illustrated in Figure 1, it is important that our estimating equation includes fixed-year effects, so that general worldwide trends towards (or away from) stronger executive constraints do not confound our estimates. The approach we take here makes it unlikely that slower moving factors such as cultural or economic change in the wider population drive changes in x, as they are approximately constant across the event window. The key identifying assumption is that the only impact of a leader death is via an increase in political instability rather than some other route. We will return to this assumption below.

Our main question is whether and how random exits matter. The theory suggests two related tests. First, we consider the hypothesis $\beta^{POST} - \beta^{PRE} = 0$ when outcome x measures strong executive constraints. If the hypothesis is rejected (and the difference is positive), this supports our bottom-line theoretical prediction that random exits gives rise to more frequent institutional reform towards stronger executive constraints (compared to the period before the exit). Second, we test the same hypothesis when outcome x measures leader turnover. Finding a positive difference implies that a random leader death indeed brings about higher political instability, which is the mechanism behind political reform in the theory. Thus, our proposed mechanism requires that both hypotheses are rejected and that $\beta^{POST} - \beta^{PRE} > 0$.

Event-study results: Political reform Table 3 presents estimates of $\beta^{POST} - \beta^{PRE}$ for the case where where the $x_{i,t}$ variable is an indicator for strong executive constraints. The numbers in brackets beneath the estimates are the p-values for an F-test on the equality of the β-coefficients. For the full sample in column (1), there is a positive effect of a leader death but it is significant only at 12%. However, the results are much clearer when we condition on the initial institutions in

place. As column (2) shows the effect of a random exit is significant at 1.5% when we look at the sub-sample where institutions are initially noncohesive (executive constraints are weak). Specifically, the probability of reform towards strong executive constraints is more than 6 percentage points higher in the five years after a random exit from office compared to the five years before. Figure 3 offers another window on this finding. It computes a separate time dummy variable for each year five years after a random leader death and five years before. It then plots these dummies with their 95% confidence bands. The change around the death of a leader is apparent.[6]

In the sub-sample of observations which start with cohesive institutions (strong executive constraints), the estimated difference is negative although not statistically significant. However, the sample of events is smaller in this case.

In column (3), we take a much more conservative approach to inference, by clustering the standard by continent rather than by country. The effect is still significant at about 10% for the weak low executive constraints group. In column (4), we rely on a ten-year, rather than a five-year, event window before and after each random exit from office (i.e., $T = 10$). Eliminating overlaps between event windows now gives us some 20 fewer events compared to the five-year definition. However, the results are very similar to those in column (2).

Column (5) includes country-specific time-trends to allow for country-specific drift in institutions. The results are essentially unchanged. Even though Table 2 shows that the treatment and control groups are quite balanced across geographic regions, column (6) includes year-by-continent dummies to allow for non-parametric, continent-specific waves of reform. The point estimates are now a little higher (in absolute value) and the coefficient differences more precisely estimated.

In columns (7) and (8), we vary the precise sample of random exits from office. As mentioned above, this is to guard against the possibility that some of the random exits might in fact have been anticipated. In column (7), we use our conservative sample of only 32 deaths that we discussed above where we are certain that the death is both random and unexpected. In this much smaller sample, the point estimate in the weak-executive constraint sub-sample is almost double that in the larger sample, although as expected the p-value is higher at 7%. In column (8), the estimation sample is more conservative than in the main case, adding unknown causes of death to the 32 used in column (7) as we discussed in the data section above. Here, we find an effect similar to the baseline case, which is significant at 5%.

Even though we have included year fixed effects, linear country-time trends, and continent-by-year fixed effects, we want to make sure that our results are not just capturing some other country-specific trends moving countries towards stronger executive constraints. Column (9) in Table 3 reports the result from a placebo test where the random deaths in the data are lagged by five years. The reform estimates for the sample that begin with non-cohesive institutions are still positive, but small and statistically insignificant. Thus, it does appear that the results are driven by the specific events we focus on, rather than by unobserved trends.

---

[6]The fact that the pre-event level of executive constraint is a negative number rather than zero in this subsample, reflects the fact that we estimate the fixed country and time effects over the whole sample.

Event-study results: Leader turnover The results where $x_{i,t}$ instead measures leader turnover can be found in Table 4. Turnover is measured as the number of leader changes per year, excluding random exits. The variable is constructed using the number of leaders in power per year in each country using the Archigos data introduced above.[7]

The table shows the same set of specifications as reported in Table 3. In column (1), for the full sample, the point estimate of $\beta^{POST} - \beta^{PRE}$ is positive; thus, the probability of a new (regular or irregular) exit is estimated to be 3 percentage points higher in the five years after a random exit than in the five years before. But the p-value from the F-test underneath the estimate suggests that the probability this result is driven by chance is as large as 6%. However, the results disaggregated by initial institutions follow the same pattern as the transitions towards cohesive institutions reported in Table 3. In countries without strong executive constraints (noncohesive institutions), the probability of turnover is around 7 percentage points higher in the five years after a random exit compared to the five years before, with a p-value around 1%. In countries with strong executive constraints, there is no significant effect and the point estimate is negative. These results lend credibility to our assumption that random exits indeed lead to higher expected turnover, when they occur in countries with weak executive constraints.

The findings in columns (3) through (6) display very similar pattern to the corresponding findings in Table 3. Moreover, the size of the effect is remarkably stable across specifications. However, the narrower sample in columns (7) and (8) no longer yields precise estimates. The findings from the placebo test in column (9) once again show no significant effect from a random exit lagged by five years.

Taken together, these results provide ballast to the core prediction of our model, a random death leads to a link between political instability and institutional reform. Our results suggest that a random leader death in a country with noncohesive institutions, on average, increases the (actual) turnover rate among its leaders over the next five years by about 46% – the average rate of turnover is about 0.13. In other words, expected tenure is shortened by about three and a half years, given an expected duration of seven and a half years. This increase in instability is accompanied by a 6% chance of reform towards cohesive institutions. The fact that random deaths of leaders drives increases in turnover as well as reforms towards cohesive institutions increases our confidence that we can indeed interpret the data in the way that our model suggests. We provide further evidence for this interpretation below.

Alternative measurement and estimation methods Table 5 reports estimates for different estimation methods and different measures of executive constraints.

Column (1) uses the discrete "xconst" variable, ranging form 1 to 7, from the Polity IV data rather than our binary version of this variable. Again, the effect of a random death over the subsequent five-year window is positive and precisely estimated, when we look at the sub-sample

---

[7]To obtain the number of leader changes we subtract 1 from the number of leaders over the specified time window. We exclude all turnovers due to the death of a leader.

of countries with weak executive constraints. Column (2) instead estimates a fixed-effect ordered logit for the seven point scale, which does not impose the artificial cardinality assumed in column (1).[8] Here too, we find a positive precisely estimated effect for transitions for noncohesive to cohesive institutions.

In column (3), we report results with a binary indicator for executive constraints as in Table 3, but now estimating the model as a conditional logit rather than as a linear probability model. The effect in the weak-executive constraints sample is positive and precisely estimated when we use a ten-year window around the event of random deaths.[9]

We conclude from Table 5 that our results are not an artefact of a particular way of measuring executive constraints nor of the method of estimation.

Instrumental-variables specification   The econometric approach we have taken so far, relies on an event study around random leader exits. We now explore an alternative approach, which more clearly exploits the theory in Section 2 by making an explicit distinction between countries and leaders. This approach is based on the identifying assumption – similar to that in the theory – that the death of a leader affects the probability of a transition towards cohesive institutions only through expected (group) turnover, conditional on age and tenure. It also exploits a key observation from Table 2, namely that leaders who die in office on average have tenures which are around seven years longer compared to those who leave office for other reasons. This suggests that leaders who die in office do indeed have greater resilience on average.

Following the theory, we consider a setting with two dependent variables. One, denoted by $\theta_{i,l,t+1} \in \{0,1\}$, captures whether country i has strong executive constraints under leader l, at date $t+1$. The other, denoted by $q_{i,l,t}$, captures the probability that leader l in country i at date t leaves office.[10] This two-equation model is given by

$$
\begin{aligned}
\theta_{i,l,t+1} &= \alpha_i^\theta + \gamma_t^\theta + \chi q_{i,l,t} + \omega^\theta A_{i,l,t-1} + \varepsilon_{i,l,t} \\
q_{i,l,t} &= \alpha_i^q + \gamma_t^q + \lambda \xi_{i,l,t-1} + \omega^q A_{i,l,t-1} + \eta_{i,l,t}
\end{aligned}
\tag{4}
$$

where $\left\{ \alpha_i^\theta, \gamma_t^\theta, \alpha_i^q, \gamma_t^q \right\}$ are country and year effects, and the control vector $A_{i,l,t-1}$ contains the age and tenure of the leader to hold constant the differences between treatment and control groups observed in Table 2.[11] Crucially $\xi_{i,l,t-1}$ is a dummy variable, which is equal to one if the leader in office at the end of period $t-1$ is somebody who will eventually die in office, thus proxying for high

---

[8] To implement the fixed-effect ordered logit, we use the method suggested by Ferrer-i–Carbonell and Frijters (2004), which builds on Chamberline (1980).

[9] When we use a five-year window the point estimate (not reported) is still positive, but is rather imprecisely estimated.

[10] The sample of leaders comes from Besley and Reynal-Querol (2011). In years with multiple leaders in office, we focus on the leader who has been the longest in office. Thus, a leader who lasts only 2 or 3 months is not included.

[11] To diminish the collinearity of age and tenure, age is measured as quartile dummies for the age of the leaders in each year. These are constructed from the sample of leaders in each institutional setting, i.e. for high and low executive constraints. The dummies are for the lowest 25% age, between 25% and 50%, between 50 and 75%, and above 75%. Tenure is also measured based on quartile dummies constructed in a similar way.

resilience ξ in the theory. The exclusion restriction is that this proxy for resilience does not have any direct effect on institutional reform. As before, the standard errors $\left\{\varepsilon_{i,\ell,t}, \eta_{i,\ell,t}\right\}$ are clustered at the country level. The specific timing comes from the theory – institutional transitions (θ_{t+1}) take place in period t in response to ex ante expected (group and leader) turnover (Q_t) in that period, which in turn depends on the type of the leader inherited from the previous period (ξ_{t-1}). As in the event-study approach, we estimate this model separately for countries depending on their initial institutions.

While the IV-approach flows naturally from the theory, it is worth pointing out that it may not deliver unbiased results in the wake of heterogenous effects. The reason is analogous to the familiar LATE point, emphasized by Heckman (1990) and Angrist and Imbens (1994): the random exits from office used to identify our instrumental variables estimates below induce a specific subset of changes in political instability.

Instrumental-variables results The results are in Table 6. As a benchmark, columns (1), (2), (6) and (7) present OLS estimates of (4) where leader exits from office are treated as exogenous. Thus, we use all leadership transitions no matter what their cause. Two specifications are presented, with and without controls for age and tenure. There is a positive and significant correlation between a leader leaving office and strong executive constraints being adopted in the next period, when a country begins with weak executive constraints, and a (smaller in absolute value) negative correlation for countries with strong executive constraints.

The instrumental-variables estimates of the full two-equation model are found in columns (3), (4), (8) and (9). The probability that a leader leaves office in any given year is lower when the leader in the previous year is one who died in office (whether in that year or later). This is in line with our interpretation that death in office proxies for a leader's resilience, ξ_{t-1} in the theory. The second-stage estimate of how expected turnover affects reform is positive and significant in countries with weak executive constraints. The point estimate is smaller than the OLS estimate, but it is now identified solely from whether a leader died in office. These estimates are similar, whether or not age and tenure are included as controls. Under strong executive constraints, we obtain a negative point estimate of whether a leader died in office on the probability of him exiting in any given year of his tenure and a negative point estimate of the probability of leader exit on executive constraints. However, none of these is statistically significant.

Finally, columns (5) and (10) report reduced-form results, analogous to the estimates presented in the event study. They show a positive and significant effect of a leader death on the probability of transiting to cohesive institutions for countries that begin with noncohesive institutions.

Taken together, these results are consistent with a structural interpretation along the lines of the mechanism suggested by the theory, with a causal effect of random deaths, mediated via higher expected (group) turnover, onto reform towards cohesive institutions.

Threats to the exclusion restriction The causal interpretation of the instrumental-variable estimates hinges on the exclusion restriction that random exits from office only affects institutional reform through expected turnover. This identifying assumption would be highly questionable if there were systematic changes in the type of leader characteristics selected after random exits. Table 7 tries to rule out the possibility, using data from Besley and Reynal-Querol (2011). The main characteristics available from that source are educational qualifications, occupational backgroud, and whether a leader has studied abroad.[12] We also add data on social class. (See the Appendix for a description of these variables.) We use essentially the same specification as in (3) except that $x_{i,t}$ is the average of the leader's characteristic in the event window. Data availability affects the sample size in some cases, so the number of events is noted in each case.

The main finding in Table 7 is that we find little evidence of a change in leader characteristics following the death of a leader. The minor exception is that random exits increases the proportion of professors or scientists among the leaders of countries which already have cohesive institutions. More importantly, the educational attainment of leaders does not seem to change significantly, nor does the proportion of leaders who have studied abroad. These results are inconsistent with an effect of a random death in office that works via a change in leader education, occupation, or acquired preferences. This diminishes the concern that systematic selection of leader types drives the institutional reforms observed in our sample.

5   Further Aspects of Institutional Reform

So far, we have focused on one specific aspect of political institutions. In this section, we relate our work to the incentive to make a political system more open. This will allow us to relate our approach to the literature on franchise reform, in particular Acemoglu and Robinson (2000, 2006). In their framework, the fear of losing power in a revolution leads an incumbent elite to extend the franchise even though this may mean that the elite loses political power.

Modeling openness We now extend the model to allow incumbents to choose the degree of openness for recruitment to office next period. This affects political stability as it decreases the chances that any particular group will hold onto power. We also add a cost of holding on to power when institutions are not fully open which can be thought of as the cost of maintaining a closed political system in the form of repression.

Specifically, suppose $\rho \in [0, 1]$ is a choice variable which affects openness where $\rho = 1$ means complete openness (free and fair elections) and $\rho = 0$ complete closedness (e.g., leaders are only picked from a small, entrenched elite such as a monarchy). We let $\Gamma(\xi, \rho)$ denote the probability that a group whose leader has resilience ξ survives as the incumbent. We assume that Γ is increasing in ξ and that $\Gamma_\rho < 0$ and $\Gamma_{\rho\rho} < 0$, i.e. a more open system reduces the probability

---

[12]The last characteristic may be important, in view of the finding by Spilimbergo (2009) that countries whose leaders have studied abroad are more likley to democratize.

that an leader survives. Let $\bar{\Gamma}(\rho)$ be the expected value when a new leader is chosen at random. Keeping office recruitment closed, $\rho < 1$, has a cost, e.g. because it requires spending on security or repressing other groups to avoid the risk of a revolution or a coup. For simplicity, this cost is linear in ρ and given by $[1 - \rho] c$.

As before, a within-period political shock ν_t determines if the incumbent leader survives as the leader of his group. Before the realization of this shock, the ex ante (unconditional) probability that the incumbent *group* survives in power is given by

$$Q(\xi_{t-1}, \rho) = E\left\{ s\left(\xi_{t-1}, \nu_t\right) \Gamma\left(\xi_{t-1}, \rho\right) + \left[1 - s\left(\xi_{t-1}, \nu_t\right)\right] \bar{\Gamma}\left(\rho\right) \right\} .$$

The revised timing of the model is:

1. The polity starts period t with an an incumbent group I_t and its leader with resilience ξ_{t-1}, and inherited institutions, $\{\theta_t, \rho_t\}$, where θ_t binds for that period.

2. The incumbent leader chooses policy $\{g_t, r_t, b_t\}$ for the current period, and political institutions, $\{\theta_{t+1}, \rho_{t+1}\}$.

3. Nature determines period-t political stability shock ν_t. If the leader survives, then his resilience remains the same. If not, a fresh draw determines ξ_t.

4. Group I_t is replaced in power with probability $1 - \Gamma\left(\xi_t, \rho_{t+1}\right)$. Each opposition group has an equal probability of taking over the executive, namely $\frac{(1-\Gamma(\xi_t, \rho_{t+1}))e}{1-e}$. If a new group takes power, the resilience of its leader is chosen at random.

Choice of openness We begin by studying the case when θ is fixed but the incumbent can choose the level of openness ρ_{t+1}. In this situation, we can look at how the resilience of the incumbent group's leader affects the degree of openness in the next period. The optimal choice of ρ solves:

$$\rho\left(\xi\right) = \arg\max\left\{ Q(\xi, \rho)V^I\left(\theta\right) + \left[1 - Q(\xi, \rho)\right] V^O\left(\theta\right) - c\left[1 - \rho\right] \right\}, \tag{5}$$

where $V^K\left(\theta\right)$ is the value of entering next period with group status $K = I, O$ and a given value of θ. There is a trade-off between staying in power in future against the costs of repression. The key observation is that $V^I\left(\theta\right) - V^O\left(\theta\right) > 0$ for all $\theta < \frac{1-\alpha e}{\alpha(1-e)}$, and that this gap is decreasing in θ. The first-order condition for openness, assuming an interior solution, is:

$$c = -Q_\rho(\xi, \rho)\left[V^I\left(\theta\right) - V^O\left(\theta\right)\right]. \tag{6}$$

How openness depends on shocks that change the resilience of the incumbent group is leader ambiguous and depends on how such shocks affect the *marginal* gain from greater openness. That is, it depends on the sign of $Q_{\rho\xi}$, which is *a priori* unclear. For example, if $Q_{\rho\xi} > 0$, then resilience and openness are complements, i.e. $d\rho/d\xi > 0$. So having a more resilient leader leaving office

will tend to reduce openness. This makes sense since having a leader who is more likely to stay in power means that the incumbent group can reduce repression costs by making the political system more open.

This ambiguity in the effect of ξ on openness is not inconsistent with existing theories of franchise extension which have tended to focus on shocks to repression costs, c in our model, to motivate increased openness. This, for example, is the approach taken to modeling franchise extension in Acemoglu and Robinson (2006). In our model, an increase in c would tend to increase openness. The key point to take away from our analysis is that there is no clear-cut theoretical link between the resilience of leaders and the decision to increase openness.

Reforms of electoral institutions in the data In Tables 8 and 9, we report results which explore the empirical relationship between reforms of electoral openness – such as franchise extensions – and shocks to political stability through leader deaths. The results contrast with those that we found for executive constraints.

We define reforms of electoral institutions by drawing on a variety of data sets. From Polity IV, we use a number of measures designed to capture the extent to which the chief executive is elected through competitive multi-party elections (the "exrec" variable), and whether this is done in a setting where no significant group or groups are regularly excluded from the political process (the "polcomp" variable). As an alternative variable to capture open contests for power, we use an indicator of the breadth of the franchise from Przeworski (2009). It provides data on suffrage rules for 187 countries between 1919 and 2000. Our third variable is from Cheibub et al (2010), and is based on Przeworski et al (2000). It seeks to classify political regimes based on the idea that "for a regime to be democratic, both the executive office and the legislative body must be filled by elections". This variable is available between 1946 and 2008 for 199 countries. More details on these variables including precise definitions can be found in the Appendix.

The results in Table 8 utilize four baseline measures in the Polity IV data concerning: (i) executive recruitment, (ii) political competition, (iii) competitive executive recruitment, and (iv) competitive participation. These capture different aspects of electoral institutions. We apply the same event-study method as in the examination of executive constraints to gauge if electoral reforms also follow random exits of political leaders from office. Strikingly, we find no evidence of reforms towards a more extensive franchise. If anything, the results suggest a setback for the franchise when random deaths occur in countries that already have an extensive franchise according to the Polity IV data (cf. the lowermost estimates in Columns 2 and 6).

Table 9 demonstrates that the absence of any effect in these electoral dimensions is not driven by the particular Polity IV variables or cutoffs that we have chosen. The estimates displayed in Columns 1-4 show that more generous definitions of the franchise do not change the results obtained in Table 8. Similarly, the results in Columns 5-8 indicate that no significant franchise reforms accompany the executive constraints reforms, if we instead use the franchise variables from the Cheibub et al (2010) or Przeworski (2009) data sets.

The results in Tables 8 and 9 suggest that our theoretical mechanism is indeed empirically associated with a specific aspect of political institutions, namely stronger executive constraints, rather than generalized political change. Thus it is less likely that our results reflect a change in the way citizens are able to express democratic sentiments after a leader's death, rather than the strategic motive for reform due to political instability suggested by our model.

Complementary political reforms? A general approach would allow both institutional dimensions θ and ρ to be chosen. In our framework, there are good reasons to expect a complementarity between stronger executive constraints and greater openness. This can be seen clearly in equations (5) and (6). Stronger executive constraints narrow $V^I(\theta) - V^O(\theta)$, the gap between the values of incumbency and opposition, and hence encourage greater openness, all else equal (since $Q_{\rho\rho} < 0$). Intuitively, as the incumbency-opposition gap diminishes, it becomes less worthwhile to incur the costs of maintaining a closed system of executive recruitment. In the limiting case of full cohesiveness, it is never worthwhile to reduce openness.

This suggests a possible sequencing of institutional reforms, where shocks to expected turnover may initially lead to stronger executive constraints and then to franchise extension. It is interesting that England – the showcase in Acemoglu and Robinson (2000) – introduced restraints on executive (royal) power – through reforms such as Magna Carta and the Glorious Revolution – long before the universal franchise.

Table 10 takes a first preliminary look at the possibility of complementarity along these lines. It lists the random deaths in our sample that were followed by a discrete reform of executive constraints. The table indicates how long the reform lasts, and whether it was preceded by, accompanied by, or followed by a reform towards extending the franchise (based on the Polity IV "exrec" measure). In nine of the fourteen cases, there was a simultaneous reform. However, in the other five, the franchise was not extended at the time and in three this was not done at all. In only two cases did the franchise extension precede the strengthening of executive constraints.

It is also notable that all permanent reforms of executive constraints – those not reversed within our sample – are associated with moves towards electoral openness. This preliminary evidence is in line with the idea of a complementarity between a more open franchise and stronger executive constraints. The theoretical argument builds on electoral openness increasing the rate of leader turnover. This is indeed true empirically in the samples we study in Tables 8 and 9. For example, countries with open executive recruitment on average have 29% of their leaders leaving office each year (using the highest score for "exrec" on its 1 to 8 scale), compared to 10% for countries with closed executive recruitment. The same pattern holds also for other measures of electoral openness.

6   Concluding Comments

Understanding the forces behind institutional change is a significant challenge in political economics. While the prevalence of strong executive constraints has increased over time, we are not aware of any previous research which provides a specific hypothesis and tests of mechanism about the drivers of such political change. Theoretically, we have shown that events which increase political instability make reform an attractive strategic option for incumbent groups. Empirically, we have exploited random leader exits due to death or illness as a source of exogenous variation to investigate this hypothesis. We believe that the results are encouraging to the view that higher political instability (here measured as higher leader turnover) encourages adoption of stronger executive constraints.

The mechanism may cast some light on some of the main trends in political reform over the past two centuries. Since monarchies rely predominantly on life-time tenure, they are particularly vulnerable to the kind of random exits that we study in this paper. Even established monarchies in history, like Britain, experienced several instances of contested succession following the death of a ruler. Moreover, autocracies generally find it difficult to institutionalize transitions of power between leaders and there is likely to be mean reversion after a particularly popular or repressive leader dies.[13] The resulting instability could help to explain the general trend towards cohesive institutions in Figure 1. However, China provides an interesting counter-example at the present time. Communist Party rule appears to protect the ruling elite from political instability with smooth leadership transitions which do not threaten one-party rule. Executive constraints remain very weak with few signs of reform on the horizon. By the logic of our model, this is unlikely to change until Communist Party rule is questioned.

But we are certainly not claiming that a model as simple as ours can give more than partial insights into how and why political institutions change. In particular, it would be fruitful to extend the preliminary approach laid out in Section 5 and jointly address what triggers change in the electoral institutions that shape transitions in power, and change in the political and judicial institutions that control the use of power once acquired. More generally, the paper emphasizes the need to look at different aspects of institutions rather than studying aggregate democracy scores. Much more needs to be done to explore the sequencing of reforms and complementarities between specific constellations of institutions.

---

[13] See the discussions in Tullock (1987) and Wintrobe (1998).

References

[1] Acemoglu, Daron, Simon Johnson, James Robinson and Pierre Yared [2008], "Income and Democracy", *American Economic Review*, vol. 98, 808-842.

[2] Acemoglu, Daron and James Robinson [2000], "Why Did the West Extend the Franchise? Democracy, Inequality, and Growth in Historical Perspective", *Quarterly Journal of Economics*, vol. 115, 1167-1199.

[3] Acemoglu, Daron and James Robinson [2006], *Economic Origins of Dictatorship and Democracy*, Cambridge, MA: Cambridge University Press.

[4] Acemoglu, Daron, James Robinson, and Ragnar Torvik [2011], "Why Do Voters Dismantle Checks and Balances?", mimeo, MIT.

[5] Aidt, Toke and Peter Jensen [2010], "Workers of the World, Unite! Franchise Extensions and the Threat of Revolution in Europe, 1820-1938", mimeo, Cambridge University.

[6] Angrist, Joshua and Guido Imbens [1994], "Identification and Estimation of Local Average Treatment Effcts", *Econometrica*, vol. 62, 467-475.

[7] Barro, Robert [1999], "Determinants of Democracy", *Journal of Political Economy*, vol. 107, S158-183.

[8] Besley, Timothy, José Montalvo, and Marta Reynal-Querol [2011], "Do Educated Leaders Matter?", *Economic Journal*, vol. 121, F205–227.

[9] Besley, Timothy and Torsten Persson [2011a], *Pillars of Prosperity: The Political Economics of Development Clusters*, Princeton, NJ: Princeton University Press.

[10] Besley, Timothy and Torsten Persson [2011b], "The Logic of Political Violence", *Quarterly Journal of Economics*, vol. 126, 1411-1445.

[11] Besley, Timothy and Marta Reynal-Querol [2011], "Do Democracies Select More Educated Leaders?", *American Political Science Review*, vol. 105, 552-566.

[12] Boix, Carles [1999], "Setting the Rules of the Game: The Choice of Electoral Systems in Advanced Democracies", *American Political Science Review*, vol. 93, 609-624.

[13] Bruckner, Markus and Antonio Ciccone [2011], "Rain and the Democratic Window of Opportunity," *Econometrica*, vol. 79, 923–947.

[14] Bueno de Mesquita, Bruce, Alisdair Smith, Randolph Siverson and James Morrow [2003], *The Logic of Political Survival*, Cambridge, MA: MIT Press.

[15] Chamberlain, Gary [1980], "Analysis of Covariance with Qualitative Data", *Review of Economic Studies*, vol. 47, 225–238.

[16] Cheibub, José, Jennifer Gandhi, and Raymond Vreeland [2010], "Democracy and Dictatorship Revisited", *Public Choice,* vol. 143, 67-101.

[17] Congleton, Roger D. [2007], "From Royal to Parliamentary Rule Without Revolution: The Economics of Constitutional Exchange within Divided Government", *European Journal of Political Economy*, vol. 23, 261-284.

[18] Ferrer-i-Carbonell, Ada, and Paul Frijters [2004], "How Important is Methodology for the Estimates of the Determinants of Happiness?," *Economic Journal*, vol 114, 641–659.

[19] Goemans, H.E, Kristian Gledtisch, and Giacomo Chiozza [2009], "Introducing Archigos: A Data Set of Political Leaders," *Journal of Peace Research*, vol. 46, 269-283.

[20] Heckman James. J. [1990], "Varieties of Selection Bias," *American Economic Review*, Papers and Proceedings, vol. 80, 313-338.

[21] Huntington, Samuel [1991], *Democratization in the Late Twentieth Century*, Norman, OK: University of Oklahoma Press.

[22] Jones, Benjamin and Benjamin A. Olken [2005], "Do Leaders Matter? National Leadership and Growth Since World War II", *Quarterly Journal of Economics*, vol. 120, 835-864.

[23] Jones, Benjamin and Benjamin A. Olken [2009], "Hit or Miss? The Effect of Assassinations on Institutions and War", *American Economic Journal Macroeconomics*, vol. 1, 55-87.

[24] Lagunoff, Roger [2001], "A Theory of Constitutional Standards and Civil Liberty", *Review of Economic Studies*, vol. 68, 109-132.

[25] Lentz, Harris M. [1994], *Heads of States and Governments: A Worldwide Encyclopedia of over 2,300 Leaders, 1945 through 1992*, Jefferson, NC: McFarland.

[26] Lentz, Harris M. [1999], *Encyclopedia of Heads of States and Governments: 1900 through 1945,* Jefferson, NC: McFarland.

[27] Lizzeri, Alessandro, and Nicola Persico [2004], "Why Did the Elites Extend the Suffrage? Democracy and the Scope of Government, with an Application to Britain's Age of Reform", *Quarterly Journal of Economics*, vol. 119, 707-765.

[28] Ludwig, Arnold M. [2002], *King of the Mountain: The Nature of Political Leadership,* Lexington: University Press of Kentucky.

[29] Marshall, Monty, Ted Gurr, and Keith Jaggers [2010], "Polity IV Project. Polity Regime Characteristics and Transitions, 1800-2009. User's Manual," Center for Systemic Peace (http://www.systemicpeace.org/inscr/p4manualv2009).

[30] Moore, Barrington, [1966], *Social Origins of Dictatorship and Democracy*, Boston, MA: Beacon Press.

[31] Persson, Torsten and Guido Tabellini [2009], "Democratic Capital: The Nexus of Economic and Political Change", *American Economic Journal Macroeconomics*, vol. 1, 88-126.

[32] Przeworski, Adam [2009], "Conquered or Granted? A History of Suffrage Extensions", *British Journal of Political Science*, vol. 39, 291-232.

[33] Przeworski, Adam, Michael Alvarez, José Cheibub and Fernando Limongi [2000], *Democracy and Development: Political Institutions and Well-Being in the World 1950-1900*, Cambridge, UK: Cambridge University Press.

[34] Putnam, Robert [1993], *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton, NJ: Princeton University Press.

[35] Rokkan, Stein [1970], *Citizens, Elections, Politics. Approaches to the Comparative Study of the Processes of Development*, New York, NY: MaKay.

[36] Spilimbergo, Antonio [2009], "Democracy and Foreign Education", *American Economic Review*, vol. 99, 528-43.

[37] Tullock, Gordon, [1987], *Autocracy*, Dordrecht: Martinus Nijihoff.

[38] Wintrobe, Ronald, [1998], *The Political Economy of Dictatorship*, New York: Cambridge University Press.

Appendix

Proof of Proposition 1 As a provisional step, it is useful to define the indirect utility from public and private goods for the incumbent elite and other groups:

$$v^K(\theta) = \alpha \hat{g}(\theta) + y + \beta^K(\theta)(T - \hat{g}(\theta)) \text{ for } K \in \{I, O\} \ .$$

where $\beta^I(\theta) = \left[\frac{1}{\theta + (1-\theta)e}\right]$ and $\beta^O(\theta) = \left[\frac{\theta}{\theta + (1-\theta)e}\right]$.

Let $V^K(\theta, \xi)$ be the stationary value of arriving in any period when institutions are θ and the leader has resilience ξ where $K = I$ denotes being the incumbent and $K = O$ denotes opposition. Now define:

$$W^I(\theta, \xi) = \xi V^I(\theta, \xi) + (1 - \xi)E\left\{V^O(\theta, z)\right\}$$

and

$$W^O(\theta, \xi) = \xi V^O(\theta, \xi) + [1 - \xi]\left(\frac{e}{1-e}E\left\{V^I(\theta, z)\right\} + \frac{1-2e}{1-e}E\left\{V^O(\theta, z)\right\}\right).$$

To prove Proposition 1, we want to solve:

$$\hat{\theta}(\xi) = \arg\max_{\theta \in [0,1]}\left\{\bar{s}(\xi)W^I(\theta, \xi) + [1 - \bar{s}(\xi)]E\left\{W^I(\theta, z)\right\}\right\} \ .$$

Observe that:

$$V^I(\theta, \xi) = v^I(\theta) + \delta\left[\bar{s}(\xi)W^I\left(\hat{\theta}(\xi), \xi\right) + 1 - \bar{s}(\xi)E\left\{\left(W^I\left(\hat{\theta}(\xi), z\right)\right)\right\}\right]$$

and

$$V^O(\theta, \xi) = v^O(\theta) + \delta\left[\bar{s}(\xi)W^O\left(\hat{\theta}(\xi), \xi\right) + 1 - \bar{s}(\xi)E\left\{\left(W^O\left(\hat{\theta}(\xi), z\right)\right)\right\}\right].$$

Using the envelope theorem:

$$\frac{\partial\left[\bar{s}(\xi)W^I(\theta, \xi) + [1 - \bar{s}(\xi)]E\left\{W^I(\theta, z)\right\}\right]}{\partial\theta} = \begin{cases} 0 & \text{for } \theta \geq \frac{1-\alpha e}{\alpha(1-e)} \\ Q(\xi)v_\theta^I(\theta) + [1 - Q(\xi)]v_\theta^O(\theta) & \text{otherwise} \ . \end{cases}$$

Moreover, $Q(\xi)v_\theta^I(\theta) + [1 - Q(\xi)]v_\theta^O(\theta) < 0$ and $Q(\xi)v_{\theta\theta}^I(\theta) + [1 - Q(\xi)]v_{\theta\theta}^O(\theta) > 0$ for $e \leq Q(\xi)$, so we only need to compare $\theta = 0$ and $\theta = \frac{1-\alpha e}{\alpha(1-e)}$ in this case. Moreover, given the recursive structure, we have

$$\bar{s}(\xi)W^I(0, \xi) + [1 - \bar{s}(\xi)]E\left\{W^O(0, z)\right\} \gtreqless \bar{s}(\xi)W^I\left(\frac{1-\alpha e}{\alpha(1-e)}, \xi\right) + [1 - \bar{s}(\xi)]E\left\{W^O\left(\frac{1-\alpha e}{\alpha(1-e)}, z\right)\right\}$$

as

$$\frac{TQ(\xi)}{e} \gtreqless \alpha T \ .$$

Solving this condition, gives the inequality stated in Proposition 1. Suppose instead that $e > Q(\xi)$, then $Q(\xi)v_\theta^I(\theta) + [1 - Q(\xi)]v_\theta^O(\theta) > 0$. Moreover, this implies that $\alpha e > Q(\xi)$ so that

$$Q(\xi)v^I(\theta) + [1 - Q(\xi)]v^O(\theta) < \alpha T \text{ for all } \theta \in \left[0, \frac{1-\alpha e}{\alpha(1-e)}\right) \ .$$

Using the recursive structure, we get

$$
\bar{s}\left(\xi\right) W^{I}\left(\frac{1-\alpha e}{\alpha\left(1-e\right)},\xi\right)+\left[1-\bar{s}\left(\xi\right)\right] E\left\{W^{O}\left(\frac{1-\alpha e}{\alpha\left(1-e\right)},z\right)\right\}
$$
$$
> \ \bar{s}\left(\xi\right) W^{I}\left(\theta,\xi\right)+\left[1-\bar{s}\left(\xi\right)\right] E\left\{W^{O}\left(\theta,z\right)\right\}
$$

for all $\theta\in\left[0,\frac{1-\alpha e}{\alpha(1-e)}\right)$. Thus, $\hat{\theta}\left(\xi\right)=\frac{1-\alpha e}{\alpha(1-e)}$, as required. ∎

Data sources and definitions

Electoral Institutions To obtain a comparable sample across countries and time to the core results, we first look at two summary indexes in the Polity IV data for executive recruitment and political competition, called "exrec" and "polcomp". The Executive Recruitment index has scores between 1 and 8. According to the Polity IV codebook, it is only for a score of 8 that the "chief executive (de facto head of government) is chosen through competitive elections matching two or more candidates from at least two major parties ... the electoral process is transparent and its outcomes are institutionally uncertain" – see Marshall and Jaggers (2010, pp. 64). We therefore define a baseline binary variable for enfranchised institutions, which is one if the "exrec" score is equal to 8 and zero otherwise. Using this baseline variable, our panel has 154 reforms since 1875. But we also try different, less demanding cutoff values.

The Political Competition score is coded between 1 and 10. By the codebook, only a score of 10 captures "Relatively stable and enduring political groups regularly compete for political influence with little use of coercion. No significant or substantial groups, issues, or types of conventional political action are regularly excluded from the political process." – see Marshall and Jaggers (2010, pp. 85). Following this coding, we define an alternative baseline binary variable for enfranchised institutions, which is equal to one if the "polcomp" score is equal to 10 and zero otherwise. This way, we obtain 50 reforms since 1875. Again, we try alternative cutoff scores.

In addition, we try to identify the individual components of the combined "exrec" and "polcomp" indexes that best capture an extended franchise. Competitive Executive Recruitment ("xrcomp" in Polity IV) is coded between 1 and 3. A score of 3 captures that "Chief executives are typically chosen in or through competitive elections matching two or more major parties or candidates" – see Marshall and Jaggers (2010, pp. 22). In those cases, we set a binary variable for enfranchised institutions equal to one. This gives 157 reforms in our sample period. For Competitive Participation ("parcomp" in Polity IV), the coded score lies between 1 and 5. A score of 5 means that "relatively stable and enduring, secular political groups ... regularly compete for political influence at the national level ... competition among groups seldom involves coercion or disruption" – see Marshall and Jaggers (2010, pp. 27). For this score, we set a binary variable for enfranchised institutions equal to one, obtaining 56 reforms in our panel.

Since these alternative Polity IV variables do not perfectly capture extensions of the franchise, we also exploit data from other sources. Przeworski (2009) provides data on suffrage rules for 187 countries from 1919 until 2000, which relies on detailed regional information. A necessary condition for a franchise extension is that elections are held at least once and Przeworski (2009) dates the changes of suffrage rules by the time of the first election under the new rules (not when electoral law was passed). He maps the suffrage (for males) onto a seven-category scale, where a level of 1 means that the franchise permits only estate representation, while a level of 7 means that it excludes only individuals below some minimum age, possibly combined with a residence requirement. Based on these data, we construct a binary indicator which is equal to one when a

country has reached level 7 of franchise extension and zero otherwise.

Finally, we use the data provided by Cheibub et al (2010), which is based on Przeworski et al (2000). These data are available from 1946 until 2008 and encompass up to 199 countries. We use their indicator variable, which seeks to define "democracies as regimes in which governmental offices are filled as a consequence of contested elections... for a regime to be democratic , both the executive office and the legislative body must be filled by elections". Specifically, a regime is classified as an electoral democracy if it fulfills four separate criteria: (i) the chief executive must be chosen by popular election or by a body that was itself popularly elected, (ii) the legislature must be popularly elected, (iii) more than one party must compete in the elections, (iv) an alternation in power under electoral rules identical to the ones that brought the incumbent to office must have taken place.

Leader Characteristics Education Graduate: A dummy that is equal to one if the leader has a graduate degree. Source: Besley and Reynal-Querol (2011)

Education College: A dummy that has value 1 if the minimum education level of the leader is college. Source: Besley and Reynal-Querol (2011)

Study Abroad: A dummy variable that has value 1 if the leader studied abroad and zero otherwise. Source: Besley and Reynal-Querol (2011)

Social Class: A variable that has value a value between 1 and 4 based on the father's job. The description of the 4 levels classification for the social status comes from Ludwig (2002). A value of 1 corresponds to Under-stratum (e.g., unable to keep job, bankrupt, imprisoned, enslaved, disabled, unsteady or seasonal employment, financially dependent on others, etc.). A value of 2 is a Lower-stratum (i.e., work for others without possessing special skills or professional training [e.g., peasants, laborers, seamstresses, blue collar workers, minor civil servants, etc.; work for self without many resources or employees [e.g., small farmer, vendor, small businessman, etc.]); A value of 3 is Middle-stratum ([i.e., special education, training, abilities required] (a) profession-als, such as doctors, lawyers, scientists, bankers, business persons, teachers, ministers, and minor politicians, (b) professional creative artists (painters, musicians, writers, actors)   (c)business persons or landowners with employees; A value of 4 corresponds to Upper-stratum ([i.e., estab-lished wealth, power or social status [e.g., the movers and shakers of society; aristocracy; landed gentry; moguls, upper crust, leaders of nations, major tribes, or political parties, etc.]) We look for leader's father job using the following sources: Lentz. (1994, 1999); Britannica Online En-cyclopedia, Academic Edition (http://www.britannica.com/); The Statesman's Yearbook Online (http://www.statesmansyearbook.com/about.html); Barcelona Center for International Affairs' Political Leaders Biographies (CIDOB) (http://www.cidob.org/en/documentation/); and other online sources, as well as individual biographies from Lexis-Nexis.

Occupational dummy variables from Besley and Reynal-Querol (2011)

Military: A dummy that is equal to 1 if the leader was in the military, before holding office.

Lawyer: A dummy that is equal to 1 if the leader was a Lawyer, before holding office.

Civil Servant: A dummy that is equal to 1 if the leader was a Civil Servant, before holding office.

Professor or Scientist: A dummy that is equal to 1 if the leader was a Professor or Scientist, before holding office.

Unskilled Worker: A dummy that is equal to 1 if the leader was an Unskilled Worker, before holding office.

Figure 1 – Worldwide prevalence of high executive constraints, 1874-2004

Prevalence of high executive constraints

y-axis: % countries with xconst-score 6 or 7

x-axis: Year

Legend: —— Countries in existence 1875   —— All countries
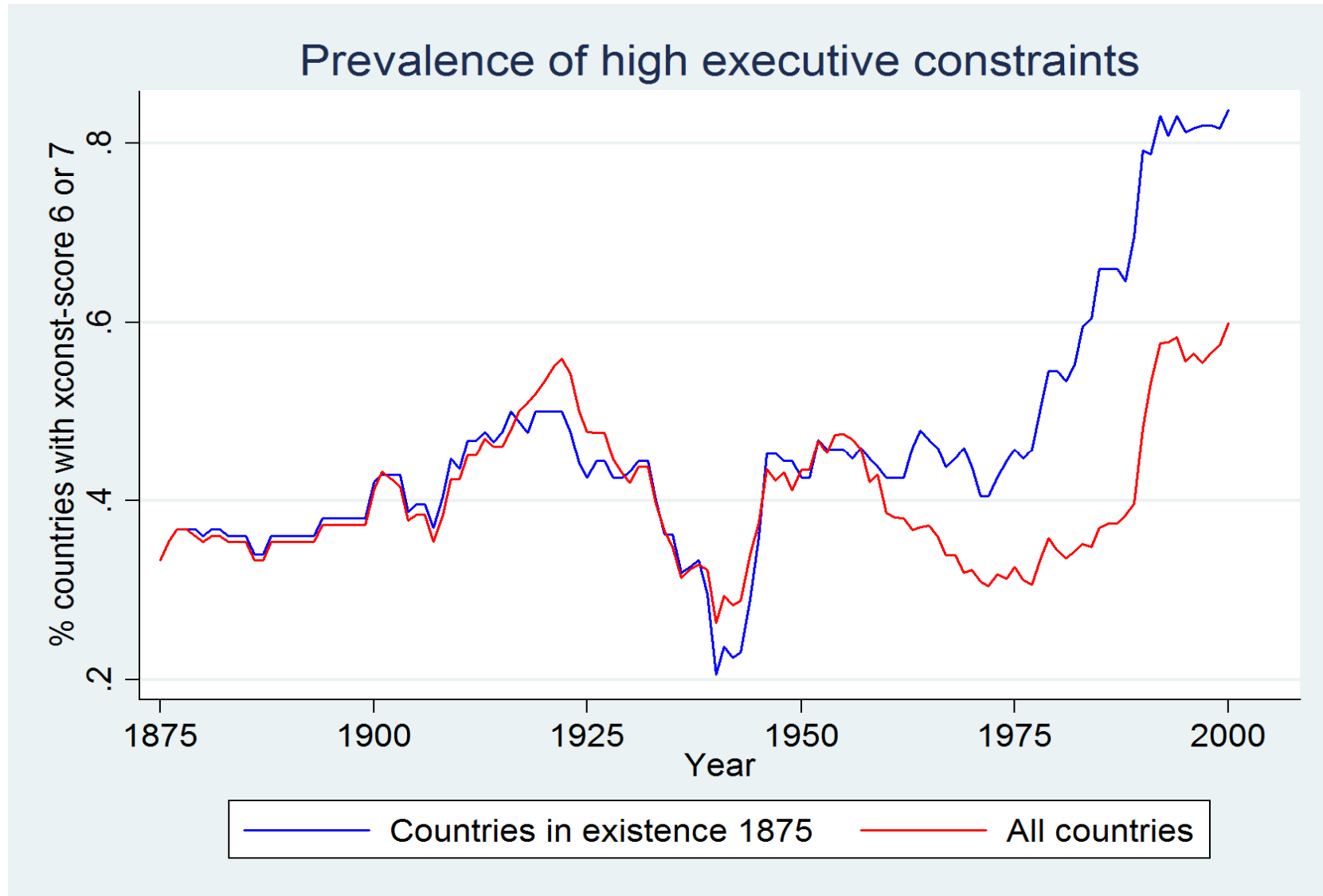
Notes: The figure shows the shares of countries in the sample that have high executive constraints, according to the binary measure we defined in Section 3, over time. The blue curve shows the prevalence for the 50 countries that are part of the entire sample, while the red curve shows the prevalence for all countries that belong to the sample in a given year.

Figure 2   Number of Random Exits and Number of Countries, 1874-2004
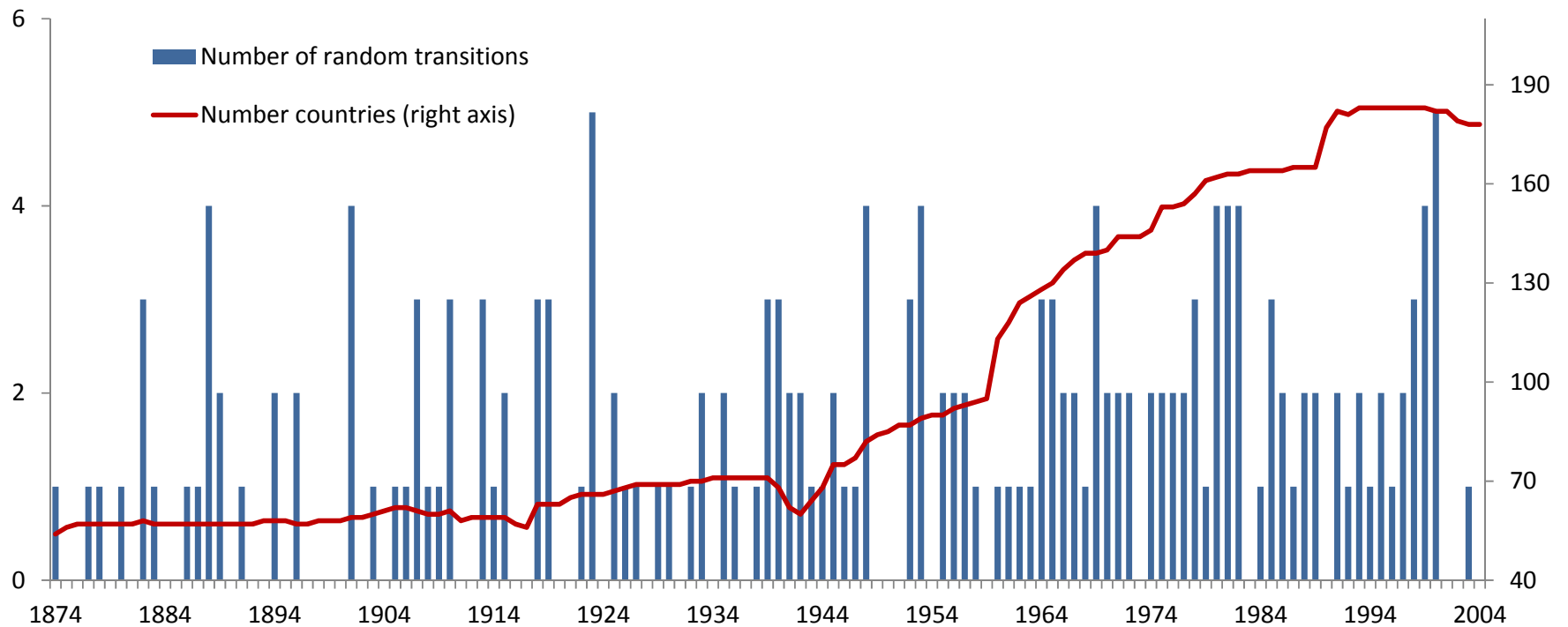
Notes: The figure shows the number of random leader exits from office (on the left vertical axis), as well as the number of countries (on the right vertical axis) for each year of our sample (on the horizontal axis).

Figure 3 - Executive Constraints before and after Random Leader Exits
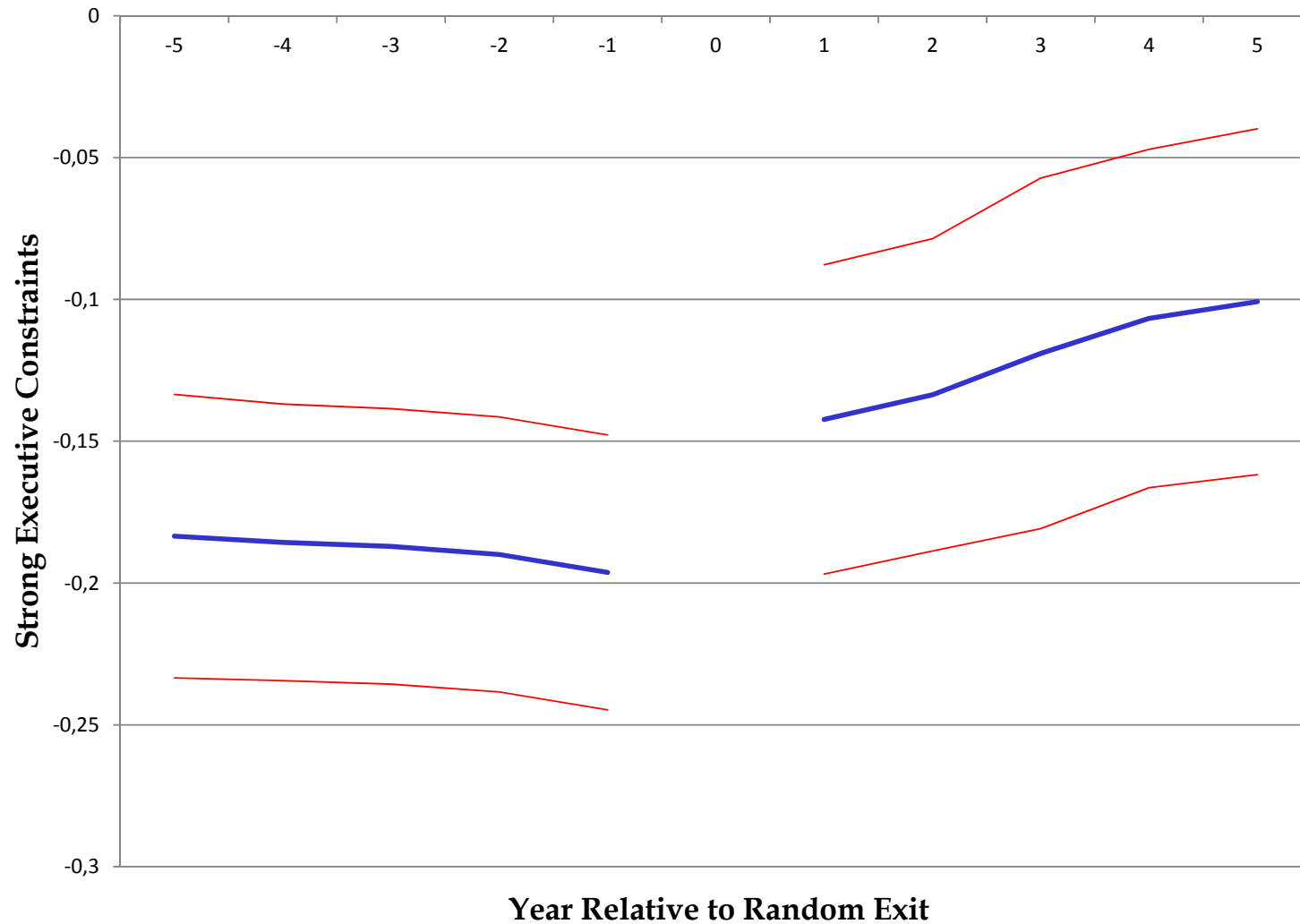
Notes: The figure shows the averaged residuals, and a 95% confidence interval, from a regression of the binary dummy for high executive constraints on country and year fixed effects (estimated from the whole sample), five years before and five years after random exits from office (not including the exit year), in countries with weak executive constraints in the year of the random exit.

Table 1 – Examples of Random Exits from Office

Country	Leader name	Year of exit from power	Reason for leaving power	Cause of death or illness	In narrow sample
Cote d'Ivoire	Houphouet-Boigny	1993	death	prostate cancer	NO
Croatia	Tudjman	1999	death	heart disease	NO
Cyprus	Makarios	1977	death	heart disease	NO
Czechoslovakia	Zapotocky	1957	death	heart disease	NO
Denmark	Stauning	1942	death	unknown	yes
Denmark	Hansen	1960	death	cancer	NO
Dominica	Douglas Roosevelt	2000	death	heart disease	NO
Ecuador	Mosquera Narvaez	1939	death	renal failure	NO
Ecuador	Roldos Aquilers	1981	death	accident	YES
Egypt	Fuad I	1936	death	heart disease	NO
Egypt	Nasser	1970	death	heart disease	NO
El Salvador	C. Melendez	1918	illness	cancer	NO
Ethiopia	Menelek II	1910	death	syphilis	NO
Ethiopia	Judith (Zanditu)	1930	death	pneumonia	NO
Finland	Svinhufud	1918	illness	cancer	NO
Finland	Kallio	1940	illness	heart disease	NO
Finland	Paasikivi	1956	illness/death	unknown	yes
Finland	Kekkonen	1981	illness	circulatory problems	NO
France	Waldeck-Rousseau	1901	illness	surgical complications	YES

Notes: In the final column, a "NO" denotes exits that are only in the full sample. A "yes" denotes an exit, which is in the medium sample of 83 deaths, but not in the smaller sample of 32. A "YES" denotes an exit, which is in the narrowest sample of 32.

Table 2 – Summary Statistics by Group and Subsample

	Full sample	Full sample	Weak Constraints	Weak Constraints	Strong Constraints	Strong Constraints
	Treated group	Control group	Treated group	Control group	Treated group	Control group
Log per capita income	7.96 (126)	8.04 (1597)	7.69 (74)	7.57 (452)	8.32 (50)	8.40 (946)
Log population	8.81 (150)	8.76 (1890)	9.05 (87)	8.62 (580)	8.93 (52)	9.23 (985)
Strong executive constraints	0.36 (164)	0.60 (1748)	0	0	1	1
Leader age	63 (171)	56.65 (1826)	63 (103)	55.40 (671)	63 (59)	58 (1010)
Leader tenure	11.66 (171)	4.29 (1831)	14.84 (103)	5.83 (671)	5.99 (59)	3.19 (1012)
Sub-Saharan Africa	0.12 (185)	0.11 (2161)	0.11 (104)	0.11 (711)	0.16 (60)	0.05 (1037)
Middle East	0.08 (185)	0.04 (2161)	0.13 (104)	0.05 (711)	0.016 (60)	0.018 (1037)
North Africa	0.03 (185)	0.01 (2161)	0.04 (104)	0.02 (711)	0.016 (60)	0.001 (1037)
Europe	0.26 (185)	0.38 (2161)	0.22 (104)	0.13 (711)	0.33 (60)	0.58 (1037)
Central Asia	0.02 (185)	0.01 (2161)	0.02 (104)	0.02 (711)	0 (60)	0 (1037)
East Asia and Pacific	0.18 (185)	0.11 (2161)	0.14 (104)	0.07 (711)	0.20 (60)	0.12 (1037)
South Asia	0.07 (185)	0.03 (2161)	0.10 (104)	0.04 (711)	0.03 (60)	0.03 (1037)
Latin America and Caribbean	0.20 (185)	0.29 (2161)	0.24 (104)	0.56 (711)	0.15 (60)	0.16 (1037)
North America	0.03 (185)	0.02 (2161)	0 (104)	0 (711)	0.08 (60)	0.04 (1037)

Notes: The statistics are calculated the year previous to a an exit due to death/illness in the treated group, or prior to any regular exit in the control group. Number of observations in brackets. Column 1 and 2 uses all data. Column 3 to 6 disaggrgate into the treated and control groups in the weak and strong executive constraints samples, respectively.

Table 3 – Random Exits and Institutional Reform: Basic Event-Study Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
POST-PRE Full sample	0.033 (0.119)								
POST-PRE Weak executive constraints		0.068 (0.014)	0.068 (0.104)	0.072 (0.024)	0.064 (0.014)	0.082 (0.005)	0.117 (0.074)	0.081 (0.041)	0.026 (0.245)
POST-PRE Strong executive constraints		- 0.039 (0.212)	– 0.039 (0.347)	– 0.021 (0.574)	-0.030 (0.345)	- 0.062 (0.046)	0.022 (0.705)	- 0.000 (0.991)	– 0.055 (0.059)
Specification			Std errors clustered by continent	10-year event window	Country time trends added	Year x continent dummies	Narrowest sample of 32 deaths	Sample of 83 deaths	Placebo test: Deaths lagged by five years
Number of events	164	104 60	104 60	95 50	104 60	104 60	20 11	44 25	106 51

Notes: The dependent variable is a binary indicator for strong executive constraints. Each cell shows the difference between regression coefficients on dummies for five years after and before each random exit event. Test statistic in brackets is p-value of an F-test for the equality of the pre- and post-event dummies. Except for column (3), the underlying standard errors are robust and clustered at the country level.

Table 4 – Random Exits and Turnover: Basic Event-Study Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
POST-PRE Full sample	0.038 (0.055)								
POST-PRE Weak executive constraints		0.074 (0.010)	0.074 (0.083)	0.062 (0.016)	0.072 (0.013)	0.073 (0.015)	0.089 (0.249)	0.075 (0.093)	- 0.044 (0.047)
POST-PRE Strong executive constraints		- 0.048 (0.204)	- 0.048 (0.276)	0.001 (0.960)	- 0.050 (0.199)	- 0.070 (0.070)	0.069 (0.343)	0.072 (0.171)	- 0.127 (0.040)
Specification			Std errors clustered by continent	10-year event window	Country time trends added	Year x continent dummies	Narrowest sample of 32 deaths	Sample of 83 deaths	Placebo test: Deaths lagged by five years
Number of events	184	104 60	104 60	95 50	104 60	104 60	20 11	44 25	105 50

Notes: The dependent variable is a measure of leader turnover, calculated as the number of non-random leader changes per year over the specified window. Each cell shows the difference of regression coefficients on dummies for five years after and before each random exit event. Test statistic in brackets is p-value of an F-test for the equality of the pre- and post-event dummies. Except for column 3, the underlying standard errors are robust and clustered at the country level.

Table 5 – Random Exits and Institutional Reform: Alternative Measures and Estimation

	(1)	(2)	(3)
POST-PRE Weak executive constraints	0.370 (0.006)	0.594 (0.000)	2.251 (0.000)
POST-PRE Strong executive constraints	- 0.139 (0.354)	- 0.225 (0.516)	0.181 (0.601)
Measure of executive constraints Estimation	Seven-point scale OLS	Seven-point scale Fixed-effect ordered logit	Binary Conditional logit with 10 year window
Number of events	104 60	98 35	73 23

Notes: Dependent variable is indicator of executive constraints, as noted. Each cell shows the difference of regression coefficients on dummies for five years after and before each random exit event. Test statistic in brackets is *p*-value of an *F*-test for the equality of the pre- and post-event dummies. The underlying standard errors are robust and clustered at the country level.

Table 6 – Random Exits and Institutional Reform: Instrumental-Variables Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Second stage: Strong executive constraints										
Leader exit	0.090***	0.091***	0.500**	0.477**		-0.028***	-0.030***	-1.427	-1.026	
	(0.012)	(0.013)	(0.254)	(0.228)		(0.008)	(0.008)	(2.796)	(1.413)	
Leader death					-0.020**					0.018*
					(0.008)					(0.011)
First stage: Leader exit										
Leader death			- 0.038**	- 0.041**				-0.011	-0.018	
			(0.017)	(0.017)				(0.022)	(0.023)	
Leader age and tenure	No	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes
Executive Constraints	Weak	Weak	Weak	Weak	Weak	Strong	Strong	Strong	Strong	Strong
Specfication	OLS	OLS	IV	IV	Reduced form	OLS	OLS	IV	IV	Reduced form
Number of observations	7985	6352	6425	6352	6352	4764	4226	4263	4226	4226

Notes: The second-stage dependent variable is a binary indicator for strong executive constraints at year t+1. The leader exit variable is a dummy that has value 1 at year t if the leader at year t-1 left office at year t. The age and tenure of leaders and whether the leader died in office refer to the leader in office at year t-1. Standard errors in brackets are robust and clustered at the country level. Column (1) to (5) show results for the weak executive constraints sample, and column (6) to (10) show the results for the strong executive constraints sample.

Table 7 – Random Exits, Education, Preferences, and Occupation of Leaders

	Graduate	College	Educated abroad	Social Class
	(1)	(2)	(3)	(4)
POST-PRE Weak executive constraints	- 0.001 (0.976)	0.039 (0.515)	0.016 (0.706)	0.025 (0.775)
POST-PRE Strong executive constraints	0.137 (0.050)	- 0.018 (0.779)	- 0.002 (0.957)	- 0.086 (0.521)
Number of events	90 53	90 53	104 60	83 49

	Lawyer	Military	Civil Servant	Scientist	Unskilled Worker
	(5)	(6)	(7)	(8)	(9)
POST-PRE Weak executive constraints	- 0.013 (0.649)	- 0.043 (0.248)	0.047 (0.118)	- 0.005 (0.843)	0.006 (0.668)
POST-PRE Strong executive constraints	0.058 (0.434)	- 0.007 (0.842)	0.009 (0.806)	- 0.108 (0.013)	0.008 (0.783)
Number of events	94 56	94 56	94 56	94 56	94 56

Notes: Dependent variable is based on binary indicator, measured by leader's education, social class, or profession, as indicated. Each cell shows the difference of regression coefficients on dummies for five years after and before each random exit event. Test statistic in brackets is p-value of an F-test for the equality of the pre- and post-event dummies. The underlying standard errors are robust and clustered at the country level.

Table 8 – Random Exits, Executive Recruitment and Political Competition Reforms

	Executive Recruitment	Executive Recruitment	Political Competition	Political Competition	Competitive Executive Recruitment	Competitive Executive Recruitment	Competitive Participation	Competitive Participation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
POST-PRE Full sample	– 0.001 (0.916)		– 0.015 (0.272)		– 0.001 (0.929)		– 0.012 (0.380)	
POST-PRE Limited franchise		0.015 (0.324)		– 0.001 (0.930)		0.022 (0.206)		0.005 (0.656)
POST-PRE Extended franchise		– 0.055 (0.0396)		– 0.076 (0.163)		– 0.053 (0.041)		– 0.075 (0.164)
Number of events	161	107 54	162	133 29	164	110 54	164	135 29

Notes: Dependent variable is based on binary indicator, associated with indexes of executive recruitment, political competition, competitive executive recruitment, or competitivene participation, as indicated. Each cell shows the difference of regression coefficients on dummies for five years after and before each random exit event. Test statistic in brackets is p-value of an F-test for the equality of the pre- and post-event dummies. The underlying standard errors are robust and clustered at the country level.

Table 9 – Random Exits and Franchise Reforms

	Executive Recruitment >4	Executive Recruitment >4	Political Competition >5	Political Competition >5	Cheibub et al	Cheibub et al	Przeworski Franchise >6	Przeworski Franchise >6
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
POST-PRE Full sample	– 0.009 (0.649)		– 0.012 (0.523)		0.030 (0.1734)		-0.022 (0.142)	
POST-PRE Limited franchise Institutions		0.037 (0.138)		0.007 (0.781)		0.02 (0.461)		0.071 (0.192)
POST-PRE Extended franchise Institutions		– 0.091 (0.003)		– 0.043 (0.119)		0.025 (0.355)		– 0.027 (0.015)
Number of events	161	98 63	162	81 81	102	67 35	146	27 119

Notes: Dependent variable is based on binary indicator, measured by the Polity IV indexes of executive recruitment, political competition, or the indexes defined by Cheibub et al (2010) and Przeworski (2009), as indicated. Each cell shows the difference of regression coefficients on dummies for five years after and before each random exit event. Test statistic in brackets is p-value of an F-test for the equality of the pre- and post-event dummies. The underlying standard errors are robust and clustered at the country level.

Table 10 – Random Exits in the Sample Followed by Executive-Constraints Reforms

Country	Year of leader death	Year of executive constraints reform	Duration of executive constraints reform	Coincident franchise reform, year (duration)
Austria	1916	1920	12 years	Yes, 1920 (12 years)
China	1908	1912	1 year	No
Croatia	1999	2000	Permanent	Yes, 2000 (permanent)
Greece	1941	1944	23 years	Yes, 1944 (23 years)
Niger	1987	1992	4 years	Yes, 1992 (4 years)
Nigeria	1998	1999	Permanent	Yes, 1999 (Permanent)
Pakistan	1948	1951	7 years	No, reformed in 1948
Pakistan	1988	1988	11 years	Yes, 1988 (11 years)
Philippines	1948	1950	19 years	No, reformed at the latest in 1944 (from which year data is available)
Portugal	1889	1890	36 years	No
Spain	1975	1978	Permanent	Yes, 1978 (permanent)
Taiwan	1988	1992	Permanent	Yes, 1992 (permanent)
Uruguay	1947	1952	19 years	Yes, 1952 (19 years)
Yemen	1962	1962	4 years	No

Notes: The table lists the countries and year of executive-constraints reform following a random exit, its duration, and whether the executive-constraints reform coincides with a franchise reform.

On-line Appendix: Case Studies

Francisco Franco in Spain[14]   General Francisco Franco had governed Spain under unchecked authoritarian rule since the end of its Civil War. According to the Law of Succession from 1947, Spain would return to monarchy, but Franco would rule for life and himself appoint the next King. The non-elected Spanish pseudo-parliament, the Cortes, was at best an advisory body with no right to initiate legislation or oppose the government. It was dominated by the so-called National Movement – the Movimiento – which constituted the political elite. This movement comprised a collection of right-wing families and was the only recognized forum for political participation. Elections were not held during the Franco period.

Some modest reforms in 1966 separated the functions of head of state and head of government, but the authoritarian character of the regime remained intact. The hard-line Admiral Luis Carrero Blanco was appointed the first prime minister and was also widely expected to become Franco's successor, even though Franco had already appointed Juan Carlos as the next head of state in 1969. Juan Carlos, the son of Spain's legitimate monarch Juan of Borbón, was generally considered an insider of the ruling elite, by which he had been educated and groomed. As a quid pro quo for the appointment, Juan Carlos swore to be faithful to the National Movement. He publicly supported the regime and took part in ceremonial functions together with Franco.

From the late 1960s, the regime saw increasing challenges from an emerging political opposition, including regional-autonomy movements in the Basque country, Catalonia, and (less so) Galicia. In particular, ETA – the Basque revolutionary liberation army – started to systematically implement the theory of action/terror/action to further its independence cause; most significantly, ETA assassinated Carrero Blanco in December 1973. The regime countered the opposition with higher levels of repression. Meanwhile, the ailing Franco replaced Carrero Blanco as Prime Minister with another hardliner, Arias Navarro. Despite the mounting opposition, there was little to suggest an end to the unchecked authoritarian regime. For the postwar period up until the year of 1974, Polity IV sets the executive constraints variable for Spain at the bottom score of 1 (on a 1-7 scale).

Franco died of heart disease in November of 1975. Juan Carlos, having been proclaimed King of Spain by the Cortes, reaffirmed Navarro as prime minister. Navarro made vague suggestions in the direction of limited reforms, which was met with public demonstrations, strikes and increased regional terrorist acts, to which the regime responded with increased repression. Following discontent with Navarro's handling of the situation, the King asked for him to step down in the summer of 1976. He replaced Navarro with another leading figure from the Movimiento, its general secretary and former Franco minister, Adolfo Suárez González.

Despite expectations to the contrary, Suárez – with outright support of the King – saw the need for more far-reaching reforms, to avoid descent into a spiral of repression and violence. He soon announced plans for a comprehensive package of political reform, which would put in place a constitutional monarchy based on parliamentary democracy with a bicameral legislature. In the fall of 1976, he managed to convince the Movimiento members of the Cortes that the only way forward was to accept this reform package, which effectively would dismantle the institution itself. Later in that fall, the Spanish people approved the plans with a majority of 88% in a national referendum. New laws permitting political parties, including the Communist Party, were passed by the Cortes in the spring of 1977, and general elections to a new legislature were held in the summer of the same year, using proportional representation.

---

[14]This subsection is based on Conversi (2002), Encyclopedia Brittanica (2012), Linz (1990), Linz and Stepan (1996), Polity IV Country Reports (2010), Rosenfeld (1997), Share (1987), and Solsten and Meditz (1988).

In these elections, Suárez ran as the party leader of the newly founded UCD at the conservative-center of politics, which emerged as the largest party followed by the PSOE (the Socialist Party). The most polarized parties, the Alianza Popular (on the far right, assuming some of the heritage from the dissolved Movimiento) and the Communist Party, each polled at about 10%. The new parliament elected a seven-member constitutional committee representing all major parties to draft Spain's new constitution. The committee's proposal was amended and eventually passed by parliament in October 1978, and then approved in a general referendum in December of the same year. After this, Suárez dissolved the parliament and called for fresh elections under the new constitution.

A mere three years after Franco's death, Suárez and Juan Carlos, two members of the former ruling elite, had thus led the country through a remarkably peaceful democratic transition. In this process, Spain adopted a constitution with a number of horizontal checks on the executive, as well as provisions for regional autonomy. The new political regime has endured since those days – its resilience was tested most dramatically in a failed coup attempt in February 1981 by Colonel Antonio Tejero, who together with 200 armed members of the paramilitary police (the Guardia Civil) stormed into the Chamber of Deputies to interrupt its election of the new prime minister. From the year of 1978, Polity IV codes Spain's executive constraints with the top score of 7 (on the 1 to 7 scale).

Chiang Ching-kuo in Taiwan[15] In its retreat from mainland China to Taiwan in 1949, the Koumintang (KMT) government had brought with it not only a large number of immigrants and a large bureaucracy, but also the official constitution of the Republic of China. Based on the political ideas of Sun Yat-sen, founder of the Koumintang (KMT) and the Republic, it had been put in place in 1946 as a compromise with the Communist Party. The constitution prescribed a peculiar form of parliamentary government encompassing an intricate system of checks and controls, where members of the National Assembly and the legislature (Legislative Yuan) with their, de jure, extensive powers were all to be elected in mainland China. The original mainland members of these two bodies came to hold lifelong tenure, guaranteeing the continued dominance of the KMT. As the mainlanders began to die off, however, the government began to hold supplemental elections in which a few Taiwanese residents were elected on each occasion.

De facto, however, large parts of the constitution were suspended as a result of the "Temporary Provisions for the Duration of Mobilization to Crush the Communist Rebellion", adopted in 1948. These provisions together with the martial law proclaimed in 1949 gave extensive powers to the president and his government. Chiang Kai-shek resumed the presidency in 1950 and kept it until his death in 1978. He was succeeded in office by his son Chiang Ching-kuo, who had previously served as minister of defence as well as prime minister. Martial law was to remain in force for 38 years. During this time, Taiwan was effectively ruled by a very powerful president and government – with support of the old KMT elite from the mainland and of the military – and executive constraints are coded as 2 or 3 (out of 7) in the Polity IV data set. In his very last years in office, Chiang put a political reform committee in place (in March 1986) and lifted martial law (in July 1987).

In January 1988, Chiang Ching-kuo died in office due to heart failure and hemmoraghe. Chiang's presidential powers and chairmanship of the KMT were assumed by his protegee, Vice-President Lee Teng-hui. As he assumed power, Lee – who, unlike his predecessors, was native Taiwanese – was troubled by the continued domination of former mainlanders in the KMT and political bodies, and by emerging opposition to the omnipotent KMT and popular demands for

---

[15]This section is based on Constitution Writing and Conflict Resolution (1999), Dagne (2002), Encyclopedia Brittanica (2012, Polity IV Country Reports (2010), USAID (2006), and US State Department (2011)

official separation and independence from mainland China. He embarked on a gradual process, leading the KMT down a path of political reform. This process began with an ad hoc National Affairs conference, which came to serve as a bit of an informal extra-constitutional assembly which could collect opinions. Only the National Assembly could legally revise the constitution, but lacked legitimacy to do so as it was dominated by former mainlanders and not representative of public opinion.

Under Lee's leadership, Taiwan's constitution was revised through a sequence of amendments (in 1991, 1992, 1994 and 1997). The first step in 1991 saw the National Assembly dominated by the old-guard of the KMT put an end to Temporary Provisions. It also decided on ten constitutional amendments. Half of these replaced the antiquated electoral rules – i.e., that members of the National Assembly and the Legislative Yuan be entirely elected in mainland China – with electoral rules for Taiwan alone, thus making these elected bodies much more representative. Another amendment gave the President the right to issue emergency orders, but only with ratification of the Legislative Yuan, thus putting in place some clear executive constraints.

After this first step, a general election was held in late 1991 to replace the whole existing National Assembly. The newly elected body, which was still dominated by the KMT, met in 1992 to discuss further amendments to the constitution and adopt 8 new articles. The most important amendment was to introduce direct, rather than indirect, election of the president by "the entire electorate in the free area of the Republic" (effective from the 1996 election), while maintaining the National Assembly's right of recall. The other features included giving the National Assembly the power of consent for appointments of leaders and Grand Justices of the Judicial Yuan (the constitutional court). As a result of the 1991 and 1992 changes, the basic institutions for a semi-presidential system with clear checks on the president was now in place. From 1992 the executive constraint score in Polity IV is lifted to a 5.

Additional reforms in 1994 and 1997 would further enhance executive constraints by securing the independence of the members of the Judicial Yuan and introducing the right of the Legislative Yuan to remove the prime minister by a constructive vote of confidence. As per these changes, the Polity IV executive constraint score went up to a 6 in 1997 (and subsequently to a 7 in 2004). In this reform process, Taiwan also developed from a one-party state into a multi-party democracy, where the KMT was challenged by the Democratic Progressive Party and the New Party (branching off from the KMT).

Sani Abacha in Nigeria[16]   In the six first years after its independence from the United Kingdom in 1960, Nigeria had a fragile democracy formally based on political institutions similar to those of its former colonial power, the UK. In the wake of mounting ethnic and political tensions, the country went through several military coups in 1966, followed by the Nigeria-Biafra civil war. Over the next 33 years, it would be dominated by members of the military elite and was more or less constantly under autocratic rule, except for a few brief and failed attempts at democratic rule. Elections were held off an on, but as a rule these were manipulated by incumbent leaders.

In 1993, General Sani Abacha came to power through another military coup. Abacha came to lead Nigeria's perhaps most brutal regime, which used its powers to enrich Abacha's family and close allies, and met calls for civilian and democratic rule with large doses of repression. His government was the Provisional Ruling Council (PRC), an elite group of military leaders that ruled by decree. Under continued pressure to implement political reforms, in October 1995 Abacha adopted a three-year timetable for transition to civilian rule. He set up a new electoral commission to produce guidelines for the establishments of political parties, at the same time as

---

[16]This section is based on Constitution Writing and Conflict Resolution (1999), Dagne (2002), Encyclopedia Brittanica (2012, Polity IV (2010), USAID (2006), and US State Department (2011).

he dissolved existing opposition groups. State assembly and gubernatorial sham elections were held in the spring of 1998, among the five parties sanctioned by the commission, and the UNCP – a proxy party for the Nigerian military – won large victories. The scene seemed staged for a pseudo election to extend Abacha's unchecked rule. Not only did the military express its support for Abacha, but all five state-recognized parties had nominated Abacha himself as the single candidate for the elections to be held in October 1998. Polity IV codes executive constraints during the Abacha period, up until 1997, at their lowest value of 1.

However, in June 1998 Abacha died of a sudden heart attack. The PRC, still ruling by decree, quickly appointed Chief of Staff Abdulsalami Abubakar as Abacha's successor. Abubakar was a bit of a military intellectual, but he was definitely a member of the military elite, having served also in the earlier regime of General Ibrahim Babangida. Upon his appointment, Abubakar declared that he would stick to Abacha's timetable for presidential elections. He and the PRC also released some political prisoners, including former General and President Olusegun Obasanjo.

To many's surprise, however, Abubakar went much farther. He recognized that long-term military rule and many human-rights infringements had seriously damaged the country's reputation and that the resulting international sanctions damaged the economy. In August and September, he maneuvered the PRC into undertaking far-reaching political reforms, which dissolved the five Abacha-controlled parties, abolished the compromised electoral commission replacing it with a new one, fired Abacha's cabinet, and abolished earlier decrees banning union activities and political strikes. Abubakar announced that he was appointing a committee to oversee extensive revisions to a proposal for a new constitution, to lay down the rules for the next civilian government. Eventually, the PRC adopted an extensive revision of the earlier 1979 constitution in early May 1999.

Abubakar also declared the earlier election results null and void and announced new national elections for February of 1999. One of the newly created parties, the People's Democratic Party, nominated Obasanjo as its presidential candidate and he went on to win the election by a large margin. According to the timetable, Obasanjo entered into office in late May 1999 under the newly adopted constitution. While the constitution still retains strong powers in the hands of the president, it provides for checks on those powers through a bicameral legislature that must approve appointments and may oppose government proposals. It also gives a more important role to the judiciary, especially the Supreme Court. Even though Nigeria has gone through difficult political times with ethnic and religious tensions and rivalry regarding oil revenues, the new political institutions have survived to this day. As of 1999, Polity IV codes the executive constraints variable at 5, meaning that "substantial limitations" on its government are in place.

References for Online Appendix

[1] *Britannica Online Encyclopedia*, Academic Edition (http://www.britannica.com/).

[2] Constitution Writing and Conflict Resolution [1999], "Nigeria 1999", (http://www.princeton.edu/~pcwcr/reports/niger1999.html).

[3] Conversi, Daniele [2002], "The Smooth Transition: Spain's 1978 Constitution and the Nationalities Question", *National Identities*, vol. 4, 223-244.

[4] Dagne, Theodoros [2002], "Nigeria in Political Transition", in Matthews, Martin (ed.), *Nigeria: Current Issues and Historical Background*, New York, NY: Nova Science Publishers.

[5] Lin, Jih-wen [2002], "Transition through Transaction: Taiwan's Constitutional Reforms in the Lee Teng-hui Era", *American Asian Review,* vol. 20, 123-155.

[6] Linz, Juan [1990], "Transitions to Democracy", *The Washington Quarterly*, vol. 13, 143-164.

[7] Linz, Juan and Alfred Stepan [1996], *Problems of Democratic Transition and Consolidation*, Baltimore, MD: Johns Hopkins University Press.

[8] Osagawara, Youshiyuki [1998], "Constitutional Reform and Democratization in Taiwan", mimeo, Tokyo University of Foreign Studies (http://www.tufs.ac.jp/ts/personal/ogasawara/paper/epaper2.html).

[9] Polity IV Country Reports [2010], Spain, Taiwan, and Nigeria (http://www.systemicpeace.org/polity/polity06.htm).

[10] Rosenfeld, Michael [1997], "Constitution Making, Identity Building, and Peaceful Transition to Democracy: Theoretical Reflections Inspired by the Spanish Example", *Cardozo Law Review*, vol. 19, 1891-1920.

[11] Share, Donald [1987], "Transitions to Democracy and Transition through Transaction", *Comparative Political Studies*, vol. 19, 525-548.

[12] Solsten, Eric and Sandra Meditz (eds.) [1988], *Spain: A Country Study*, Washington, DC: GPO for the Library of Congress.

[13] Tang, Dennis Te-chung [1999], "Constitutional Reforms in Taiwan in the 1990s", mimeo, National Taiwan University (http://idv.sinica.edu.tw/dennis/19990712.pdf).

[14] Tien, Hung-mao and Tun-jen Cheng [1997], "Crafting Democratic Institutions in Taiwan", *The China Journal*, vol. 37, 1-27.

[15] USAID [2006], *Democracy and Governance Assessment of Nigeria*, ARD Inc.

[16] US State Department [2011], "Background Note: Nigeria" (http://www.state.gov/r/pa/ei/bgn/2836.htm#political).