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Elections as a conflict processing mechanism[☆]



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ABSTRACT

We examine the conditions under which societal conflicts are peacefully processed by competitive elections when the contending parties can revert to force as an alternative. We show that the viability of the electoral mechanism depends on the balance of military force, the sharpness of divisions within a society, and institutions that moderate policies implemented by winners of elections. For elections to be held and their outcomes to be respected, the probabilities that they would be won by incumbents must bear an inverse relation to the magnitude of policy changes resulting from elections. Elections are competitive when their outcomes make some but not too much difference. Constraining the scope of policy divergence increases the range of the balance of force under which elections are competitive in divided, but not in homogeneous, societies. Hence, competitiveness of elections and constitutional constraints on policies – the norms being promoted as essential for democracies – do not always go together.

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1. Introduction

Elections are a way of processing conflicts. Yet they are just one way, historically rare and recent. During the past two-hundred years, political power changed hands more frequently by the use of force than through elections. From 1788 when the first election took place in the United States until 2009 governments around the world changed as a result of 577 coups and 544 elections.¹ To understand why competitive elections are held in some but not in other societies, it is necessary to ascertain what would have occurred if peaceful order broke down. The possibility that force may be used casts a shadow over elections.² The type of political regime that can be maintained depends on counterfactual outcomes of violent confrontations.

The purpose of this analysis is to examine the conditions under which conflicts are peacefully processed by competitive elections when the contending parties can revert to force as an alternative, the viability of the electoral mechanism under the shadow of force.

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¹ All the numbers and descriptive figures presented below are based on the PIPE data set (Przeworski, 2014) that covers about 3000 thousand elections, political institutions, and some political events in the world from 1788 through 2008.

² The general idea of peaceful equilibria induced by the shadow of violence is due to Powell (1999).

Assume that two political forces are in a repeated conflict over some policy: the tax rate, the size of military budget, the laws regulating abortion, and the political rights of minorities. At each time they can process the conflict by an election or by fighting, which is inefficient. Winners of elections pursue policies less favorable to them than winners of violent conflicts. Fighting is inefficient because it is costly. The probability that the current incumbent would win the next election need not be the same as the probability that the incumbent would prevail in a violent conflict. Hence, political actors face two lotteries, with different stakes and different probabilities.

Elections, however, are a special kind of a lottery because conflicting parties attempt to influence their probability of winning by undertaking some actions. In standard models of elections these actions are policy platforms proposed to the electorate. Depending on the assumptions about the objectives of the parties, uncertainty about voters' preferences, and the role of social and partisan identities, these models generate different conclusions concerning the extent to which party platforms converge in electoral equilibria. We deviate from this approach, taking the distance between policies implemented by winners and those that would have been pursued by losers as given. In turn, we allow the incumbents to manipulate elections by other instruments, such as adopting advantageous electoral rules, controlling the media, extending patronage, or when this is not sufficient, reverting to fraud. The extent of manipulation is constrained only by the possibility that the opposition would refuse to participate or would not acquiesce to the incumbent's victory. Hence, ours is a model of political, not electoral, competition.

Elections occur in specific social contexts that differ greatly in the intensity of conflicts. Some societies are highly homogeneous, while others are deeply split by economic, religious, ethnic, or regional cleavages. Hence, the extent of what we call "political polarization" – the distance between the ideal policies of the parties – varies across societies. Elections in Luxembourg are not elections in Iraq. Yet the entire spectrum of conflicting interests need not be at stake in elections. Parties may moderate their stances when competing in elections, while super-majoritarian institutions, such as bicameralism or executive veto, or anti-majoritarian institutions, such as constitutional courts or independent central banks, may disable some extreme policies. Hence, while the stakes in elections – the utility difference associated with their outcomes – depend on the intensity of conflicts, they may be moderated by the political institutions.

Viewing elections as a method of processing conflicts when parties can revert to force leads to the following conclusions³:

- (1) As one would expect, no elections are held when one party has an overwhelming military advantage. We do not assume that parties act as armies. The military force of contending parties depends on the partisan postures of organized bodies that bear arms: the armed forces, various kinds of police, secret services, frontier guards, and sometimes paramilitary militias. These bodies may be highly partisan or purely non-partisan, unwilling to intervene on behalf of either party. The glaring weakness of our model, and the general approach it implements, is that the partisan postures of the military are taken as a given feature of the environment.⁴
- (2) When elections are held, incumbents manipulate them to the point at which the opposition is indifferent between participating and fighting. Hence, probabilities of winning elections reflect relations of force: elections are rarely, if ever, "fair." The opposition consents to incumbents' manipulation of elections because defeat in a fight would be costly. In any electoral equilibrium, the chances of the losing party to win the next election must be greater if the current defeat inflicted on it a larger loss of utility. To maintain peace, winners of elections must give their opponents a chance to recuperate their losses in the future, sometimes to the point of allowing them to enjoy electoral advantage. Hence, parties should alternate in office more frequently when more is at stake in the outcomes of particular elections.
- (3) Elections are competitive, in the minimal sense that neither party is certain to win, if their outcomes make some but not too much difference. Given that in our model parties care only about the policy outcomes (following Wittman (1973), not Downs (1957)), elections are not competitive if their outcome would make no difference whatsoever, as in the median voter model. When outcomes of elections make little difference, either party can declare the policy that would have resulted from competition and the other party consents. At the other extreme, if elections were to make too much difference, parties would rather fight than face the possibility of defeat.

The electoral mechanism is most robust when the stakes in elections assume a specific value, the present value of the cost of being dominated by force. This is true whether a society is little polarized and elections process a large segment of the divisions that are or it is more polarized but elections process only a small part of the underlying conflict. Societal conflicts and political institutions interact in a subtle way. In less polarized societies, some policy divergence is necessary to induce parties to compete and outcomes of elections are acceptable whoever wins, because their distance from ideal policies is small for both parties. In more polarized societies, even outcomes of elections that make little difference would be unacceptable to both parties.

The paper is structured as follows. Because our assumptions concerning the manipulability of elections and the fixed distance between electoral policies are unorthodox, we devote a separate section to justify them, both theoretically, summarizing some of the relevant literature, and empirically, showing some facts concerning the history of elections. The subsequent section introduces the model and it is followed by a presentation of the main results and their implications with some empirical tests using original data. The model is then applied to conflicts over distribution of income. The final section concludes.

³ For models of conflict management in a dynamic environment see Besley and Persson (2011), Dixit et al. (2000), Ellman and Wantchekon (2000), Grossman (2004), Hirshleifer (1995), and Powell (1999).

⁴ While several recent models (Acemoglu et al., 2010; Besley and Robinson, 2010; Svolik, 2012) treat civilian–military relations as a principal–agent problem, in which civilians pay the military to engage in repression and the military revolt when the civilians do not satisfy their participation constraint, the military intervene in politics not only on behalf or behest of civilians but also for its own reasons. Rivero (2012) counts that more than one-half of military coups after 1945 were directed against military governments, while one-half of coups were led by officers of lower rank: evidence that coups have something to do with the relations within the military institutions, not only with military–civilian relations. All we can say is that partisan postures of different repressive apparatuses and the relations among them are still largely unexplored (but see Davis and Pereira, 2003).

2. Manipulating elections and choosing platforms

Our argument is based on two assumptions that deviate from the standard view of elections: (1) incumbents have instruments other than electoral platforms to manipulate their probability of winning elections, and (2) given the extent of political divisions in a particular society and the political institutions, the contending parties cannot reduce the divergence between policy platforms below some minimum.⁵ Hence, in our model the probability that incumbents win elections is the instrument of the incumbent, while the policy distance between parties is given.

Because these assumptions are not standard, they require justification. The assumption that incumbents can manipulate the probability that they would win the next election has recently received widespread attention (Egorov et al., 2011; Little, 2012; Magaloni, 2006; Gandhi et al., 2009; Simpser, 2013; Svolik, 2008; Svolik, 2009). The reason is perhaps that the frequency with which incumbents win elections is striking. Over the past two-hundred years incumbents won 2315 out of 2949 national-level elections in which the office of the chief executive was at stake, which gives $p = 0.79$, and 4:1 odds of winning. It is hard to believe that incumbents enjoy such an overwhelming advantage just because their policy proposals are more attractive to the electorate (as in spatial models of electoral competition, see Roemer (2001)), because they have performed so well in the past (as in accountability models, see Barro (1973) or Ferejohn (1986)), or because they are better qualified to govern (as in Ashworth and Bueno de Mesquita (2008)). As Fig. 1 shows, defeats of incumbents became frequent only during the past thirty years and it is again implausible that this change would be due to a sudden decline in their popularity.

Incumbents have an advantage because they control all kinds of instruments that influence outcomes of elections. Some use the state apparatus to repress or spy on their opponents, others mobilize public bureaucracy to act in their partisan support, control or pressure the media, legally manipulate the rules of competition, obtain electoral resources from special interests in exchange for favorable policies, expand public spending so as to make people happier when an election approaches, and as the last recourse engage in fraud.⁶

The role played by force is revealed by the fact that those rulers who had the military power to grab office by unconstitutional means also had the power to impose themselves in elections, while those who entered constitutionally had to accept a lower probability of winning. Estimating probit regressions in which the dependent variable is winning an election shows that the distribution of these probabilities is bimodal.⁷ The two peaks clearly reflect the manner in which the incumbent chief executive entered into office: those who entered constitutionally run reasonably competitive elections, with p of about 0.65, while those who entered by other means are almost certain to win (Fig. 2).

Given these facts, we feel justified to assume that incumbents can choose the probability with which they would win the next election. Incumbents choose this probability strategically, asking themselves how many votes they can manipulate or steal without the opposition reverting to violence, and they implement it using instruments listed above. Participation of parties in elections, peaceful acquiescence with an electoral defeat, and alternations in office resulting from elections are endogenous outcomes in our model.

The assumption that platforms do not converge below some minimum can be justified already within the standard spatial framework, where proposed policies diverge as long as parties are policy-oriented and there is some uncertainty about the distribution of voters' preferences (Roemer, 2001). An even stronger justification is provided by the "unified theory of party competition" developed by Adams et al. (2005). This theory combines the assumption that parties maximize votes or the expected value of policies, an assumption that leads to expect policy convergence, with psychological and sociological assumptions – "the existence and persistence of strong partisan loyalties [as well as] voting as rooted in class, ethnicity, or other sociodemographic factors" (page 2) – which cause policies to diverge in equilibria of party competition. Hence, the minimum equilibrium distance between party platforms depends on the intensity of social and economic cleavages in a society.

Policy outcomes depend, however, not only on party platforms. The relation between party programs and policy outcomes is mediated by the entire system of political institutions. Particular institutional systems may contain super-majoritarian as well as contra-majoritarian devices. By blocking the implementation of some programs, such institutions mitigate the effects of electoral victories and defeats. They reduce the stakes of elections. We are aware that some of our conclusions hinge on the assumption about the rigidity of the distance between party platforms: if parties could move to any position in policy space, inefficient conflicts would never occur in a model that assumes full information (Hicks, 1932).⁸ Yet over the past two hundred years such conflicts have been ubiquitous. Some countries are unable to establish peaceful order. A few maintain order without holding elections. Many celebrate elections in which opposition is either not allowed or not given a chance to win. Finally, in some countries elections are peaceful and competitive. Their relative frequency during the past 200 years is shown in Fig. 3. These are the facts that motivate our analysis.

3. The model

Consider an environment of discrete time and infinite horizon. In each period $t = 0, 1, \dots$, two parties, $j \in \{L, R\}$, conflict over some one dimensional policy $x \in R$. Each party is characterized by an ideal policy x_j^* . Without loss of generality, the mid-point between the

⁵ The approach also differs from several models of dynamic bargaining, in which p is taken as fixed and the winner of the current election either unilaterally chooses the electoral platform (as in Alesina (1988) as well as Dixit et al. (2000), where there is no rebellion alternative).

⁶ For different "menus of manipulation," see Posada-Carbó (2000), Mozaffar and Schedler (2002), Lehoucq (2002) and Hyde (2011).

⁷ Other specifications exhibit the same pattern.

⁸ As is well known (Jackson and Morelli, 2011), inefficient conflicts can occur if (1) the policy space is discrete, (2) there is uncertainty, or (3) no credible commitments are possible. Our model relies on the first assumption.

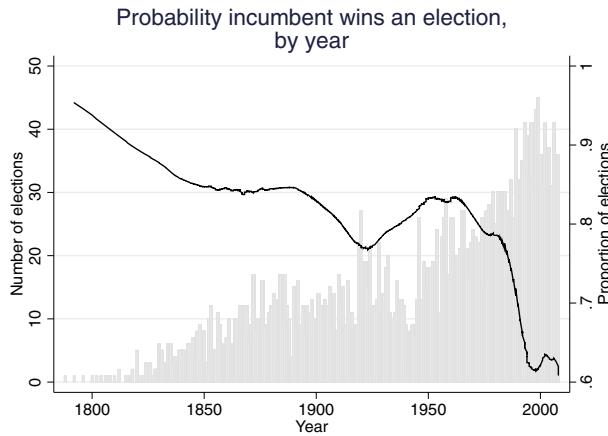


Fig. 1. Probability incumbents win an election, by year. Note: The incumbent party is a party, person, or a designated successor. Elections include national level elections in which the office of the chief executive was at stake and the incumbent presented itself. Lowess smooth.

Source: [Przeworski \(2014\)](#).

ideal policies is set to 0, so the ideal points of the parties can be written as $x_L^* = -x^*$ and $x_R^* = x^* > 0$. The distance between these ideal policies, $2x^*$, measures the political polarization of a particular society. Utilities depend on the Euclidean distance between the ideal and the implemented policy. Specifically, when the implemented policy is x , $U_j(x_j^*, x) = -d(x_j^*, x) = -|x_j^* - x|$. The parties share a common discount factor $\rho \in (0, 1)$.

At each time one party is the incumbent, I , and the other the opposition, O , indexed by the superscript k . To decide what policy should be implemented, the incumbent first chooses between holding an election or imposing its ideal policy by force. If the parties enter an electoral competition, each proposes a policy platform. Just as in standard electoral competition models, the distance between platforms of the winner and loser in an election may be smaller than that between their ideal positions. The electoral competition, however, need not lead to a complete convergence of platforms. We assume that the incumbent and the opposition are bound to propose a fixed platform $x_j = \alpha x^*/2$, with $\alpha \in [0, 2]$. The parameter α reflects the extent to which electoral competition or the institutional features of a political system reduce the distance between policies. When $\alpha = 0$ policies converge, as in the median voter theorem. In contrast, when $\alpha = 2$ elections do not have any effect on moderating party positions. If both parties participate in an election and the policy is implemented according to the winning platform, the one-period utility of party j is given by:

$$U_j = \begin{cases} U_j(x_j) = -|x^* - x_j| = -\left(1 - \frac{\alpha}{2}\right)x^* & \text{if } j \text{ wins} \\ U_j(x_{-j}) = -|x^* - x_{-j}| = -\left(1 + \frac{\alpha}{2}\right)x^* & \text{if } j \text{ loses} \end{cases}.$$

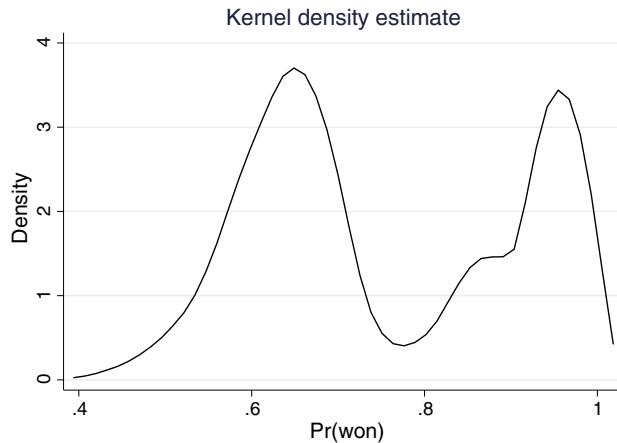


Fig. 2. Probability density of incumbent victories. Note: The regressors are per capita income, the lagged number of years the current chief executive had been in office, the presence or absence of the opposition during the year preceding the election, and an indicator of whether the incumbent chief executive entered into office constitutionally or not.

Source: [Przeworski \(2014\)](#).

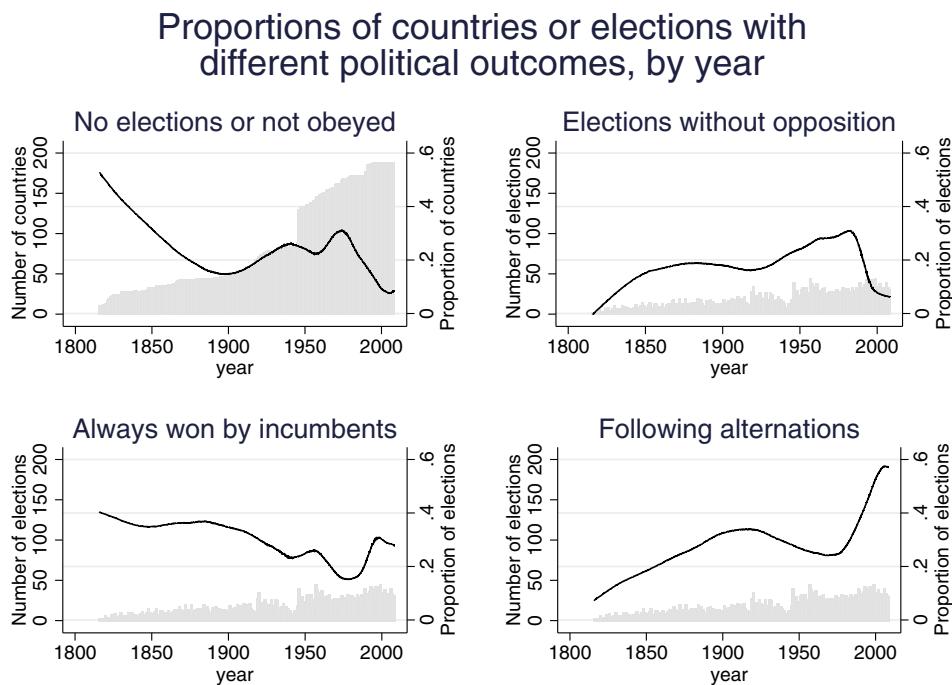


Fig. 3. Proportion of countries or elections with different political outcomes. Note: "No elections or not obeyed" counts the years of independent countries which never held national level elections or held them in the past but at the present did not hold them for a period that exceeds constitutionally specified terms by more than one year or held them as scheduled but their results were not obeyed. "Elections without opposition" is self-explanatory. "Elections always won by incumbents" counts elections that precede first partisan alternations in office resulting from elections. Finally, "following alternation" counts elections that follow first alternation, even if incumbents win all subsequent elections but as long as elections are held regularly and their results are obeyed. Lowess smooth.

Source: Przeworski (2014).

The second assumption is that the incumbent can choose the probability of winning an election, p_j^I . This choice is constrained, however, by the condition that the opposition be willing to participate, so that it does not imply that incumbents always choose $p_j^I = 1$ and win.

Instead of holding elections as incumbents or entering electoral competition as opposition, parties may attempt to impose themselves by force ("fight"). Each party is characterized by its military power, measured as the probability of winning a fight. Specifically, the probability that party L defeats party R in a fight is q and the military power of R is $1 - q$. Note that q characterizes party L and does not depend on the incumbency status. While the winner of an election implements its electoral platform, the winner of a fight imposes its ideal policy. Fights can assume different forms – violent demonstrations, general strikes, mass uprisings, coups, or even civil wars – but they are inefficient because the loser suffers an additional utility loss in the amount $c > 0$, which can be interpreted as a non-policy cost of being dominated by force.⁹ Hence, the per period utility of the winner of a fight is $U_j(x_j^F) = 0$ while the utility of the loser is $U_j(x_{-j}^F) - c = -(2x^* + c)$.

Fighting is additionally costly in the sense that it leads to permanent damage to the mechanism of elections. If a fight occurs, either before or after an election, the winner implements its ideal policy and the loser suffers the cost of being dominated by force in every future period.¹⁰ Following a common practice in dynamic models (Fearon, 2011; Powell, 2013), the assumption we make is that any deviations from the equilibrium strategies must be Markov. A renegotiation back to the electoral equilibrium is ruled out not only for simplicity, but also for the intuition that a severe loss commits parties to the peaceful equilibrium. A straightforward algebra will show that if a party would rather fight knowing that the electoral mechanism is to be destroyed forever, then it will not obey when the electoral mechanism is to be destroyed for any shorter period. In turn, if a party obeys when the defeat is permanent, it may or may not obey when the defeat is limited in time. Hence, the assumption is a necessary condition for the existence of electoral equilibrium and is without loss of generality. In a broader sense, the threat of using force to determine policies does not fluctuate over time as is the case in the standard approach such as Acemoglu and Robinson (2001). In our paper, though, the commitment problem remains an obstacle to peace even without the fluctuation of q , because incumbents can still manipulate elections when both parties are already signed into the peaceful competition. In our view, it is the manipulation combined with aversion to the costly fight that leads to large incumbency advantage. Our analysis is mainly based on this point.

In sum, elections and violent conflicts constitute two lotteries for processing conflicts of interests, one efficient and the other costly.

⁹ It does not matter for our results who suffers the costs: winner, loser, or both. In what follows, we will make the assumption that it is the loser because it is more plausible.

¹⁰ One can think of the payoff function as one that the loser of a fight suffers up-front a cost $C = \sum_{t=0}^{\infty} \rho^t c$, which means that its actualized per period cost during this time is $c = (1 - \rho)C$.

The decisions of parties to enter a peaceful or violent stage of the game are determined by comparisons of the von Neumann–Morgenstern utilities from these lotteries. If the electoral mechanism is available, at the beginning of any period t the incumbent decides whether or not to hold an election.¹¹ Write this decision as $\theta_j \in \{0, 1\}$, $\theta_j = 1$ if the incumbent holds the election. If the incumbent party decides to hold an election, it also chooses p_j , the probability of winning an election.¹²

If the incumbent does not hold an election, the opposition decides whether to acquiesce or fight, $\phi_j \in \{0, 1\}$. When the opposition does not fight as a response to the decision of not holding election, $\phi_j = 1$, the incumbent simply implements its ideal policy. When the opposition fights, $\phi_j = 0$, policy is determined as specified above and the loser bears the cost c . If the incumbent decides to hold an election, implementing p_j , the opposition decides whether to enter the election or to fight. We write this decision as $\omega_j \in \{0, 1\}$, where $\omega_j = 0$ indicates a fight.

The conflict over policy is peacefully settled if both parties participate in elections and the both obey the outcome. Write the outcome of an election from party j 's perspective as $e_j \in \{-1, 1\}$, where $e_j = 1$ means electoral victory. The choice whether to obey or to rebel following an electoral defeat is represented by $a_j \in \{\text{obey, rebel}\}, \{0, r\}$ for short. These decisions are made simultaneously, so a fight ensues if at least one party plays $a_j = r$.

If the electoral mechanism is available at time t , the stage game can be summarized as follows:

- (1) The incumbent j decides whether or not to hold an election: $\theta_j \in \{0, 1\}$, and $p_j \in [0, 1]$ when $\theta_j = 1$.
- (2) The opposition $\neg j$ decides whether to acquiesce or to fight when the incumbent does not hold elections, $\phi_j \in \{0, 1\}$; and when the incumbent does hold, whether to enter the election or resist by force: $\omega_{-j} \in \{0, 1\}$.
- (3) If the incumbent does not hold elections and the opposition acquiesces, the incumbent implements its ideal policy.
- (3b) If the opposition rebels, whether an election is to be held or not, a fight ensues.
- (4) When the result of election is observed, the parties simultaneously decide whether to obey or rebel. If both parties obey, the winning platform is implemented, and the game continues as before.

The solution concept is Markov Equilibrium. The only varying state over time is the incumbency status. q , x^* , and α are all parameters of the game. Hence, conditional on the incumbency status, the party's equilibrium strategy is stationary. The sequence of strategic interaction in each period starts with the decision by the incumbent with regard to the holding of elections and ends with parties' choices of obeying the electoral result or not. The pairs of strategies $\{\theta_j^*, p_j^*, \omega_j^*, \phi_j^*, a_j^*\}$ for both parties consist mutually best responses whenever the electoral mechanism is feasible. An equilibrium clearly exists. The following definitions help to distinguish particular cases of interest.

Definition 1. *An equilibrium is peaceful if neither party fights.*

A peaceful equilibrium occurs when both parties hold elections as incumbents and obey when lost. An equilibrium can also be peaceful, however, even if elections are not held. When a party enjoys extremely strong military support, it may simply impose the ideal policy without incurring any resistance.

Definition 2. *An equilibrium is electoral if both parties hold elections and obey.*

If a party does not hold elections as the incumbent, it does not enter elections as opposition. This is because a party does not hold elections if the best possible outcome, which is that it wins, is worse for it than the expected value of fighting. Formally, if $\theta_j = 0$, then $\omega_j = 0$. Hence, an electoral equilibrium must be peaceful. Elections, however, need not be competitive.¹³

Definition 3. *An equilibrium is competitive if $0 < p_j^* < 1$ for both parties.*

An equilibrium is considered to be competitive as long as there is a positive, even if very small, probability that the incumbent loses. This is because as long as $p_j < 1$, alternation in office is certain to occur at some point in the future. This notion of electoral competitiveness is consistent with the “minimalist conception of democracy,” democracy as a political institution in which incumbents lose elections and respect the outcome (Przeworski, 1999).

4. Results

4.1. When do parties hold or not hold elections?

While we restrict attention to peaceful electoral equilibria, the value functions corresponding to non-electoral equilibria are necessary to derive the conditions for parties to hold elections. Intuitively, when one party enjoys supports from a predominant military force, it is unlikely to make any political compromise. Assume that L is the militarily strong party and the incumbent. The maximum of L 's value when holding elections is $V_L^l(\theta_j = 1, p_L = 1; \sigma_{-j}^*) = \frac{U_L(x_L)}{1-p}$, L 's value as the incumbent when it assures itself of winning, $p_L = 1$,

¹¹ To simplify notation, we drop the t subscript in what follows.

¹² Note that the subscript j indicates a party, not necessarily the incumbent. When j is the opposition, θ_j and p_j can be interpreted as j 's strategy had it been the incumbent at time t .

¹³ Remember that $p_j = 1$ says nothing about the vote margin: p_j may equal 1 even when party j is certain to win 50.1 percent of the vote. In general, if v_j is the vote share that party j is certain to obtain and v_{-j} is the certain share of party $\neg j$, $p_j = (0.5 - v_{-j})/(1 - v_j - v_{-j})$.

and when R acquiesces. On the other hand, the minimum of L 's value for not holding elections is $V_L^I(\theta_j = 0; \sigma_{-j}^*) = \frac{(1-q)[U_L(x_R^*) - c]}{1-\rho}$, that is, its value when R fights. Thus, L attempts to impose its ideal policy as an incumbent (or, prefers to fight in opposition) when $\frac{(1-q)[U_L(x_R^*) - c]}{1-\rho} > \frac{U_L(x_L)}{1-\rho}$, or, when $q > \frac{(1+\alpha/2)x^* + c}{2x^* + c} \equiv q^*$. By symmetry, a militarily strong R prefers fight to any electoral mechanism when $q < q^{**} = \frac{(1-\alpha/2)x^*}{2x^* + c}$. Hence, a necessary condition for the existence of electoral equilibria is that neither party should enjoy extreme dominance in military prowess. A summary is provided by Proposition 1.¹⁴

Proposition 1. *A necessary condition for the existence of electoral equilibria is that $q^{**} \leq q \leq q^*$, where the two critical values are given by $q^* = \frac{(1+\alpha/2)x^* + c}{2x^* + c}$ and $q^{**} = \frac{(1-\alpha/2)x^*}{2x^* + c}$. When $q > q^*$ or $q < q^{**}$, the party with stronger military support will always seek to impose its ideal policy rather than hold an election.*

4.2. Electoral equilibria

To establish a sufficient condition for the existence of electoral equilibria, one needs to consider not only the probability of winning, p_j , but also the incentives with regard to holding an election (θ_j), participating as opposition (ω_j), and obeying the result (a_j). The analysis entails three steps. We first derive the conditions for both parties to obey upon having lost an election. We then use the conditions for obeying ex-post to derive the optimal probabilities of winning p_j^* for both parties. Finally, by inspecting the values of p_j^* for both parties, we derive a series of values of q critical for distinguishing competitive and non-competitive equilibria. To simplify the notation, the expected value of j in the incumbency status k when both parties obey the results of elections, $EV_j^k(a_j = o, a_{-j} = o)$, is written as EV_j^k . These value functions for L and R are:

$$\begin{aligned} EV_j^I &= p_j [U_j(x_j) + \rho EV_j^I] + (1-p_j) [U_j(x_{-j}) + \rho EV_j^O] \\ EV_j^O &= (1-p_{-j}) [U_j(x_j) + \rho EV_j^I] + p_{-j} [U_j(x_{-j}) + \rho EV_j^O]. \end{aligned}$$

Substituting yields

$$\begin{aligned} EV_j^I &= \frac{[(1-\rho)p_j + \rho(1-p_{-j})]U_j(x_j) + (1-p_j)U_j(x_{-j})}{(1-\rho)[1-\rho p_j + \rho(1-p_{-j})]} \\ EV_j^O &= \frac{[(1-\rho)p_{-j} + \rho(1-p_j)]U_j(x_{-j}) + (1-p_{-j})U_j(x_j)}{(1-\rho)[1-\rho p_j + \rho(1-p_{-j})]}. \end{aligned}$$

To identify the conditions under which parties hold elections as incumbents and enter when in opposition, it suffices to focus on the conditions for obeying ex-post when a party lost an election, which respectively for L and R are given by

$$\begin{aligned} U_L(x_R) + \rho EV_L^O(p_L, p_R) &\geq \frac{(1-q)[U_L(x_R^*) - c]}{1-\rho}, \\ U_R(x_L) + \rho EV_R^O(p_L, p_R) &\geq \frac{q[U_R(x_L^*) - c]}{1-\rho}. \end{aligned} \tag{1}$$

The left hand side expressions of Eq. (1) are the ex post values conditional on losing an election and entering the next stage game as an opposition. Each incumbent chooses the probability of winning p to make the opposition indifferent between fighting and accepting the electoral defeat, which implies that both conditions hold with equality. Substituting the utilities, the p 's that satisfy these conditions with equality are given by

$$p_L^* = 1 + \frac{1-\rho}{\rho} \frac{1}{c} ((2q-1-\alpha/2)x^* + qc), \tag{2}$$

$$p_R^* = 1 + \frac{1-\rho}{\rho} \frac{1}{c} ((1-\alpha/2-2q)x^* - qc), \tag{3}$$

¹⁴ For brevity in Proposition 1 we only establish a necessary but not sufficient condition for the existence of the electoral equilibria. When the incumbent enjoys extreme military support to contain the opposition, the incumbent sticks to the choice of not holding: when $q > \frac{2x^*}{2x^* + c}$ (for L as the incumbent) or when $q < \frac{c}{2x^* + c}$ (for R as the incumbent). But even when $\frac{c}{2x^* + c} \leq q \leq \frac{2x^*}{2x^* + c}$ and the opposition fights as a response to the incumbent's choice of not holding, the incumbent may still prefer fighting to winning for sure when its military support is sufficiently high. The critical values of q corresponding to this scenario are q^* and q^{**} . Whether q^* and q^{**} , or $\frac{2x^*}{2x^* + c}$ and $\frac{c}{2x^* + c}$ are sufficient for identifying the electoral equilibria depend on the value of c . Specifically, when $c < (1 - \alpha/2)x^*$, it is the case that $q^* < \frac{2x^*}{2x^* + c}$ and $q^{**} > \frac{c}{2x^* + c}$. The necessary and sufficient condition for the electoral equilibria is $q^{**} \leq q \leq q^*$. If otherwise, the necessary and sufficient condition for the electoral equilibria is $\frac{c}{2x^* + c} \leq q \leq \frac{2x^*}{2x^* + c}$.

which implies that $p_L^* + p_R^* > 1$ if $\alpha x^* < c/(1 - \rho)$. Taking the difference $EV_j^l - EV_j^0$ and substituting the equilibrium values of p_j gives

$$\rho(EV_j^l - EV_j^0) = \frac{\rho(p_j^* + p_{-j}^* - 1)}{1 - \rho(p_j^* + p_{-j}^* - 1)} \alpha x^* = \frac{c}{1 - \rho} - \alpha x^*,$$

or, equivalently,

$$\alpha x^* + \rho(EV_j^l - EV_j^0) = \frac{c}{1 - \rho}. \quad (4)$$

The expression $\alpha x^* + \rho(EV_j^l - EV_j^0)$ represents the present value of the difference between winning and losing an election: αx^* is the utility difference made by the outcome of the current election, while $\rho(EV_j^l - EV_j^0)$ is the continuation value of the difference between holding the next election as the incumbent and entering the election as the opposition. In turn, $c/(1 - \rho)$ is the present value of conflict. Thus, in any electoral equilibrium, each party's total utility difference associated with the outcome of elections must equal the efficiency gain due to not fighting. The reason is that when the electoral equilibrium is peaceful each incumbent chooses p_j that makes the opposition indifferent between obeying and rebelling. If $\alpha x^* + \rho(EV_j^l - EV_j^0) < c/(1 - \rho)$, at least one of the incumbents would not have used its advantage fully, so this cannot be an equilibrium. If $\alpha x^* + \rho(EV_j^l - EV_j^0) > c/(1 - \rho)$, the participation constraints would have been violated for at least one party in opposition, so the equilibrium cannot be electoral.

Proposition 2. *In any peaceful electoral equilibrium it must be the case that $\alpha x^* + \rho(EV_j^l - EV_j^0) = c/(1 - \rho)$: the stakes in the present and future elections equal the total cost of fighting. $EV_j^l \geq EV_j^0 \Leftrightarrow p_j^* \geq 1 - p_{-j}^* \Leftrightarrow \alpha x^* \leq c/(1 - \rho)$.*

Intuitively, competing in elections makes sense only if the incumbency status gives parties a higher expected value than being opposition in an electoral equilibrium. The second equivalence says that in any electoral equilibrium the incumbent can choose a higher probability of winning than would be given to it by the opposition only if the utility difference between winning and losing a single election is not larger than the loss from fighting.

The constraint facing any incumbent who wants to maintain the electoral mechanism is given by Eq. (4). Note that the right-hand side of Eq. (4) is constant. When αx^* is large, a peaceful equilibrium can be maintained only if the winner of the current election has a low incumbency advantage. If a party just won an election that inflicted a large utility loss on the loser, the only way the loser can be induced to obey is by having a high probability of winning the subsequent election and recuperating this utility loss.¹⁵ This result is given by the following corollary.

Corollary 1. *In any competitive equilibrium, the probability of a peaceful partisan alternation in office increases when the outcomes of particular elections make more difference (larger α).*

Proof. Inspecting Eqs. (2) and (3) obtains that $\frac{\partial p_j^*}{\partial \alpha} > 0$. ■

The second implication is that for peace to prevail the electoral chances must reflect the military force. When incumbents prefer to be peacefully elected rather than to confront violent conflicts, they still use the threat of using their military power to push the opposition to indifference between obeying and fighting. As a result, the probabilities that they would win elections reflect their chances to prevail by force.

Corollary 2. *When elections are held, the probabilities of winning for incumbents increase in their military power.*

Proof. Inspecting the expressions for p_j^* shows that $dp_L^*/dq > 0$ and $dp_R^*/dq < 0$. ■

Peaceful elections are only exceptionally "fair" in the sense that $p_j^* = 0.5$. Both parties run perfectly fair elections only when they have equal military force and when the stake in the outcome of elections is the entire distance between the ideal positions of the parties. Yet even when military force is perfectly balanced, incumbents exploit their advantage whenever stakes in elections are lower than those in violent conflicts. The opposition consents to incumbents' manipulation of elections because as stakes in elections decline it has less to lose, while fighting is costly.

¹⁵ An example is offered by post-communist Poland. The stakes in elections were high because they entailed privatization of state enterprises and deregulation of the labor market, both of which the Right advocated and the former Communists opposed. The Right won the first free parliamentary election in 1991 but was defeated in 1993, only to return to office in 1997.

4.3. When are elections competitive?

Not all electoral equilibria are competitive. The critical values for competitive elections are implied by $0 < p_L^* < 1$ and $0 < p_R^* < 1$. Using Eqs. (2) and (3), parties expose themselves to the possibility of defeat when

$$p_L^* < 1 \text{ if } q < \frac{(1 + \alpha/2)x^*}{2x^* + c} \equiv q', \quad (5)$$

$$p_R^* < 1 \text{ if } q > \frac{(1 - \alpha/2)x^* + c}{2x^* + c} \equiv q''. \quad (6)$$

At the other extreme, the incumbent may simply abdicate, adopting $p_j^* = 0$, as in the case of Germany in 1933 and France in 1940 (Ermakoff, 2008).

$$p_L^* > 0 \text{ if } q > \frac{(1 + \alpha/2)x^*}{2x^* + c} - \frac{\rho}{1 - \rho} \frac{c}{2x^* + c} \equiv q^\wedge, \quad (7)$$

$$p_R^* > 0 \text{ if } q < \frac{(1 - \alpha/2)x^*}{2x^* + c} + \frac{1}{1 - \rho} \frac{c}{2x^* + c} \equiv q^{\wedge\wedge}. \quad (8)$$

We now have four critical values. Note that elections can be competitive only if $q' > q''$ or $q^{\wedge\wedge} > q^\wedge$. Inspecting these critical values shows that these conditions are respectively equivalent to $\alpha x^* > c$ and $\alpha x^* < \frac{1+\rho}{1-\rho}c$.

When $c < \alpha x^* < \frac{c}{1-\rho}$, competitive elections occur in the range $q \in (q'', q')$. If $\frac{c}{1-\rho} < \alpha x^* < \frac{(1+\rho)c}{1-\rho}$, competitive elections take place in the range $q \in (q^\wedge, q^{\wedge\wedge})$. Note that when $\alpha x^* > \frac{c}{1-\rho}$, it is the case that $EV_j^I < EV_j^O$ and $p_j^* < 1 - p_{-j}^*$. Paradoxically, the parties appear to “compete to lose.” This occurs when outcomes of elections make a big difference, larger than the inefficiency cost of fighting, so the loser would fight unless the current incumbent induces it to obey by making it likely that it would be able to recuperate its electoral loss in the future. The historical examples are provided by the practice of “rotativismo,” periods in which parties rotated in office in alternate elections.¹⁶ The result is summarized by the following proposition.

Proposition 3. *Competitive elections exist only if $c < \alpha x^* < \frac{1+\rho}{1-\rho}c$. The range of q consistent with competitive elections is (q'', q') when $\alpha x^* < \frac{c}{1-\rho}$, and $(q^\wedge, q^{\wedge\wedge})$ when $\alpha x^* > \frac{c}{1-\rho}$*

It is clear that for each case in Proposition 3, the threshold values q' and $q^{\wedge\wedge}$ are bounded away from q^* .¹⁷ Inspecting the value functions for the opposition, EV_j^O , shows that the militarily weak party prefers the certainty of losing an election to fighting. At the same time, the militarily strong party opts for elections with certainty to win when $q < q^*$ (Proposition 1). Hence, the range (q', q^*) and its mirror accommodate non-competitive elections. The next proposition summarizes all parameter conditions for non-competitive elections.

Proposition 4. *A non-competitive electoral equilibrium exists for a certain set of q . When $\alpha x^* < \frac{c}{1-\rho}$, the range of q consistent with non-competitive elections are (q', q^*) and (q^{**}, q'') ; when $\alpha x^* > \frac{c}{1-\rho}$, that range is $(q^{\wedge\wedge}, q^*)$ and (q^{**}, q^\wedge) .*

The range of the balance of physical force under which elections are competitive provides a measure of the robustness of electoral mechanism given the intensity of conflicts in a particular society, x^* , and the extent to which these conflicts are reflected in elections, α . Let $\|Q\|$ be the length of the range q consistent with competitive elections.

$$\|Q\| = \begin{cases} q' - q'' = \frac{\alpha x^* - c}{2x^* + c} & \text{if } c < \alpha x^* < \frac{c}{1-\rho} \\ q^{\wedge\wedge} - q^\wedge = \frac{(1+\rho)c/(1-\rho) - \alpha x^*}{2x^* + c} & \text{if } \frac{c}{1-\rho} < \alpha x^* < \frac{1+\rho}{1-\rho}c \end{cases}$$

As Fig. 4 shows, the range of relations of military force under which this mechanism works depends on social and political conditions under which elections take place. What matters for the robustness of the electoral mechanism is how much is entailed in the outcomes of elections, αx^* , “the electoral stakes.” Consider one extreme: the eighteenth century utopia of a society that is “harmonious” in the sense that everyone wants the same policy to prevail ($x^* = 0$), a society characterized by a perfect consensus (Przeworski, 2010). In such a society there is no reason for elections to be competitive and/or even to hold them: it makes no difference who makes decisions

¹⁶ Spain between 1881 and 1917 is a classical example: “The electorate did not elect Parliament, and it did not elect the government. The system worked ‘from top to bottom’: the king named his head of government, who convoked elections, which had, of necessity, to bestow a large majority on his party” Garrido (1998, 218). Similarly in Portugal between 1851 and 1906, “Elections usually occurred after a change of government, not before, and were then won by the incoming administration which manipulated the patronage of the party bosses among the provincial electors” (Birmingham, 2003, 132). Such periods also occurred in Bulgaria, Romania, Venezuela, and Columbia.

¹⁷ q' is straightforward. When the threshold value of q is given by $q^{\wedge\wedge}$, it follows that $q^{\wedge\wedge} < q^*$ as long as $\alpha x^* > \frac{\rho c}{1-\rho}$, which is the case since $\alpha x^* > \frac{c}{1-\rho}$.

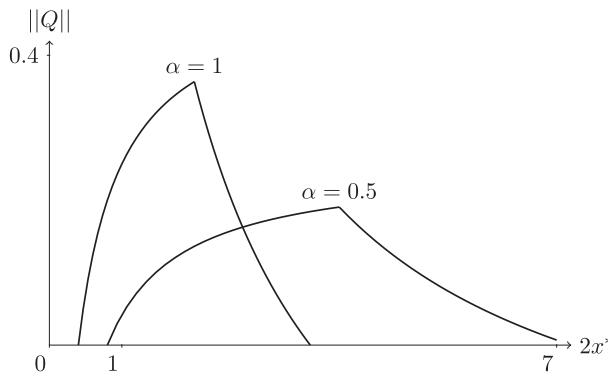


Fig. 4. Range of q under which the equilibrium is electoral and competitive. Note: The figure is drawn for $\rho = 0.8$ and $c = 0.2$. $||Q|| = q' - q''$ when $\alpha x^* < c/(1 - \rho)$ and $||Q|| = q'' - q'$ when $c/(1 - \rho) < \alpha x^* < c(1 + \rho)/(1 - \rho)$. The turning point in each curve is the point $\alpha x^* = c/(1 - \rho)$.

and by which procedures. In fact, $||Q||$ converges to 0 as αx^* becomes sufficiently close to the cost of fighting, c . In this case the range $[q^{**}, q^*]$ accommodates a peaceful electoral equilibrium without party alternation: whoever coming into power wins the subsequent elections with probability one. Institutional constraints on the choice of executives neutralize the pressure for alternation. At the other extreme, however, if a society is deeply divided by ethnicity, religion, or income, outcomes realizing these interests in full are not tolerable. This corresponds to the case when $\alpha x^* > \frac{c}{1-\rho}$, the range $||Q||$ for competitive elections decreases in α . When the policy preferences are extremely partisan, electoral platforms have to be constrained by non-majoritarian institutions in order for peaceful alternation through elections to be viable.¹⁸

Hence, elections are competitive when something is at stake in their outcomes but not too much is at stake. The electoral mechanism is most robust when the stakes in elections assume a specific value, which is $c/(1 - \rho)$. This is true whether a society is little polarized and elections process a large segment of the divisions or because it is more polarized but either the logic of electoral competition pushes the parties to the center or some non-majoritarian institutions disable extreme policies.

Yet the range of relative military strength under which elections are competitive is wider in more homogeneous societies in which elections process a large part of the existing divisions than in more polarized societies in which policies converge. Societal conflicts and political institutions interact in a subtle way. In less polarized societies, some policy divergence is necessary to induce parties to compete and outcomes of elections are acceptable whoever wins because their distance from ideal policies, $x_j^* - x_{-j}$, is small. In more polarized societies, outcomes of elections that make a big difference are unacceptable to the loser because $x_j^* - x_{-j}$ is large. And when polarization is profound, even elections that make no difference may not be feasible.

5. An application to distributive conflicts

While in some societies the main cleavage lines are constituted by religion, ethnicity, or region, all societies face conflicts over distribution of income. To illustrate the results of the model in a concrete setting, the question in this section is how much redistributive conflict is compatible with competitive elections in societies differing in per capita income and its distribution. Hence, the policy x concerns redistribution of income.¹⁹

The rate of redistribution, τ , is implicitly defined by

$$y_j^N = (1 - \tau)y_j^M + \tau y, \quad (9)$$

where y_j^N is the post-fisc ("net") income of a representative supporter of party j , y_j^M is the pre-redistribution ("market") income and y is average income. Party L represents individuals with incomes below the median, party R those with incomes above the median.²⁰ The distribution of pre-fisc incomes is fixed, with $y_L^M = \theta y$, $y_R^M = (2 - \theta)y$, $0 < \theta \leq 1$.²¹ Hence, Eq. (9) can be rewritten as

$$y_j^N = [(1 - \tau)\theta_j + \tau]y = [\theta_j + \tau(1 - \theta_j)]y. \quad (10)$$

¹⁸ For example, in Thailand the two major parties (currently the Pheu Thai Party and the Democrat Party) represent an urban–rural cleavage of enormous distributive conflicts. The constitutional monarch played an important role in mediating partisan conflicts and maintaining a relatively peaceful and democratic order (Baker and Phongpaichit, 2005).

¹⁹ The only model of redistribution under the threat of force we could find is Leon (2014), where left-wing governments redistribute to prevent the possibility that the rich would use their resources to buy off the military in the future. The postures of the military are exogenous in this model, as they are in ours.

²⁰ Note that the self-sorting of individuals with different incomes into parties may occur endogenously in the electoral equilibrium, as in Roemer (2001) "average-member Nash equilibrium." The same occurs in the model of Dixit and Londregan (1995).

²¹ θ was calculated by summing income shares of the bottom five deciles from WDI and two bottom quintiles plus half the middle quintile from UN-WIDER. To get an intuition of the numbers, note that according to WDI (World Bank Group, 2014), θ varies from 0.12 to 0.74, with the mean of 0.46. The numbers from UNU-Wider (2014) are almost identical: the range is from 0.08 to 0.80 with the mean of 0.48.

The ideal policy of the Right is $\tau_R^* = 0$ and of the Left $\tau_L^* = 1$. The mid-point between the ideal policies is 0.5 and party policies are

$$\tau_L = 0.5 \left(1 + \frac{\alpha}{2} \right)$$

and

$$\tau_R = 0.5 \left(1 - \frac{\alpha}{2} \right).$$

Translating this example back to the general model, the stake entailed in particular elections is $\alpha x^* = |\tau_L - \tau_R|(1 - \theta)y$, where $\alpha = |\tau_L - \tau_R|$ is the proportion of the underlying conflict that is processed by an election and $x^* = (1 - \theta)y$, the amount of income which would need to be redistributed to reach perfect income equality, is the intensity of the conflict ("polarization"). Now, it can be shown that the τ implied in Eq. (9) is $\tau = (G^M - G^N)/G^M$, where G^M is the Gini coefficient of gross market and G^N of net incomes. Hence, $|\tau_L - \tau_R| = |G_R^N - G_L^N|/G^M$. In turn, for any distribution of income, $1 - \theta \propto G^M$.²² Hence, $\alpha x^* \propto |G_R^N - G_L^N|$, the difference in the Gini coefficients of net income times the average income.

Applying the general model to income redistribution generates two testable hypotheses.

Proposition 2 suggests that the larger are the stakes in a particular election, the smaller should be the probability that the incumbent wins the subsequent elections. Hence,

Hypothesis 1. *The larger is the differences caused by the outcome on an election, $\alpha x^* \propto |(G_R^N - G_L^N)|$, the smaller should be the number of electoral periods the winner survives in office.*

Testable implications of **Proposition 3** are less direct. Letting $U(y^N) = y^N$ and substituting in the respective utilities shows that the width of the interval in which they are competitive is

$$\|Q'\| = \frac{\alpha x^* - c/y}{x^* + c/y} = \frac{|\tau_L - \tau_R|(1 - \theta)y - c}{(1 - \theta)y + c}, \quad (11)$$

This interval increases in per capita income, y , and the degree of inequality, $1 - \theta$. The result with regard to income is consistent with [Przeworski \(2005\)](#) and [Benhabib and Przeworski \(2006\)](#), who use a more general form of utility function. It is also consistent with massive evidence, originating with [Lipset \(1959\)](#), that democracies are more frequent in more developed societies. The intuition for the effect of inequality is that in equal societies too little is at stake to be decided by elections. In the light of [Proposition 3](#), elections are not competitive unless $\frac{c/y}{1-\theta} < |\tau_L - \tau_R| < \frac{1}{1-\theta} \frac{c/y}{1-\theta}$. Hence, holding c/y constant, to satisfy the upper bound, as inequality (or "polarization"), measured by $1 - \theta$ (or the Gini coefficient of market incomes), increases, elections remain competitive only if the proportion of the underlying conflict that is processed by elections, $\alpha = |\tau_L - \tau_R|$, declines. Hence, we get

Hypothesis 2. *When elections are competitive, the difference between party platforms, $\alpha = |\tau_L - \tau_R|$, is negatively correlated with the Gini coefficient of market incomes.*

The data for Gini coefficients of market and net incomes as well as for the rates of redistribution are available from the Standardized World Income Database ([SWIID, 2013](#)), which provides 100 imputations for each of these series for each year, covering 147 countries between 1960 and 2012.²³ While all data bases concerning income distributions suffer from multiple problems ([Atkinson and Bartolini, 2001](#)), the SWIID data are most extensive and they appear reasonably reliable.²⁴ To assess the stakes in particular elections, in turn, we need to average the inequality series for the durations of particular partisan government, for which we use the Political Institutions and Political Events Dataset (PIPE) ([Przeworski, 2014](#)), which provides information about national-level elections in which the office of the chief executive was at stake, as well as about outcomes of these elections.

The problem we still face, however, is that we observe only the actual rates of redistributions, τ , and the actual Gini coefficients of net incomes, G^N , but not party platforms. Hence, to bring the model to the data, we must rely on additional assumptions. A weak assumption is that a party that was defeated in an election would have pursued the same policies had it continued in office, so that we can use the average rates of redistribution that were pursued by the defeated incumbent as a proxy for its current platform and treat the observed difference between the average rates of two successive partisan governments as the distance between platforms. Hence, if $s = 0, 1, 2, \dots$ indexes successive continuous periods of partisan governments in office ("spells"), $\alpha_s = |\tau_s - \tau_{s-1}|$, where the τ 's are averages for the particular spells. The cost of relying on this assumption, however, is that there are relatively few instances in which partisan alternations in office occurred for which the economic data are available: we end with only 171 observations. A stronger assumption is that a higher τ reflects a larger distance between platforms. In principle there is no reason party platforms would not move in the same direction regardless of the rate of redistribution that would be actually implemented by the victorious party

²² Given any continuous distribution of income, $\theta = E(y_l|y_l < y_M)$, where y_M is the median income. Hence, inequality as measured by $1 - \theta$ increases in G^M , $d(1 - \theta)/dG^M > 0$. The functional form, however, depends on the distribution.

²³ Throughout we use the mean of each of the 100 imputations for each year. Indonesia is an outlier in all the series and the numbers are not believable, so we drop it.

²⁴ [Przeworski \(2014\)](#) compared inequality series from SWIID, with those from UN-WIDER, "top incomes" of [Alvaredo et al. \(2014\)](#), and WDI ([World Bank Group, 2014](#)). He found that the data from SWIID are closely related to those from UN-WIDER and top incomes, but WDI differs from the other sources.

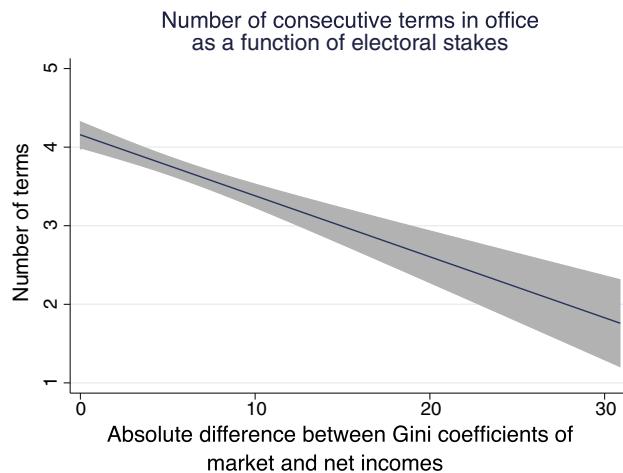


Fig. 5. Number of consecutive terms in office as a function of electoral stakes. Note: Linear regression with pooled data. Shaded area is the 95% confidence interval. N = 3030 (excluding Indonesia).

(as in standard models of electoral competition). Yet the stronger assumption is buttressed by the fact that in these 171 observations larger differences between the rates implemented by successive governments are associated with higher average rates of redistribution of the incoming government ($\beta = 0.94, t = 3.14, p = 0.002$).

To test [Hypothesis 1](#), we use the strong assumption and estimate by OLS

$$T_{it} = \alpha + \beta |(G^M - G^N)|_{it} + e_{it},$$

where T_{it} is the number of consecutive elections won by the incumbent i elected for the first time at t and $|G^M - G^N|_{it}$ is the average absolute difference between Gini coefficients of market and net incomes during the tenure in office of this incumbent. [Fig. 5](#) shows the effect of thus measured electoral stakes on the number of electoral periods a party survives in office.²⁵

Thus, with the caveat about the assumption needed to connect the model to the data, [Corollary 1](#) defends itself well.²⁶ The implications are that parties that redistribute less have longer tenures in office, that parties that redistribute more lose elections sooner, and that in the end one should not expect that over time elections would generate much redistribution.

To test [Hypothesis 2](#), we use the weak assumption discussed above.²⁷ We estimate by OLS

$$\alpha_s = \alpha + \beta G_{s-1}^M + e_s$$

where $\alpha_s = |\tau_s - \tau_{s-1}|, \tau_s, \tau_{s-1}$ are the average rates of redistribution implemented by pairs of successive partisan governments, and G_{s-1}^M is the Gini coefficient of market incomes during the last year of the outgoing government. [Fig. 6](#) shows that when elections are competitive²⁸ thus measured divergence between redistributive platforms does decrease in the inequality of market incomes.

As predicted, when elections are competitive the proportion of the underlying conflict that is processed by competitive elections decreases in the extent of polarization.

These tests are not exacting and are subject to several caveats but they do provide *prima facie* evidence in favor of the two central results of the model: (1) higher stakes in particular elections are followed by shorter tenures of incumbents, and (2) conflicts are processed by competitive elections if elections process a larger part of political divisions in homogeneous than in heterogeneous societies.

6. Conclusions

The two central lessons from viewing elections under the shadow of force are that (1) when the outcomes of elections make more difference, alternation in office through elections must be more frequent for the electoral mechanism to be viable, and (2) elections are competitive when something is at stake in their outcomes but not too much is at stake.

A normative implication of the first result is that all good things do not go together. On the one hand, one aspect of elections that is generally viewed as desirable is that incumbents should not enjoy excessive advantage, that elections should be “fair,” “genuine,”

²⁵ Regression with fixed effects yields $\beta = -0.16$, with a 95% confidence interval $[-0.19, -0.13]$. The results using the number of consecutive years in office are qualitatively the same.

²⁶ Under the weak assumption, the slope is weakly positive until the difference between platforms reaches about 0.15 and then turns negative. With N = 171, however, the standard errors are so large that nothing much can be read from the data.

²⁷ Using the strong assumption, that is, the actually observed rates of redistribution, would be equivalent to regressing redistribution on inequality, while we need to study how platform divergence changes with inequality.

²⁸ For competitive elections we use the regime classification of [Cheibub et al. \(2010\)](#). Using the presence of opposition, from [Przeworski \(2014\)](#) generates similar results. There are 6 observations in which there was no opposition in the preceding election, which is why N = 165.

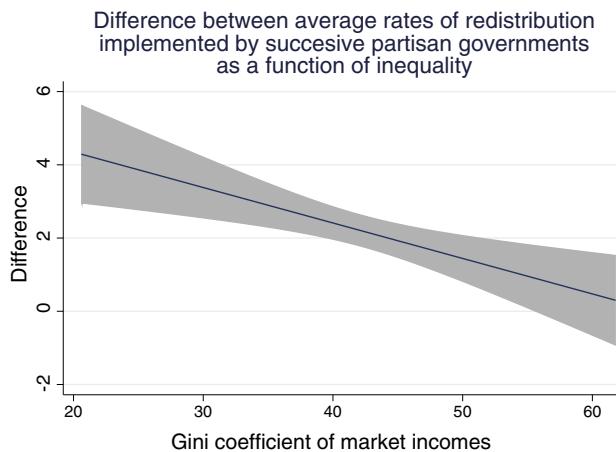


Fig. 6. Difference between Ginis of market and net income as function of market Gini. Note: Linear regression. Shaded area is the 95% confidence interval. N = 165.

or “democratic,” to use the language of election monitoring agencies.²⁹ In terms of our model, this norm implies that incumbents’ probabilities of winning should be relatively low, close to 0.5. On the other hand, a widely promoted feature of political institutions is that the winners of elections should be subject to constitutional constraints: “constraints on the chief executive,” coded by the Polity data set, is extensively used to assess security of property rights (Acemoglu, 2003; Easterly, 2007; Hall and Jones, 1999; Kaufmann et al., 1999; Rodrik et al., 2004). Ever since North (1973) seminal book, “rule of law,” understood as a constraint on majority rule,³⁰ is seen as promoting security of property rights, thus investment and growth (Acemoglu, 2003; North, 1981; North and Weingast, 1989). This constraint is implemented mainly by constitutional courts but also by independent central banks, independent regulatory agencies, and less obvious super-majoritarian devices, such as bicameralism or executive veto. Translated into the language of our model, this norm implies that the stakes entailed in the outcomes of elections should be low.

These two norms cannot be simultaneously satisfied. In any peaceful electoral equilibrium the probabilities with which incumbents win elections bear an inverse relation to the utility difference made by their outcomes. If elections make little difference, because constitutional constraints are tight, the incumbent party can dominate without meeting resistance by the opposition, which forfeits little losing elections but would bear costs being defeated in a violent conflict. Hence, tight constitutional constraints go together with “electoral authoritarianism” (Levitsky and Way, 2002): long periods in which elections are contested but the same party always wins. During the past two hundred years, there were 19 countries in which the same party prevailed in contested elections during at least 40 consecutive years, with Luxembourg between 1848 and 1974 the record holder. Conversely, the probabilities of incumbents’ winning must be low when outcomes of elections make a significant difference: if the winner of such elections wants to maintain peace, it must induce the loser to remain within the electoral game by giving it a chance to recuperate some of the losses in the future. Hence, peaceful alternation in office through elections should be more frequent in countries that have weaker constitutional constraints.

The second result says that elections are competitive if their outcomes matter enough to induce parties to compete, rather than just acquiesce to incumbent’s policy. Thus, in relatively homogeneous societies constitutional constraints are counter-productive. Yet in more divided societies such constraints make electoral outcomes acceptable to the loser where more extreme outcomes would not be. Hence, the effect of constitutional constraints on the robustness of the competitive mechanism depends on the extent of the political polarization of a particular society. The institutions that promote democracy are not the same in different societies.

References

- Acemoglu, D., 2003. Root causes. A historical approach to assessing the role of institutions in economic development. *Finance Dev.* 40, 27–43.
- Acemoglu, D., Robinson, J.A., 2001. A theory of political transitions. *Am. Econ. Rev.* 91, 938–963.
- Acemoglu, D., Ticchi, D., Vindigni, A., 2010. A theory of military dictatorships. *Am. Econ. J. Macroecon.* 2, 1–42.
- Adams, J.F., Merrill, S., Grofman, B., 2005. *A Unified Theory of Party Competition: A Cross-national Analysis Integrating Spatial and Behavioral Factors*. Cambridge University Press.
- Alesina, A., 1988. Credibility and policy convergence in a two-party system with rational voters. *Am. Econ. Rev.* 78, 796–805.
- Alvaredo, F., Atkinson, A.B., Piketty, T., Saez, E., 2014. The World Top Incomes Database. Technical Report. Codebook. Paris School of Economics.
- Ashworth, S., Bueno de Mesquita, E., 2008. Electoral selection, strategic challenger entry, and the incumbency advantage. *J. Polit.* 70, 1006–1025.
- Atkinson, A.B., Bartolini, A., 2001. Promise and pitfalls in the use of ‘secondary data sets’: income inequality in the OECD countries as a case study. *J. Econ. Lit.* 39, 771–799.
- Baker, C., Phongpaichit, P., 2005. *A History of Thailand*. Cambridge University Press.
- Barro, R., 1973. The control of politicians: an economic model. *Public Choice* 14, 19–42.

²⁹ European Union observers want elections to be “open and fair,” OSCE wants them to be “genuine,” while the Declaration of Principles for International Elections Observation of the Carter Center and NDI wants them to be “genuine and democratic.” Everyone also wants elections to be non-violent. See respectively European Commission (2008), OSCE (2005), and Carter Center (2005).

³⁰ On the relation between democracy and the rule of law, see essays in Maravall and Przeworski (2003).

- Benhabib, J., Przeworski, A., 2006. The political economy of redistribution under democracy. *Economic Theory* 29, 271–290.
- Besley, T., Persson, T., 2011. The logic of political violence. *Q. J. Econ.* 126, 1411–1445.
- Besley, T., Robinson, J., 2010. *Quis custodiet ipsos custodes? Civilian control over the military*. *J. Eur. Econ. Assoc.* 8, 655–663.
- Birmingham, D., 2003. *A Concise History of Portugal*. Cambridge University Press.
- Carter Center, 2005. *Declaration of Principles for International Election Observations and Code of Conduct for International Election Observers*. 1st ed. .
- Cheibub, J.A., Gandhi, J., Vreeland, J.R., 2010. Democracy and dictatorship revisited. *Public Choice* 143, 67–101.
- Davis, D., Pereira, A., 2003. *Irregular Armed Forces and Their Role in Politics and State Formation*. Cambridge University Press.
- Dixit, A., Londregan, J., 1995. Redistributive politics and economic efficiency. *Am. Polit. Sci. Rev.* 89, 856–866.
- Dixit, A., Grossman, G., Gul, F., 2000. The dynamics of political compromise. *J. Polit. Econ.* 108, 531–568.
- Downs, A., 1957. *An Economic Theory of Democracy*. Harper.
- Easterly, W., 2007. Inequality does cause underdevelopment: insights from a new instrument. *J. Dev. Econ.* 84, 755–776.
- Egorov, G., Sonin, K., 2011. Incumbency advantage in non-democracies. Unpublished manuscript.
- Ellman, M., Wantchekon, L., 2000. Electoral competition under the threat of political unrest. *Q. J. Econ.* 115, 499–531.
- Ermakoff, I., 2008. *Ruling Oneself Out: A Theory of Collective Abdications*. Duke University Press.
- European Commission, 2008. *Handbook for European Union Election Observation*. 2nd ed. .
- Fearon, J., 2011. Self-enforcing democracy. *Q. J. Econ.* 126, 1661–1708.
- Ferejohn, J., 1986. Incumbent performance and electoral control. *Public Choice* 50, 5–25.
- Gandhi, J., Przeworski, A., 2009. Holding onto power by any means? The origins of competitive elections. Unpublished manuscript. Emory University.
- Garrido, A., 1998. Electors and electoral districts in Spain, 1874–1936. In: Romanelli, R. (Ed.), *How Did They Become Voters?* Kluwer, pp. 207–226.
- Grossman, H.I., 2004. Constitution or conflict? *Conflict Manag. Peace Sci.* 21, 29–42.
- Hall, R.E., Jones, C., 1999. Why do some countries produce so much more output per worker than others? *Q. J. Econ.* 114, 83–116.
- Hicks, J., 1932. *The Theory of Wages*. 2nd ed. Macmillan London.
- Hirschleifer, J., 1995. Anarchy and its breakdown. *J. Polit. Econ.* 103, 26–52.
- Hyde, S., 2011. *The Pseudo-Democrat's Dilemma: Why Election Observation Became an International Norm*. Cornell University Press.
- Jackson, M.O., Morelli, M., 2011. The reasons for wars: an updated survey. In: Coyne, C., Mathers, R. (Eds.), *The Handbook on the Political Economy of War*. Edward Elgar Publishing, pp. 34–58.
- Kaufmann, D., Kraay, A., Zoido-Lobatón, P., 1999. Governance matters. Technical Report 2196. World Bank, Development Research Group, Macroeconomics and Growth, and World Bank Institute, Governance, Regulation, and Finance.
- Lehoucq, F., 2002. Can parties police themselves? Electoral governance and democratization. *Int. Polit. Sci. Rev.* 23, 29–46.
- Leon, G., 2014. Strategic redistribution. The political economy of populism in Latin America. *Eur. J. Polit. Econ.* 34, 39–51.
- Levitsky, S., Way, L., 2002. The rise of competitive authoritarianism. *J. Democr.* 13, 51–65.
- Lipset, S.M., 1959. Some social requisites of democracy: economic development and political legitimacy. *Am. Polit. Sci. Rev.* 53, 69–105.
- Little, A., 2012. Elections, fraud, and election monitoring in the shadow of revolution. *Quart. J. Polit. Sci.* 7, 249–283.
- Magaloni, B., 2006. Elections under autocracy and the strategic game of fraud. Unpublished manuscript. Annual Meeting of the American Political Science Association, Washington, DC.
- Maravall, J.M., Przeworski, A., 2003. *Democracy and the Rule of Law*. Cambridge University Press.
- Mozaffar, S., Schedler, A., 2002. The comparative study of electoral governance—Introduction. *Int. Polit. Sci. Rev.* 23, 5–27.
- North, D.C., 1973. *The Rise of the Western World: A New Economic History*. Cambridge University Press.
- North, D.C., 1981. *Structure and Change in Economic History*. Norton New York.
- North, D.C., Weingast, B.R., 1989. Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England. *J. Econ. Hist.* 49, 803–832.
- OSCE, 2005. *Election Observation Handbook*. 5th ed. .
- Posada-Carbó, E., 2000. Electoral juggling: a comparative history of the corruption of suffrage in Latin America. *J. Lat. Am. Stud.* 32, 611–644.
- Powell, R., 1999. *In the Shadow of Power: States and Strategies in International Politics*. Princeton University Press.
- Powell, R., 2013. Monopolizing violence and consolidating power. *Q. J. Econ.* 128, 807–859.
- Przeworski, A., 1999. Minimalist conception of democracy: a defense. In: Shapiro, I., Hacker-Cordón, C. (Eds.), *Democracy's Value*. Cambridge University Press, pp. 23–55.
- Przeworski, A., 2005. Democracy as an equilibrium. *Public Choice* 123, 253–273.
- Przeworski, A., 2010. *Democracy and the Limits of Self-government*. Cambridge University Press.
- Przeworski, A., 2014. *Political Institutions and Political Events (PIPE) Database*. Technical Report. Codebook. New York University.
- Rivero, G., 2012. Oligopoly of violence. Unpublished manuscript. New York University.
- Rodrik, D., Subramanian, A., Trebbi, F., 2004. Institutions rule: the primacy of institutions over geography and integration in economic development. *J. Econ. Growth* 9, 131–165.
- Roemer, J., 2001. *Political Competition: Theory and Applications*. Harvard University Press.
- Simpser, A., 2013. *Why Governments and Parties Manipulate Elections: Theory, Practice, and Implications*. Cambridge University Press.
- Svolik, M., 2008. Authoritarian reversals and democratic consolidation. *Am. Polit. Sci. Rev.* 102, 153–168.
- Svolik, M.W., 2009. Power sharing and leadership dynamics in authoritarian regimes. *Am. J. Polit. Sci.* 53, 477–494.
- Svolik, M., 2012. *The Politics of Authoritarian Rule*. Cambridge University Press.
- SWIID, 2013. *Standardized World Income Inequality Database*. Technical Report. University of Iowa.
- UNU-Wider, 2014. *World Income Inequality Database (WIID3.0A)*. United Nations University.
- Wittman, D.A., 1973. Parties as utility maximizers. *Am. Polit. Sci. Rev.* 67, 490–498.
- World Bank Group, 2014. *World Development Indicators 2014*. World Bank Publications.