

Elections, Information and Liberalization in the Post-Cold War Era

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History did not end after all in 1991. Instead, while liberal democracy does seem to have become firmly established in many formerly communist and authoritarian countries, non-democratic regimes remain in place around the world, with as many as 54 percent of countries list by Freedom House as either Not Free or only Partly Free in 2008. In fact, in recent years the study of authoritarian regimes has undergone something of a revival as scholars and policy-makers try to get to grips with how authoritarianism has changed and adapted to post-Cold War conditions. A central part of that effort has, unsurprisingly, gone into examining the dynamics of change in contemporary non-democratic regimes, and the ways in which authoritarian regimes might open up or liberalize politically, allowing more space for opposition politics, or improving the quality of political or civil rights.

While political scientists have provided good analyses of the long-term trajectories that sort countries into different regime types (Przeworski et al 2000, Boix 2003, Acemoglu and Robinson 2006, Pop-Eleches 2007), we understand less about the short and medium term dynamics within authoritarian regimes that can lead to apparent democratic breakthroughs or moments of political liberalization. However, there is a growing literature that addresses the issue of when and how authoritarian regimes liberalize (Hadenius and Teorell 2007, Lindberg 2009, Bunce and Wolchik *forthcoming*). Much of this literature has focused on the role of elections as key moments of vulnerability for authoritarians and as a crucial mechanism through which liberalization can be achieved. While there is a lot of agreement that elections matter, scholars have identified different pathways through which this process takes place. In this paper, we build on this literature to argue that while there are indeed many different “modes of liberalization” in which elections play a key role, they have in common a single mechanism based on information revelation. In short, we argue that elections play a central role in

liberalization because they act as a mechanism for conveying new – and often surprising – political information to pivotal elites in the information-poor environment of authoritarian regimes. Based on the information elections provide, these elites either continue to bandwagon with the regime, or decide to challenge, which in turn may lead to liberalization.

The question of when and how authoritarian regimes liberalize is an important one for political scientists working in a number of areas. Most obviously the issue is central for scholars of comparative politics interested in democratization and the related field of authoritarianism. For scholars of democratization, how elections work has always been a major preoccupation. While the “electoralist” fallacy that equates elections with democracy has been rightly criticized (Schmitter and Karl 1991, Karl 2000), the quality of elections in different countries has continued to be seen as the primary indicator of progress in democratization (Diamond 1993). In this paper we are also interested in electoral quality, but we consider elections from a different angle, treating them not just as an outcome but as a central cause of progress towards democratization. Moreover, we are not simply interested in high quality elections, but also in the potential liberalizing impact of poor quality elections. In fact, one of the findings of the paper is that political liberalization can be the product of elections that are decidedly not free and fair.

While understanding elections has long been important to scholars of democratization, elections have more recently also become a major topic of interest to scholars of authoritarianism, since it has been increasingly clear that the third wave of democratization has left some authoritarian regimes high and dry. The persistence of non-democratic forms of government has led to a renewed burst of energy in the study of authoritarianism and much of this has focused on how elections can actually help sustain authoritarian regimes by shaping political competition (Brownlee 2007, Lust-Okar 2007), or providing information on supporters

and opponents (Magaloni 2007). In this paper, we demonstrate that while elections can indeed be a useful tool for contemporary authoritarians, they also represent a potentially useful opportunity for oppositionists and others seeking to undermine regime unity.

The question of how and when authoritarian regimes open is of interest not only for academic students of international politics, but also for policy-makers and the large (and growing) democracy promotion industry (Karatnycky and Ackerman 2005). In this paper we contribute to debates on international democracy promotion by not only highlighting a key mechanism that leads to liberalization, but also by showing how that mechanism works and by considering the conditions that make it more or less likely to be effective.

In addition, the paper contributes new data on episodes of liberalization in the post-Cold War era. We collected data on all liberalizations between 1992 and 2006, identifying 92 cases of rapid liberalization taking place in non-democracies with a population greater than 500,000. We use this data in two main ways. First, we analyze the different ways in which liberalization has actually happened and propose a new framework for classifying modes of political liberalization that puts existing studies of such phenomena as “electoral revolutions” and “liberalizing electoral outcomes” into a broader global context. Second, we use the new data to test our arguments about elections, information and liberalization.

Authoritarians, Elections and Liberalization

Almost all authoritarians hold elections. According to our data, only 6 of 128 non-democratic states, or 4.7 percent of the total, had neither an election for chief executive nor for a national legislature between 1991 and 2006. This finding is consistent earlier findings that among non-democracies since World War II, 75.2 percent of all country-years have seen legislatures in existence, 58.9 percent have featured multi-party systems and 49.9 percent have

had both legislatures and allowed the existence of multiple political parties (Gandhi 2008: 94). Moreover, not all of these elections are purely for show. For example, Schedler calculates that as of 2002, 38.4 percent of countries in the world could be considered “electoral authoritarian,” that is authoritarian regimes that hold elections with real competition (Schedler 2002:36). Similarly, Levitsky and Way (2002) identify a large number of competitive authoritarian regimes across much of the developing world during the 1990s.

Not all authoritarian elections are alike, however. Most broadly, we can distinguish between elections with genuine competition and those with none. Elections without competition of any kind, typified by those held in single party communist states, might better be thought of as a form of state ceremonial in which the pomp and power of the state is put on display to impress its citizens and discourage potential opponents (Zaslavsky and Brym 1978). These kinds of elections are common, by our estimates taking place in more than twenty countries in the post-Cold War world.

Elections with some form of competition, however, are also quite common in non-democratic countries. Since 1992, we estimate that around 380 of these have taken place in over one hundred countries.¹ At first blush the pervasiveness of elections in non-democratic regimes seems odd, since elections are often thought of as being the essence of democracy. Nevertheless, there are many reasons why (semi)authoritarians might want to hold elections, even ones with some elements of real competition.

The most obvious advantage is that holding elections can help countries, especially poor countries, access financial support from the international community. However, elections might also matter domestically by providing a solution to the issue of succession, a mechanism for

¹ These figures are based on looking at countries that have a Freedom House Political Rights score greater than or equal to 2 and a Polity2 score less than or equal to 8.

circulating jobs among the elite, and a chance for the ruling party to show its strength and intimidate opponents and would-be defectors (Magaloni 2006, 8-10). In addition, the process of contesting elections may provide incumbents with information on the identities of supporters and opponents, divide the opposition and encourage opponents to turn away from violence and invest in existing institutions (Brownlee 2007, Lust-Okar 2007).

While scholars focused on the Middle East and other long-standing authoritarian regimes tend to stress the usefulness of elections to authoritarians, those looking at the former communist states or at sub-Saharan Africa tend to see elections as having the potential to undermine authoritarian regimes and as promoting liberalization. One way is through the long-term effects that holding a series of elections can have. Using data from post-independence African elections, Lindberg has shown that even highly flawed elections can gradually inculcate norms of respect for elections and can generate more meaningful political competition over time (Lindberg 2006). In this account, liberalization occurs as a slow process engendered by multiple repetitions of increasingly freer and fairer elections.

If the African experience is that repeating elections tends to lead to better quality, the experience of the post-Soviet space has been quite different. There, if anything, the quality of elections has declined rather than improved with repetition. However, elections in the post-Soviet space have still had a significant impact on liberalization by creating opportunities for opposition groups to challenge and overthrow incumbent authoritarians. Scholars have proposed two different modes through which this process can work. Looking specifically at the experience of post-communist states, a number of scholars have analyzed the dynamics of “electoral revolutions” or “electoral breakthroughs” in which dramatic popular mobilizations *after* elections have overthrown incumbents accused of electoral fraud (Beissinger 2007, Tucker 2007,

Bunce and Wolchik 2006 a,b). Alternatively, incumbent authoritarians may actually be defeated at the ballot box in “liberalizing electoral outcomes” or “electoral turnover” brought about by the opposition uniting in a single coalition *before* the election (Bunce and Wolchik 2006 a,b., Gandhi 2008, Howard and Roessler 2006).

In this paper we seek to build both theoretically and empirically on these shorter run approaches to thinking about the ways in which elections might be linked to liberalization. Theoretically we identify a common mechanism, information revelation, that we believe underlies both electoral revolutions and liberalizing electoral outcomes. We argue that authoritarian regimes are generally low information environments from a political perspective and that holding periodic elections provides elites and the population with the opportunity to update their information on the relative strength of the incumbent coalition and alternatives. When elections produce new or surprising information, the ruling elite is in danger and liberalization can occur in one of several different ways that we outline below.

Furthermore, in addition to *electoral revolutions* and *electoral turnover*, we identify two additional paths by which elections can lead to liberalization; *forced* and *voluntary electoral liberalizations*. In *forced electoral liberalizations*, incumbents are not overthrown but are nevertheless forced into making concession when the weakness of the incumbent coalition is revealed in unexpectedly poor electoral performance. *Voluntary electoral liberalizations*, by contrast, occur when elections confirm to ruling coalitions their own capacity to dominate even in a more liberalized political context. This too can lead to liberalization but in this case liberalization is likely to be controlled, limited and orchestrated from above. Taken together, these variants give us four modes of electoral liberalization, but, as we argue in the next section, the key mechanism in all of these changes, however they occur, is information.

Finally, while we show that elections do have an independent effect on the likelihood of liberalization, and that this effect holds even when we control for the fact that the holding of elections and their quality is endogenous to political conditions in a given state, not all liberalizations involve elections in a causal role. In fact, as our data demonstrate, a significant proportion of liberalizations are either completely non-electoral or they involve elections only as a finishing touch to a process that is basically non-electoral.

In the next section we expand on how elections provide and, in some cases, create information. We then relate information revelation theoretically to the different modes of liberalization, before turning to the empirical analysis.

Elections and Information

Ruling coalitions in all states are politically constructed and involve a broad range of players with different resources, including businessmen, bureaucrats, leaders of mass organizations like labor unions and political parties, and, of course, specialists in coercion like the military or the security forces. In authoritarian regimes, these elites are pivotal in deciding the fate of the regime. As long as pivotal elites continue to ally themselves with the existing rulers, the regime is likely to remain stable. By contrast, when these elites split and some decide to throw in their lot with the opposition, then the regime is in danger. Precisely which actors constitute the “pivotal elites” will, of course, vary from regime to regime, but irrespective of their particular identity, these players need information to make decisions about their optimal political choices. Moreover, where elections involve at least some degree of competition, the voters at large in a country are also potentially important political actors. A key part of the game in elections is convincing voters to turn out and to vote. In order to do this the regime and opposition will need information on the voters, while the voters in turn will need information on

the strength and intentions of the opposition and regime. Consequently, information is absolutely central to the stability of any regime, and authoritarian regimes are no exception.

However, the important political information on which this process relies is much scarcer in authoritarian than in democratic regimes. In democratic contexts, free media and regular opinion polling lead to a high degree of shared information on the general distribution of political preferences. Moreover, the legitimacy of democratic procedures provides strong incentives for elites to play more or less by the rules of the game, which induces a high degree of predictability to how the various players will act subsequent to the elections themselves in counting the votes, deciding upon and ratifying the results (Hardin 1988). However, in authoritarian regimes, limits on media freedom and civil and political rights, including the right of alternative political parties to compete, means that there are few sources of reliable information and relatively few incentives for sincere preference revelation. Political power is not openly contested and so the strength of the incumbent regime is often largely untested and unknown. Moreover, the procedural rules tend to be much less binding on politicians and so political behavior is generally less predictable.

In such an environment, authoritarian elections provide a rare opportunity for pivotal elites to gather information on the relative strength of the incumbent rulers and the opposition. In fact, authoritarian elections can be rich sources of information for all the key actors involved; regime, pivotal elites, opposition and the populace. This is particularly clear if we think of elections as being more than just a day of voting, but as consisting of a multi-stage organizational and political challenge that begins with party/candidate registration and campaigning, continues with the election itself, and ends with a process of counting the votes and ratifying the results. Potentially important information about the unity of the regime and the

strength of opposition forces can be revealed in any of these stages. The multi-stage nature of elections is particularly crucial because the different stages allow for the sequential revelation of information which can change the behavior of actors at subsequent stages in the process.

The first stage of the election process, the campaign period, is of central importance. Here both the regime and the opposition have crucial opportunities to communicate with pivotal elites and with the population at large. For the regime, the key task is to control the registration of parties and candidates and the overall conditions of the campaign. The challenge is to create an election with enough opposition that an appearance of competition is achieved, while at the same time, controlling participation to minimize the chances of defeat (Wilson 2005). Part of the task is to structure the political environment in such a way as to divide the opposition, giving some elements incentives to participate, while isolating potentially more serious challengers (Lust-Okar 2007). While structuring elections in this way is a common practice in “authoritarianism in an age of democratization” (Brownlee 2007), getting it right requires considerable political skill and administrative resources, and mistakes can lead to either damaging electoral boycotts, or an opportunity for genuine political opposition.

A central element here is the degree of repression and harassment of the opposition. Repression conveys two very distinct messages: one about coercive capacity and the other about the incumbents’ confidence in their popular support. For example, vigorous harassment and arrest of opposition candidates might indicate regime strength and determination, convincing pivotal elites to stay the course, intimidating the opposition and cowing the population. Depending on the context, however, too firm a hand, can end up making the regime look desperate and afraid of an electoral contest (Bunce and Wolchik 2009a; 17). Similarly, for the opposition the campaign period represents an important opportunity to send messages, but also to

collect information. A key task for the opposition is to convince the voters at large that they are worth voting for. As Bunce and Wolchik (2009a) point out, oppositions in authoritarian regimes can be at least as unpopular as incumbents, and often have a major task on their hands to convince voters that change is not only possible but worthwhile. Part of this means gathering information on popular preferences, the age/sector/geographical profile of potential supporters and on how to tailor appeals, but part of it also involves showing courage, commitment and worthiness. Paradoxically, the repressive efforts of the regime can often assist the opposition's communication strategy. For example, the apparent attempts on the part of the Kuchma regime to poison Ukrainian opposition leader, Viktor Yushchenko, in the run-up to the 2004 elections did much to turn a former regime insider into a popular opposition hero. This process can also help the opposition to coordinate on a single candidate or a joint slate, as it reveals to members of the opposition their relative strengths and political potential.

The election campaign might also provide the opposition with opportunities to send reassuring messages to pivotal elites. For example, contacts between opposition leaders and the security apparatus charged with policing elections might actually help to counter regime efforts to paint the opposition as dangerous, or a threat to established forces.

On election day the task for the regime is to get out the vote for regime-supported candidates and parties. How well the regime is able to do this will in turn depend upon genuine popularity, and, at least as important, on having a political and patronage machine that can reliably encourage, cajole, coerce or intimidate people into turning out and voting for particular parties and candidates (Auyero 2001). To the extent that the regime's mobilizational machine is successful, it might embolden incumbents to undertake further liberalization, as happened in Ghana in the aftermath of the 1992 elections.

Some authoritarian incumbents also supplement these mobilizational measures with active efforts to depress turnout in areas known to favor the opposition: the incumbents' repertoires range from relatively benign administrative tactics (such as short polling hours or insufficient ballots) to systematic and large-scale violent campaigns against groups known to side with the opposition, as in the eviction and killing of Kikuyu voters in the Rift Valley prior to the 1992 Kenyan elections. The regime's relative success in doing this not only affects the electoral outcome but it reveals crucial information about regime strength and viability to pivotal elites, the opposition and the populace, and even to core regime members themselves. In some cases, weakness will be revealed that can lead to post-electoral concessions to the opposition, such as in Mexico in 1988.

For the opposition, Election Day reveals information on areas of regime strength and weakness, as well as revealing the extent of popular support that may be harnessed to challenge the regime. Seriously flawed elections that end up nevertheless being close (Serbia 2000, Ukraine 2004 and Zimbabwe 2008) may trigger large scale oppositions mobilizations and protest, while polls that confirm incumbent dominance (Russia 2007) are less likely to be subject to serious challenge..

Since by Election Day, international observers and the international media are often present, this additional audience represents an opportunity to publicize information on regime repression, fraud and cheating.² The greater scrutiny from international public opinion may temporarily reduce the government's reliance on overt coercion and should be particularly important in countries where the opposition has otherwise limited opportunities to make its voice heard due to restrictions on media freedom and civil rights. To the extent that international

² For a more detailed analysis of the interaction between international elections monitors and domestic political actors, see Hyde and Marinov 2009

observers take a clear stance about the conduct and fairness of the elections, this implicit endorsement of either the government or the opposition is likely to provide crucial signals to both pivotal elites and the broader public about the relative costs and benefits of siding with either of the two sides. In this respect, the initial endorsement of election-day procedures by the OSCE in the April 2009 Moldovan elections arguably played a crucial role in undermining the credibility of opposition protesters.

Finally there is the issue of counting the votes and ratifying the results which requires coordination between the incumbent leadership and other organs such as the Central Election Commission, and the judiciary. The extent to which this cooperation will be forthcoming is contingent on players' assessment of the balance of power in the elections so far. The security forces are also likely to play a key role in this process, as they are responsible for controlling potential opposition mobilization on the streets. Maintaining the loyalty of these forces is crucial, especially if the elections turn out to be unexpectedly close. The so-called "Orange Revolution" in Ukraine in 2004 is one recent example of a regime that "won" the campaign and the vote count, but lost the ratification due to a failure to keep key elites in the courts and in the security services on board. Similarly, in the case of Serbia in 2000, key elites only began to defect from the regime, after the opposition was able to present its parallel tabulation of the vote, exposing regime fraud.

So far we have thought about elections as revealing information about the pre-existing strength of the regime and its ability to orchestrate politics. However, elections can also have an independent effect on liberalization by generating new "facts" that can shift the balance of forces in favor of the opposition. This may happen for at least two reasons. First, the successful management of elections requires different skills and resources than the routine demands of day-

to-day governance in authoritarian regimes. Therefore, previously stable authoritarian governments may find that their traditional strength in areas such as the management of the economy or the operation of security forces does not automatically translate into an ability to mobilize the population in an electoral context. This challenge should be particularly severe for authoritarian incumbents with limited experience of contesting elections, as well as in low-information environments where political allegiances are highly uncertain.

Second, elections have an almost unique capacity to act as a focal point for political attention and energies, thereby helping the opposition overcome the often significant coordination problems inherent in mounting a coherent political campaign in the low-information environments that characterize most authoritarian regimes. Consequently, elections create the potential for moments of what Beissinger (2002) calls “thickened history” when political attention and energies are focused into a relatively narrow space of time and new dynamics and reputational cascades can suddenly emerge that can lead to large scale political change. This is a moment in which political agency can be extremely important. Strategy matters. In fact, Bunce and Wolchik (2009a) argue that the primary way in which international actors contributed to the wave of so-called “colored revolutions” in the post-Communist space was through teaching and inspiring oppositions to adopt new game-changing strategies, techniques and political technologies. In other words, elections are temporally and spatially structured opportunities for actors to change the “natural” order of politics and the very fact of holding elections creates the possibility for political changes that would not occur in the absence of elections, even given the same structural conditions or balance of power among political forces.

Information Revelation and Modes of Liberalization

We have argued that holding elections can in and of itself make liberalization more likely in a non-democratic regime, and we have claimed that a key mechanism linking elections to liberalization is the way in which elections either reveal scarce information, or generate new information, about the balance of power. In this part of the paper we develop the analysis further by showing that there are in fact multiple “modes of liberalization” associated with elections, and by illustrating the role of information revelation in each of these modes.

In Figure 1 we illustrate the different channels through which elections can contribute to liberalization depending on how they interact with the information environment. We start from the premise that authoritarian incumbents have a choice about whether or not to hold elections in the first place. If the incumbents decide to hold elections, the conduct and result of these elections can either reveal that the regime is weaker than previously thought, or that the regime is stronger than (or at least as strong as) was thought before the elections.

Figure 1 here

Let’s assume first that the incumbent regime reveals itself to be weaker than expected. In this scenario, the unexpected revelation of regime weakness leads to the defection of key elites from the ruling coalition, opening the way to political liberalization. Liberalization can happen in a range of different ways.

One possibility is that the authoritarian incumbents suffer an unexpected defeat in the elections. In this case, they may choose to accept the results and exit from power, leading to liberalization through *electoral turnover*. Examples of this form of liberalization include Romania in 1996 and the Central African Republic in 1993. The incumbents, of course, may

reject this option and cancel the elections to try to remain in power, leading to political retrenchment as in Algeria in 1992.

Another possibility is that incumbents, seeing their imminent defeat, decide to attempt to falsify or refuse to accept the results. Here again there are two broad possibilities. Either the falsification or rejection of the results is successful and the status quo remains (or a more restricted regime results), as in Burma in 1990 or the regime is unable to coordinate elite support in ratifying the falsification and liberalization occurs through an *electoral revolution*, as in Serbia in 2000.

A third possibility is that incumbents manage to win the elections, but are noticeably weakened. In this case, elite defection may push incumbents to accept more competitive politics resulting in what we call a *forced electoral liberalization* in the post-election period. An example of this form of liberalization came in the aftermath of an unexpectedly low turnout in heavily manipulated elections as in Poland in June 1989 or in Comoros in 2002. Once again, turning back from elections and political retrenchment is also an option.

Figure 1 also illustrates the possible scenarios if elections demonstrate not the weakness, but the strength of the ruling group. Strong incumbents are usually unlikely to want to change the status quo, and having demonstrated their strength to pivotal domestic elites, are unlikely to be under much pressure to do so. Hence, liberalization in these circumstances is unlikely. Nevertheless, liberalization can on occasion arise from incumbent strength. As Bermeo (1997) has argued, authoritarians may be induced to tolerate opposition political participation if the incumbents believe that they are likely to continue to dominate anyway. If we assume that there are some costs to authoritarianism, either in terms of domestic or international legitimacy, then incumbents might often be likely to be willing to liberalize at least somewhat if they felt that

they could still win. If so, gradual liberalization of political competition may be instigated by incumbent authoritarians as a way of testing the waters to see if they can compete in a more liberal environment. In this case, elections can play a crucial role in revealing to the regime its own strength and encouraging further *voluntary electoral liberalization*. Examples of this process include Tanzania in 1995 and Ghana in 1992 and 1996.

Electoral turnover, electoral revolution, forced electoral liberalization and voluntary electoral liberalization, of course, do not completely exhaust the possible liberalization paths. Many political liberalizations in the post-Cold War era were completely unrelated to elections. These possibilities are reflected on the right-hand side of Figure 1.

As with electoral liberalization, non-electoral liberalizations result from a wide variety of challenges to incumbents. In some cases, liberalization is the result of the decision of a sitting autocrat, perhaps under international pressure. A good example of this is the decision of King Hussein of Jordan to legalize political parties in 1992. Here an incumbent dictator (in this case a monarch) initiated a very limited political opening in response to pressure from international patrons. By contrast, in Nicaragua in 1995 liberalization was the result of a compromise between two trenchantly opposed, but evenly matched, domestic political groups. This kind of agreement to split the difference among opposing factions is just the kind of deal Dankwart Rustow (1970) would have expected to lead to lasting democratization.

Far from all non-electoral liberalizations, however, are as non-violent as Jordan and Nicaragua. In fact political violence and unrest of various kinds is a major mechanism driving non-electoral liberalizations. The case of Nepal, which experienced significant improvements in the degree of political contestation and openness in 2006 in response to a combination of a Maoist insurgency and mass political protests, is a good illustration. Finally, some non-electoral

liberalizations are more the result of the laws of biology than the “laws” of political science: the death of a dictator. For example, when Olusegun Obasanjo became Nigeria’s first elected president in 16 years in February 1999, the key events of liberalization took place the previous year when not just the ruling military leader, General Abacha, but also the Abacha’s main rival for the presidency, Chief Abiola, both died natural deaths.

The final group of liberalizations consists of cases in which elections are part of the process of liberalization but are not in themselves causally important. These are cases in which elections are the end result of a prior liberalization that had fundamentally different, non-electoral causes. Elections are part of the process of liberalization but only really in as much as they confirm progress that has taken place outside of the electoral area. A good illustration of this process is the political liberalization that took place in Mozambique in the early 1990s. Though both Freedom House and Polity scored 1994 as the year of “liberalization” when the first free elections took place with both Frelimo and Renamo competing, the elections were really just the finishing touch to a liberalization process that had begun in October 1992 with the ending of the Mozambican civil war. The end of the war was itself a product of a military stalemate, and broad international forces, notably the collapse of the USSR and the cutting off of Russian support for international Communist forces like Frelimo on the one hand, and the end of apartheid in South Africa on the other, which effectively cut off the main source of support to Renamo. The elections themselves did little to change the political situation in the country, with Frelimo staying in power, though perhaps somewhat chastened by the 38 percent of the vote gathered by Renamo. Other cases include Mali in 1992 and Niger in 1999 where elections marked the moment of international recognition of liberalizations but were mostly a finishing touch at the end of processes of incumbent regime collapse under non-electoral pressure.

Elections, Information and Liberalization: Hypotheses

Even though we have shown that liberalizations can be triggered by a wide range of non-electoral factors, we expect elections to have an important role in many cases. In this section, we develop specific testable hypotheses about the relationship between elections and liberalization based on the information theory outlined above. We develop three sets of hypotheses. First, we hypothesize how the quality and salience of *different kinds of elections* should affect the prospects of political liberalization in a non-democratic state. Second, we consider specifically how the effects of given types of election will vary as a function of other *elements of the information environment* in which those elections take place. Third, we develop predictions about how *different types of non-democratic regimes* should be affected by elections, depending upon their institutional make-up.

We have argued above that elections provide crucial tests of strength and popularity for incumbent authoritarian regimes. Consequently, we should expect that regime openings should be strongly associated with elections. However, not all elections should have the same effect. If elections do indeed work through the mechanism of information revelation, then it is reasonable to suppose that elections that reveal more information should be more likely to be associated with liberalization than elections that are less informative. Since both the quantity and the quality of information revealed might be expected to be positively associated with the extent to which elections are free and fair, then we should expect that cleaner elections are more likely to be associated with liberalization than dirty elections.

Moreover, we would not expect all elections within a given polity to have the same effect in terms of revealing politically significant information. Just as Pacek et al. (2009) have shown that voters pay less attention to institutionally less important elections, so we would expect

pivotal elites also to pay less attention. If this is true, then we should observe that elections in which the most important executive offices are at stake are more likely to be liberalizing than elections for less important offices.

Finally, in thinking about the relationship between different kinds of elections and liberalization, we also need to pay attention to the fact that the existence, timing and type of elections depend on some of the same factors that drive liberalization. In other words, elections are to a certain extent endogenous to factors that might themselves be causes of liberalization, such as structural conditions and the prior level of political rights. In part, this is a statistical problem that we address below. However, there is also a theoretical issue to consider. In developing our theory, we have argued that it is not just the quality and the quantity of political information that matters, but also the extent to which that information is surprising, or has not already been incorporated into political expectations. Thus, while fully free and fair elections should generate the most accurate political information, that information is less likely to be surprising since fully free and fair elections tend to occur in cases with greater press freedom and well-respected political and civil rights. Therefore, once we adjust for the endogeneity of electoral quality we should no longer expect it to matter monotonically; it may be that it is precisely those elections that lie somewhere between completely fake and completely fair that are the most likely to produce surprises and hence liberalization.

The next set of implications of our information theory focuses on the interaction between elections and the information environment in which they take place. The quality of the information environment can affect the possibility of liberalization in two quite distinct and, in fact, countervailing ways. On the one hand, greater freedom of information or greater civil and political liberties should amplify the liberalizing effect of elections by giving the opposition

more space to organize and challenge the incumbent regime. Thus, we would expect a *positive* interaction effect between elections and factors like a free press and higher civil liberties.

On the other hand – and here our theoretical predictions are more counterintuitive - if elections have an impact on the likelihood of liberalization specifically through the mechanism of information revelation, as we have argued, then we should expect elections to be more consequential when information on the relative strength of different political players was harder to find before the elections. Just as elections in non-democracies should reveal more unexpected information than elections in democracies, so we should observe variation across non-democracies too: the less information that was available before, the greater the effect of the information revealed by a given election. If this is true, then we should expect a *negative* interaction effect between elections and measures of the quality of the information environment in driving the probability of liberalization. Moreover, we should expect this negative interaction to apply in particular to cases of non-voluntary liberalization, such as electoral turnover, forced electoral liberalization and electoral revolution.

The third set of hypotheses derived from the information theory relates to the rapidly growing literature on varieties of non-democratic regimes. It is increasingly accepted that there are important differences between different types of non-democratic regime that are not adequately captured by a simple democratic/non-democratic dichotomy, and we argue that this variation is likely to have an impact on the likelihood of liberalization by elections. Hadenius and Teorell (2007), for example, suggest that the propensity for non-democratic regimes to democratize depends to a significant extent on their institutional and political make-up. Others have suggested that the behavior and stability of non-democratic regimes will vary as a function

of whether or not they possess political parties that are capable of gathering information and distributing punishments to opponents and rewards to supporters (Geddes 1991, Ghandi 2008).

With regard to different types of non-democratic regimes, our theory suggests two principal hypotheses. We have argued that elections represent a particular test of strength for all non-democratic regimes. However, it seems likely that non-democratic regimes will vary in the extent to which this is true. In particular, regimes that claim their legitimacy through the ballot box are likely to be more vulnerable than those whose primary power rests on a different foundation, such as the traditional authority of monarchs, the divine will for theocratic regimes, or coercion for pure military regimes. Consequently, monarchies, theocracies, and pure military regimes should be less affected by elections than other types of autocracy.

A second hypothesis relates to variations in the role of political parties in non-democratic regimes. If elections lead to liberalization through information revelation as we have argued, we should expect non-democratic regimes that have better information gathering systems to be less vulnerable to liberalization in the face of elections. Since political parties are important mechanisms for gathering and disseminating political information, we expect that non-democratic regimes that have previously allowed political parties to operate should be less vulnerable to forced electoral liberalization than other authoritarian regimes.

Testing the Theory: The Dependent Variable

By “political liberalization” we mean a significant improvement in the quality or quantity of political rights exercised by citizens, improvements in the institutional framework that shapes political competition to make it more open or fair, or improvements in political practice that have the effect of making the competition for the most important political posts in the state more

transparent and impartial. In using this definition, our goal is to include a range of ways in which polities can experience a process that might be more commonly called a “political opening.”

Two caveats are in order. First, liberalization and democratization are emphatically not, as Linz and Stepan (1996) remind us, the same as thing, and it is possible, indeed common, to have liberalization without democratization (though the reverse is not possible). Closed authoritarian regimes can witness improvements in the extent of political competition in the system or in the permitted range of political action without coming close to democratization. The limited opening of a one-party state to real but still constrained political competition, as in Tanzania in 1995, is an example. Second, liberalizing moments do not need to be durable, but may be followed by authoritarian reversion. In order to keep both of these points in mind, we refer to the political openings analyzed in this paper as “liberalizing moments”, a term that deliberately suspends judgment on whether these “moments” are consolidated into more permanent gains.

Operationalization and Patterns

In operationalizing the dependent variable, we follow Howard and Roessler (2006), who use a combination of an improvement in Freedom House political rights scores and a simultaneous improvement in the Polity IV regime score. We define a liberalizing moment as a simultaneous (or lagged) improvement of 1 point on the Freedom House political rights scale and a 2 point improvement in the 21-point Polity scale (details for this choice can be found in Appendix 1).

This measure has a number of advantages. First, it offers a clear and transparent coding rule to decide the frequently contentious question of whether a particular moment is liberalizing or not. Second, combining two sources that look at different dimensions of liberalization (and

often disagree) ensures that we select only cases on which there is considerable degree of consensus, and so we can be confident that the cases we identify do indeed represent *significant* progress in the direction of liberalization.³ Third, and most importantly, basing our selection of liberalizing moments on a combination of the Freedom House political rights scale and the Polity IV regime score guarantees that we take the kind of broad perspective on liberalization outlined in the previous section. Using these summary measures rather than one of the many sub-categories offered by these and other rating agencies means that our sample is both *inclusive* in the sense of being open to counting liberalizations that arise from the broadest range of sources, and also *selective* in that only changes that are significant in terms of political, as opposed to civil, forms of liberalization are going to be counted.

However, any measure of liberalization raises the problem of how to measure elections and liberalization separately so that their relationship can be assessed. Specifically, one drawback of our broad measure is that both FH political rights and Polity regime scores include an assessment of the extent to which a country's government is chosen by free and fair elections. Consequently, holding free and fair elections (where there were none before) will trigger an improvement in both indexes and lead to a classification of the case as a liberalizing moment. From the perspective of looking at the role of elections in liberalization this might introduce a potential bias in favor of finding that elections – and especially clean elections – matter.

There are a number of potential responses to this problem. One possibility is to drop the approach based on FH political rights and Polity regimes scores and instead identify liberalizing moments based only on non-electoral measures such as FH civil liberties scores and Polity

³ In a few cases where both sources noted a one-point improvement or where one of the sources noted a large improvement (at least 2 points on FH or 3 points on Polity) while the other source did not, we used changes in two additional sources (Coppedge 2008 and Cingranelli and Richards 2009) to decide whether the case constitutes a liberalizing moment.

executive constraints. The two measures are highly correlated, (at .64), but they do disagree on a fair number of liberalizing moments, largely because the second indicator misses some fairly obvious instances of liberalization, such as South Africa in 1993-4. Below we show that our results hold using such a measure. However, adopting this alternative operationalization of liberalization is not an attractive option because it artificially narrows the scope of the cases we analyze, reducing their number and, worse, systematically missing cases in which the source of progress is something other than improvements in civil rights or executive constraints.

Consequently, since we are specifically interested in what proportion of all liberalizations have a significant electoral component we use the broader measure. However, we attempt to insulate the results from electoral bias by conducting a qualitative analysis of each of the liberalizing moments identified by the coding rule, and determining on a case-by-case basis precisely what role – if any – elections played, and whether that role was truly causal. The other mitigating factor, which we will discuss in more detail below, is that most of our regressions endogenize election timing and quality, which means that our findings are not based on the specific details of any given election.

Using this broad definition of a liberalizing moment, we identified 92 cases of rapid liberalization taking place in non-democracies with a population greater than 500,000 in the period from 1992-2006. Non-democracies are understood to be countries in which significant further liberalization (as we define it) was still theoretically possible.⁴ At least as a first cut, there seems to be considerable support for the view that most liberalizing moments are associated with elections; 73 cases of rapid liberalization since 1992, or 79 percent, have taken place in the same year as elections. Whether (or when) this relationship is causal is, of course, a deeper question

⁴ While this choice of cutoff results in the inclusion of a number of reasonably (though imperfectly) democratic countries, the robustness tests in the appendix suggest that our findings are not affected by the high cutoff.

that we address in detail below. Equally clear, however, is that, whatever the relationship between elections and liberalization, most elections are not associated with liberalization. Even if all cases of liberalization and elections in the same year were causal, this leaves most elections (over 83 percent) without liberalizing consequences.

Operationalizing Modes of Liberalization and Elections

As outlined in our earlier discussion of the different paths to liberalization, we have identified six possible types of liberalizing moments. In four of these, elections play a central causal role; electoral turnover, electoral revolutions, forced electoral liberalizations, and voluntary electoral liberalizations. In addition, there are two other paths in which elections are either completely absent from the process (non-electoral liberalizations) or in which they play a limited causal role (what we call “finishing touch elections”). We coded all the liberalizing moments identified in the previous section according to this schema. All liberalizations were coded using a combination of the Polity Country Reports, Freedom House reports, the Economist Intelligence Unit Country Profiles and newspaper accounts.

To test the hypotheses we also need a measure of election quality. We used election observer reports, newspaper reports, and for sub-Saharan Africa Steffan Lindberg’s dataset (Lindberg 2006) to code all national level parliamentary and presidential elections for the 444 election years in our dataset. We coded elections according to a simple 4 point scale, where 1 represents elections with no competition, 2 represents elections with limited competition and/or heavily falsified results, 3 represents elections with competition and significant irregularities but with results that were generally seen as acceptable, and 4 represents elections that were essentially free, fair and clean.

Table 1 shows that the electoral revolutions and electoral turnovers on which the existing literature focuses, account for 7.6 and 18.5% percent of total liberalizing moments respectively. Forced electoral liberalizations are 8.7%, while voluntary liberalizations account for a surprisingly large 19.6% of total liberalizations. Non-electoral liberalizations or ones in which elections play only a finishing touch role are also extremely important, accounting for some 45% percent of cases of political liberalization in the post-Cold War era. Table 1 also suggests that most electoral liberalizations were associated with either seriously or somewhat flawed elections. Meanwhile, as expected, sham elections were completely irrelevant, while free and fair elections played a surprisingly marginal role and mattered primarily for electoral turnovers.

Alternative Explanations

In addition to the role of elections, there are a number of other elements that are likely to affect the probability of liberalization. The democratization literature stresses the importance of economic development as a catalyst for transitions from authoritarian rule (Boix and Stokes 2003, Epstein et al 2006), and the impact of economic crisis on the stability of authoritarianism (Haggard and Kaufman 1995). Therefore, our baseline statistical models include lagged measures of GDP/capita and urbanization, as well as economic growth.⁵

Our regressions also control for a number of other well-established correlates of democracy and democratization. Thus, in line with a number of recent works about the impact of inequality on democratization (e.g. Boix 2003, Acemoglu and Robinson 2006), we included the income share of the highest quintile of the population as an indicator of economic inequality. There is also a substantial literature suggesting a “natural resource curse” in which natural resources are negatively associated with political openness because such resources provide

⁵ While other economic performance aspects (such as unemployment or inflation) could also matter, the data coverage and comparability was significantly weaker, so we excluded them from the present analysis.

discretionary resources for incumbent authoritarians (Dunning 2008). We use a measure of resource rents to test the potential impact of this. In addition, Way (2008) points to the existence of an extensive and well-resourced coercive apparatus as a factor that will affect the stability of the incumbent regime. While this is difficult to measure precisely, we have sought to take it into account by controlling for military spending per capita.

We also control for the effects of popular mobilization in the form of strikes, demonstrations and other protests. Mobilization is not only destabilizing in itself (Beissinger 2002), but is also usually a signal of divisions within the elite, since anti-government mobilization that is not heavily repressed usually means that protesters have influential allies within the elite. Consequently, in authoritarian states elite division and mobilization generally go hand in hand (Baldez 2002; 8, Robertson 2007). To take this into account we control for anti-government mobilization in the country (using Banks' data).

There is a considerable literature in political science suggesting that democracy is more stable in homogenous societies than in ethnically heterogeneous ones (Dahl 1991, Lijphardt 1997).⁶ The argument, simplifying considerably, is that diversity undermines compromise and consensus and therefore triggers instability. We include controls for the degree of ethnic fragmentation to allow for a potentially similar effect in non-democratic regimes.

Another set of competing explanations that need to be taken into account are neighborhood effects in which the political environment of neighboring states has an independent effect on the likelihood of liberalization within a given state (Beissinger 2007, Bunce and Wolchik 2006a,b, Kopstein and Reilly 2000, Pevehouse 2002). Consequently, we control for the probability that liberalizing is more likely in countries located in more democratic

⁶ Fish finds that ethnic fractionalization is not associated with low levels of voice and accountability once other factors are taken into account (Fish 2005: 85-91).

regions. We measure this by taking the average regional Freedom House political rights score in the preceding year for a given country. Since larger countries are less sensitive to outside leverage (Levitsky and Way 2005), we also included an indicator of the overall population.

Finally, we control for the effect of previous levels of political rights. We do so both to test whether the likelihood of liberalization is affected by prior political openness and to capture ceiling/floor effects, whereby less democratic countries have greater room for improvement and might therefore be more vulnerable to change.

Empirical findings

In Table 2 we analyze the relationship between elections and political liberalization in a regression framework. The main dependent variable in these regressions is a binary indicator of whether a certain country experienced a liberalizing moment in a given year. In order to avoid drawing causal inferences from situations where elections were the result rather than the driver of liberalization, we excluded finishing touch liberalizing moments from this analysis.⁷ Since all of our dependent variables are dichotomous, and since electoral liberalizations only occurred in a small fraction of country-years (5.5%), we use rare-event logistical regressions with robust standard errors clustered by country (King and Zeng 1999).⁸ We look at all country-years from 1992-2006 for which a liberalizing moment is possible (i.e. those that have a Freedom House Political Rights score greater than or equal to 2 *and* a Polity2 score less than or equal to 8).⁹

⁷ We also excluded Nigeria 1998 in which a non-electoral liberalization occurred in an election year.

⁸ While we considered using fixed-effects models to deal with potentially omitted variables, we were ultimately persuaded by Beck and Katz's argument that fixed effects are almost never justified in a BTSCS framework. Moreover, in our case, such an approach resulted in a drastically smaller (and arguably biased) sample, since countries without liberalizing moments are thrown out in fixed effects models. However, the role of elections is strongly confirmed when using fixed effects (see appendix). Moreover, following Beck et al. (1998) we ran the regressions with a non-failure duration variable and a set of cubic splines to correct for temporal dependence but since they never approached statistical significance and did not significantly affect any of the coefficients of interest, they were not included in the final specifications.

⁹ We also exclude micro-states excluded by Polity IV.

Table 2 here

Liberalization and different kinds of election

The substantively large and statistically highly significant effect of *Election year* in model 1 confirms that elections do indeed play a crucial role in post-Cold War political liberalization, even once we exclude finishing touch liberalizing moments and control for alternative explanations. Nor is this impact limited to elections that get a clean bill of health from international observers: Model 2 suggests that while sham elections indeed offer no political opening opportunities, even flawed elections emerge as powerful predictors of liberalizing moments, as long as at least some degree of genuine political contestation is allowed. While the effect is stronger for elections with relatively minor blemishes, it holds even for seriously flawed elections that are decried as undemocratic by both the opposition and foreign observers.

However, since both FH political rights and Polity regime scores are affected by the fairness of political competition, it is conceivable that these findings could be an artifact of our choice of dependent variable. To address this concern, models 3 and 4 run the same regressions as the first two models, but use a different definition of liberalizing moments, based on simultaneous improvements in FH *civil liberties* and Polity *executive constraints*. Since these two indicators are not explicitly linked to the electoral aspects of a regime, this version of the dependent variable avoids the potential problem of including elections on both sides of the regression equation. Doing so does not affect our initial findings about the importance of elections in liberalization: Model 3 indicates that liberalizing moments were still significantly more likely to occur during election years, while model 4 confirms the importance of all non-sham election types, and particularly the role of somewhat flawed elections. Therefore, we are

confident that our findings about the role of elections are not simply an artifact of our operationalization choices.

While the analysis so far has shown that the liberalizing potential of elections depends on the specifics of their conduct, Model 5 pushes the logic further and asks whether elections for more important offices are more likely to trigger liberalization. Building on Pacek et al's (2009) finding that voters participate more in constitutionally important elections, we might expect that elections in which the most important political offices are at stake are more likely to result in liberalizing moments. We use Banks data on the type of political system to distinguish between elections in which the post of chief executive is at stake (legislative elections in parliamentary systems and presidential elections in presidential systems) from other elections. As model 5 shows, both elections for chief executive and other elections are significantly associated with liberalization. However, as illustrated in Table 4,¹⁰ elections for chief executive are substantively three times more likely to lead to liberalization than elections in which the chief executive office is not at stake.

Despite their powerful substantive and statistical significance, the findings so far are ultimately insufficient to establish causality because they do not address the potential endogeneity of election timing and election type. Since the timing, competitiveness and fairness of an election are potentially affected by many of the same factors that affect political liberalization, it is conceivable that elections are simply *markers* of these deeper causes and as such the correlation between elections and liberalization could be spurious.

To address this serious methodological issue, the regressions presented in the remainder of this paper do not use the actual (and potentially endogenous) indicators of election timing and quality. Instead we ran two sets of instrumental variable regressions, which used exogenous

¹⁰ Table 4 illustrates the substantive effects of the main statistical findings in Tables 2&3 using *Clarify*.

predictors of election timing and quality to obtain predicted values of the endogenous variables that were then used as predictors in the second stage regressions. For election timing, we used the fact that by the 1990s most countries – regardless of their degree of democracy – had constitutionally set election intervals, which makes it possible to identify years for which elections were scheduled. While countries sometimes either hold early elections or postpone elections, and such delays may be indicative of political crises that may facilitate liberalization, *scheduled elections* are exogenous and turned out to be an extremely powerful instrument for actual elections (see electronic appendix 4).

For election type we used two instruments. The first is a dummy indicator of whether the previous election in a given country was of a particular type, and is based on the idea that previous practice provides an input into the current election type, but is unlikely to affect the likelihood of a liberalizing moment through other channels in subsequent elections. The second instrument is the share of a given election type among all the elections held in the preceding year in the region to which the country belongs. The rationale for the second instrument is that governments may emulate regional election trends. Finally, we included an interaction term between the two instruments to account for the possibility that the impact of diffusion is mediated by domestic legacies. The first-stage regressions in appendix (Table A2) confirm the predictive strength of lagged election type and to a lesser extent that of regional election effects.¹¹

Using this instrumental variable regression approach, models 6 and 7 in Table 2 are much better suited to establishing the causal impact of elections on political liberalization. While the

¹¹ While both instruments may potentially pick up the effects of unobserved omitted variables (which would undermine their utility as instruments), we obtained very similar second-stage results when using only one of the two instruments. (Results available from the authors upon request) Since it is highly unlikely that both instruments pick up the same omitted variables, this increases our confidence in the robustness of these findings.

size of the *Election year* coefficient in model 6 is about 25% smaller than in model 1, its high substantive and statistical significance nevertheless confirm the importance of elections for triggering liberalizing moments even once we correct for endogeneity. The results in model 7, whose substantive effects are also illustrated in Table 4, broadly confirm the findings of the baseline regression in model 2: Type1 *sham elections* are still meaningless, while the impact of *somewhat flawed elections* and *seriously flawed elections* is highly significant and slightly larger in magnitude than in model 2. However, as expected, accounting for endogeneity had the greatest impact on *free and fair elections*, which were no longer statistically significant and even changed sign.¹²

Thus, the statistical results confirm the importance of endogeneity concerns for free and fair elections, whose independent causal impact seems to be reduced by the more favorable domestic and international environment in which such elections usually occur. From the perspective of our information theory, the greater causal impact of slightly and even significantly flawed elections suggests that in order to matter for liberalization, elections have to provide information that is not only genuine but also surprising. Therefore, the next part of our analysis focuses more specifically on the interaction between elections and the information environment in non-democratic states.

Elections and information environments

As we discussed in the theoretical section, the nature of information environments in non-democracies can affect liberalization in two different – and potentially contradictory – ways. On the one hand, a less repressed media and civil society can help the opposition challenge the authoritarian incumbents, but on the other hand incumbents may be vulnerable – especially

¹² These results are robust to sample and model specification changes (see electronic appendix 5).

during elections – if civil liberty restrictions undermine the quality of the information incumbents are able to gather about the relative strength of different political actors.

To capture the quality of the information environment, we used two measures. The first is a press freedom index, which combines data from Freedom House *Freedom of the Press* ratings, the CIRI *Freedom of Speech and Press Index*, and the Minorities at Risk *Freedom of Expression* index.¹³ The second measure is the Freedom House *Civil Liberties* score, which captures a broader conception of the information environment that includes not only the freedom of the press and expression but other civil liberties, such as the freedom of assembly.¹⁴ In line with the nature of our theoretical argument, we tested the effects of the interaction between these information environment indicators and the type of election in a given country-year. To simplify the interpretation of results, for the regression in Table 3 we combined Type 3 and 4 elections into a single category, *broadly clean elections*. For each information environment measure we ran separate tests for two versions of the dependent variable: one for all non-finishing touch liberalizing moments and one restricted to forced electoral liberalizing moments. Incumbent miscalculations should be crucial for the latter and therefore we should expect the interaction between elections and the information environment to be more powerful. Finally, since multiple interaction effects in rare-event logistical regression models are hard to read from regression coefficients, Figure 2 offers a graphical illustration of the main results in model 1 (which are similar to the patterns in models 2-4).¹⁵

Table 3 and Figure 2 here

¹³ The standardized index had an alpha reliability coefficient of .83.

¹⁴ Both measures were lagged by one year to avoid concerns about reverse causation.

¹⁵ We used the *relogitq* command in Stata to compute predicted probabilities of liberalizing moments for the different election types for values of the press freedom ranging from the 10th to the 90th percentile while holding the other variables at their mean.

The negative and significant interaction effects between broadly clean elections and the quality of the information environment in models 1-4 strongly confirms our theoretical predictions about the information role of elections. Across all four specifications, broadly clean elections had a much greater liberalizing potential in restrictive information environments, which confirms that incumbents are more vulnerable when restrictions on the media and civil liberties undermine their ability to assess accurately their own political strength and that of their opponents. Figure 2 and Table 4 illustrates the large substantive effect of this interaction, as the probability of experiencing a liberalizing moment in a broadly clean election is roughly six times higher in countries with serious prior restrictions on press freedom (10th percentile) than in countries with relatively few restrictions (90th percentile). Meanwhile, the positive interaction effects between dirty elections and greater press and civil freedoms are more consistent with the alternative channel, whereby greater civil liberties empower the opposition and help them extract concessions in the context of dirty elections. However, these effects are substantively smaller and statistically insignificant, and therefore constitute much weaker empirical support.

Table 4 here

These findings are robust regardless of whether we explain all non-finishing touch liberalizing moments (Models 1&3) or only forced liberalizations (Models 2&4),¹⁶ and we get very similar results for both press freedom and the broader civil liberties indicator. The fact that non-democratic incumbents are more vulnerable in reasonably clean elections when press freedom and civil liberties were previously low is consistent with our theory about the role of elections in revealing surprising information but is at odds with the intuitive notion that greater civil liberties would strengthen the opposition. These findings make sense only when understood

¹⁶ However, in line with our expectations, the results were somewhat stronger in models 2 and 4.

in terms of the information theory of elections, and so they represent strong statistical support for the importance of information in explaining the election-liberalization nexus.

Elections and different authoritarian institutions

As discussed in the theory section, the specific nature of authoritarian institutions should affect the liberalizing potential of elections in two distinct ways. The first mechanism, which is tested in model 5, focuses on the question of how earlier multi-party competition affects the likelihood of subsequent liberalization. Once again the predictions based on our information-based theory – that regimes allowing some degree of multi-party competition should have better information and hence be less vulnerable to forced liberalizations – diverges from explanations focusing on opposition strength, which should be expected to be higher in systems where more than one party is allowed to run in elections. To test this hypothesis, we created a dummy indicator for multi-party regimes based on Hadenius and Teorell’s classification scheme, and interacted it with the indicator for broadly clean elections.

The regression results in model 5 are again strongly supportive of our information-based hypothesis. Thus, while the durability of multi-party authoritarian regimes did not differ from other authoritarian regimes in years with no elections, sham elections or seriously flawed elections, the negative and statistically significant interaction effect in model 5 indicates that such regimes were considerably less vulnerable in the context of broadly clean elections.¹⁷ Conversely, as illustrated in Table 4, the effect of broadly clean elections was much larger and more statistically significant for regimes that had not previously allowed multi-party elections. The fact that this vulnerability occurs in a context where the opposition presumably has less political experience of contesting elections than in multi-party regimes, further underscores the

¹⁷ The conditional effect a having multi-party regime in years with broadly clean elections was negative (significant at .05 one-tailed)

extent to which the stability of authoritarian regimes is tied to their ability to gather reasonably accurate political information, which is much harder to come by in the absence of multi-party elections. Thus, the regime findings reinforce our earlier conclusions based on the interaction between elections and information environments. These results also suggest limits to Lindberg's (2007) argument that repeated elections lead to liberalization. For Lindberg, practice at holding elections leads to improved electoral quality. While this may be true, we find that regimes with practice at competing with other parties in elections may actually be less likely to liberalize further because they have better information gathering abilities and so are less vulnerable to electoral surprises. If this is true, then there may be limits to the extent of progress that can be derived from repeated elections.

The second mechanism focuses on how important elections are for authoritarian incumbents' claims to power. In particular, we should expect elections to matter less for regimes whose power rests either on alternative sources of legitimacy (such as the traditional authority of monarchs or the charismatic authority of religious leaders) or explicitly on coercive power (as in the case of military regimes). To test these hypotheses, we used Hadenius and Teorell's regime classification to create a dichotomous variable that captures monarchies, theocracies and military regimes, and then we interacted this variable with the election-year indicator. As expected, the interaction effect in model 6 is negative, which confirms that elections have a weaker liberalizing effect in regimes where the legal-rational authority of elections competes against explicitly formulated alternative claims to power.¹⁸ Another way to interpret this result is to think of elections in such regimes as usually being about less important institutions, since much of the de facto executive power is vested in unelected officials such as monarchs. From this perspective,

¹⁸ While the statistical significance of the interaction term falls short of conventional significance thresholds (.14 one-tailed) the coefficient is reduced by more than one third for "non legal-rational" regimes.

these findings reinforce the earlier results in model 5 of table 2 about the greater liberalizing potential in elections for the office of the chief executive.

However, model 6 also has another interesting implication about the effect of regime type; the positive and statistically significant coefficient for monarchies/military regimes/theocracies suggests that such regimes are actually at a *higher* risk of being forced to liberalize in *non-election* years. While this effect disappears during election years (due to the negative interaction effect discussed above), it nevertheless illustrates the risks inherent in avoiding elections for institutions with genuine executive power. Without the election mechanism to channel information about popular demands, authoritarian regimes appear to be overall more vulnerable to liberalization.

Conclusion

In this paper we have developed a theoretical framework to explain why most episodes of significant political liberalization since the end of the Cold War have been tied to – and often caused by – elections. This empirical regularity is striking not only because authoritarian incumbents tend to benefit from significant power asymmetries compared to their political challengers but also because we have shown that such changes often happen in the context of electoral contests that fail to meet international standards for free and fair elections. To explain this puzzle, we have focused on the crucial role of elections in revealing – and at times producing – new information about the relative political strength of incumbents and opposition groups. Depending on the underlying strength of the incumbents and the nature of the informational surprise, we have identified a number of distinct liberalization paths, ranging from the voluntary electoral liberalizations initiated by incumbents who perform well in elections and therefore agree to greater subsequent political opening, to electoral turnovers where authoritarian

incumbents lose elections and decide to accept the loss rather than attempting to falsify or cancel the elections.

We have shown that the relationship between elections and liberalization holds if we account for endogeneity and exclude elections that coincide with liberalizing moments but are mostly the result rather than the driver of political liberalization. More importantly, we find strong support for the predictions of our information-based theory along several different dimensions. First, we find that for elections to play a causal role in promoting liberalization they have to provide information that is both genuine – hence the lack of relevance of sham elections without any competition – and surprising, as reflected by the weak impact of completely free and fair elections once we account for endogeneity.

Second, we argue that the impact of different types of elections is crucially mediated by the information environment in which these contests take place. In particular, we show that broadly clean elections (but not fake or significantly flawed elections) are more likely to trigger liberalizations in situations where the prior information was limited by restrictions on press freedom and civil liberties. While this finding is at odds with the intuitive expectation about the role of civil liberties in strengthening opposition movements, it is consistent with our claim about the importance authoritarian incumbents miscalculating their actual strength in information-poor environments, and therefore being caught by surprise by the results of electoral contests.

Finally, our information theory offers a new lens for explaining the different trajectories of different types of authoritarian regimes. In particular, we show that authoritarian regimes which have previously allowed for some form of multi-party competition are less vulnerable to electoral surprises and therefore less likely to be forced into liberalizing concessions than regimes where such party competition was previously banned. Combined with the fact that

military regimes and monarchies tend to be significantly more vulnerable to non-electoral liberalizations, this finding confirms that despite their inherent risks for authoritarian incumbents, genuinely competitive elections can play a crucial role for the survival of authoritarian regimes, which otherwise run a greater risk of miscalculating the real power balance in the country. This helps to account for the apparent stability of many hybrid regimes in the post-Cold War era that some had thought to be an inherently unstable form of regime.

We have focused on the political dynamics of liberalization, rather than longer term structural forces that shape regime dynamics. However, the information theory of elections is intended to complement rather than replace structural explanations, providing a theory of short term political change. There is nothing in the information theory itself that tells us what to expect in terms of the durability of a given political opening. Nevertheless, the theory we have developed, and the taxonomy of liberalizations it implies, does frame a broader research agenda on political liberalization and democratization in the post-Cold War era. This agenda includes specifying in more detail what other factors interact with elections to make liberalization more likely, identifying when elections might lead not to liberalization but to authoritarian reversal, and understanding better which kinds of liberalization are more durable. A related agenda is to think more about the first stage in our two-stage framework and develop more theory and analysis of when authoritarian incumbents are likely to hold elections of different types. This might involve thinking about the relative strengths and weaknesses of different incumbents and how they balance their desire for information with their goal of stability.

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Appendix

Table 1 Liberalization Modes and Election Types In the Post-Cold War Era

		Liberalizing moment type						
		Non-electoral	Finishing touch election	Voluntary electoral liberalization	Forced electoral liberalization	Electoral turnover	Electoral revolution	Total
Election type	No election	17	0	0	0	0	0	1,228
	Sham	1	0	0	0	0	0	60
	Seriously flawed	0	3	5	3	0	6	137
	Somewhat flawed	0	18	13	5	12	1	162
	Free and fair	0	3	0	0	5	0	86
Total		18	24	18	8	17	7	

Table 2: Elections and political liberalization

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Liberalizing moment	Liberalizing moment	Liberalizing moment (alternative)	Liberalizing moment (alternative)	Liberalizing moment	Liberalizing moment	Liberalizing moment
Election year	2.244** (.292)		1.612** (.397)			1.702** (.328)	
Sham election		-.012 (1.124)		.164 (1.276)			-1.183 (1.135)
Seriously flawed election		1.728** (.380)		1.209* (.496)			1.816** (.530)
Somewhat flawed election		3.606** (.414)		2.632** (.545)			3.673** (.573)
Free & fair election		2.541** (.617)		2.289** (.678)			-.106 (1.953)
Elections of chief executive					2.495** (.352)		
Other elections					1.269** (.395)		
Military spending	-.177 (.362)	-.190 (.353)	.107 (.365)	.101 (.360)	-.413 (.411)	-.289 (.336)	-.283 (.350)
Anti-government demonstrations	.806** (.280)	.844** (.259)	.662* (.296)	.677* (.291)	.429 (.318)	.835** (.277)	.756** (.288)
GDP/capita (t-1)	-.147 (.296)	-.062 (.274)	-.083 (.359)	-.052 (.326)	.096 (.334)	-.079 (.291)	.046 (.309)
GDP chg (t-1)	-.022 (.015)	-.024 (.015)	-.029* (.015)	-.030# (.016)	-.038* (.018)	-.022 (.016)	-.026 (.017)
Natural resource rents	-.171 (.123)	-.174 (.113)	-.233 (.176)	-.253 (.168)	-.189 (.150)	-.179 (.120)	-.229# (.121)
Income inequality	-.000 (.025)	-.005 (.024)	-.037 (.030)	-.038 (.029)	-.010 (.028)	-.006 (.024)	.002 (.025)
Ethnic fractionalization	.547 (.832)	.066 (.741)	.173 (1.064)	-.166 (.990)	1.143 (.904)	.571 (.814)	-.089 (.797)
Regional democracy	.128 (.194)	.069 (.174)	.608** (.233)	.544* (.240)	.206 (.210)	.091 (.188)	.065 (.174)
Population	-.093 (.136)	-.074 (.134)	-.027 (.187)	-.022 (.188)	.009 (.158)	-.120 (.130)	-.030 (.126)
Urbanization	.006 (.012)	.003 (.011)	.007 (.015)	.006 (.014)	.009 (.014)	.006 (.012)	.002 (.012)
FH pol rights (t-1)	-.375** (.093)	-.670** (.110)	-.536** (.144)	-.746** (.151)	-.470** (.101)	-.364** (.092)	-.498** (.101)
Observations	1587	1588	1507	1508	1259	1587	1561

Logistic regression coefficients with standard errors in parentheses (one-tailed where appropriate) * significant at 5%; ** significant at 1%

Note: Also included in the regressions but not presented here are dummy variables indicating missing data.

Table 3: Elections, information environments and institutions

	(1)	(2)	(3)	(4)	(5)	(6)
	Lib moment	Forced lib moment	Lib moment	Forced lib moment	Forced lib moment	Lib moment
Seriously flawed election	2.316** (.553)	3.435** (.830)	1.660 (1.190)	3.067# (1.663)		
Broadly clean election	2.167** (.367)	3.415** (.503)	5.357** (1.301)	7.125** (1.358)	6.001** (1.774)	
Seriously flawed election* Press freedom	.474 (.899)	.241 (.874)				
Broadly clean election* Press freedom	-.992* (.496)	-1.799** (.545)				
Press freedom	-.064 (.272)	.768* (.348)				
Seriously flawed election * FH civ liberties (t-1)			.151 (.484)	.001 (.661)		
Broadly clean election* FH civ liberties (t-1)			-1.081** (.400)	-1.357** (.383)		
FH civ liberties (t-1)			-.086 (.149)	.313# (.169)		
Broadly clean election* Multi-party-authoritarian					-3.153* (1.835)	
Multi-party-authoritarian					.044 (.661)	
Election year						2.260** (.438)
Election year* Monarchy/ military/ theocracy						-.859 (.777)
Monarchy/military/ theocracy						1.386* (.619)
Military spending	-.207 (.325)	-.557 (.421)	-.235 (.365)	-.607 (.432)	-.270 (.385)	-.285 (.287)
Anti-government demonstrations	.665* (.265)	.640 (.403)	.627* (.263)	.638 (.402)	.961* (.392)	.951** (.277)
GDP/capita (t-1)	-.105 (.300)	.169 (.354)	-.031 (.324)	.187 (.383)	-.004 (.378)	-.009 (.307)
GDP chg (t-1)	-.030# (.016)	-.045* (.019)	-.024 (.016)	-.037# (.022)	-.031 (.020)	-.032* (.015)
Natural resource rents	-.156 (.114)	-.179# (.107)	-.184 (.121)	-.211# (.119)	-.094 (.087)	-.137 (.106)
Income inequality	-.000 (.022)	.013 (.029)	-.003 (.024)	.010 (.032)	-.011 (.031)	-.014 (.024)
Ethnic fractionalization	.214 (.810)	-.575 (.890)	.275 (.816)	-.589 (.899)	.247 (1.121)	.880 (.991)
Regional democracy	-.022 (.181)	.042 (.211)	.039 (.186)	.055 (.208)	-.079 (.210)	.014 (.177)
Population	-.047 (.116)	.024 (.166)	-.009 (.120)	.065 (.167)	-.190 (.167)	-.154 (.127)
Urbanization	-.002 (.011)	-.028 (.018)	-.001 (.012)	-.023 (.018)	-.019 (.020)	.000 (.013)
Observations	1550	1572	1559	1582	1505	1511

Logistic regression coefficients with standard errors in parentheses (one-tailed where appropriate) * significant at 5%; ** significant at 1%

Note: Also included in the regressions but not presented here are dummy variables indicating missing data.

Table 4: Substantive effects of elections on the likelihood of liberalization

	Probability of non-FT liberalizing moment %	Probability of forced liberalizing moment %	Based on model/table
All variables at mean	3.2	0.9	6/2&2/3
Election year	9.6**		6/2
Elections for chief executive	15.0**		5/2
Other elections	5.0*		5/2
Sham election	1.0		7/2
Seriously flawed election	9.0**		7/2
Somewhat flawed election	26.4**		7/2
Free and fair election	2.4		7/2
Broadly free election in low press freedom context	39.5**	30.3**	1/3&2/3
Broadly free election in high press freedom context	6.1*	5.1*	1/3&2/3
Broadly free election in low civil liberties context	59.5**	46.4**	3/3&4/3
Broadly free election in high civil liberties context	1.9	2.3	3/3&4/3
Broadly clean election in multi-party-authoritarian		9.2**	5/3
Broadly clean election in non-multi-party-authoritarian		61.7**	5/3
Non-election year in monarchy/military/theocracy	4.5*		6/3
Election year in monarchy/military/theocracy	15.2**		6/3
Non-election year in non-monarchy/military/theocracy	1.2		6/3
Election year in non-monarchy/military/theocracy	9.4**		6/3

Note: Predicted probability calculated using relogitq command in Stata 10 while keeping other variables at their mean. Statistical significance of difference from baseline * 5% ** 1%

Figure 1: Information and Liberalizing Electoral Outcomes

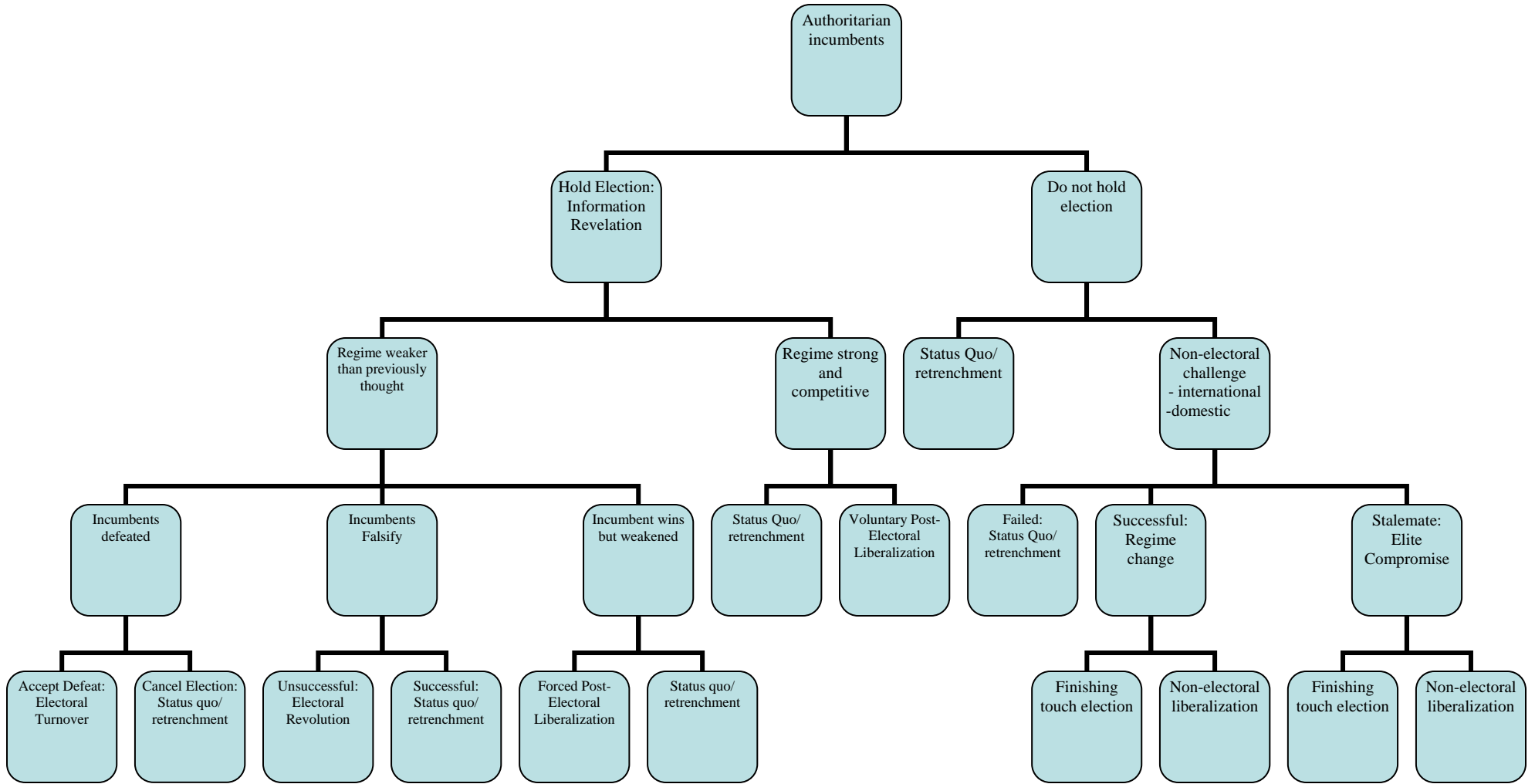
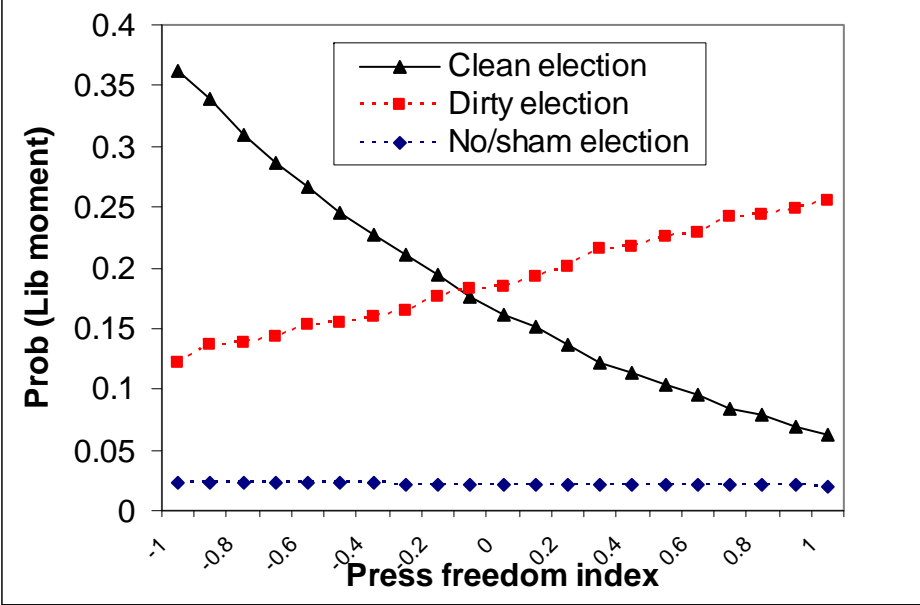


Fig. 2: Press freedom, election type and liberalization



Electronic appendix 1 - Operationalizing Liberalizing Moments

Howard and Roessler define liberalization as a simultaneous three-point improvement on the 21-point Polity scale and a one-point improvement in Freedom House political rights represents a useful starting point for a systematic analysis of liberalizing moments. Nonetheless, a closer look at the results produced by these coding criteria, suggests two types of limitation of a rigid approach to identifying liberalizing moments.

The first limitation is of a primarily technical nature, and can be illustrated by discussing a few of the more prominent cases, which would arguably be misclassified by the Howard-Roessler coding scheme. One such case is the Georgian Rose Revolution of 2004, which would not qualify as a liberalizing moment under the “Polity3&FH1” rule because its two-point Polity score improvement fell short of the three-point threshold. Since there is no particular theoretical reason for using a three rather than a two-point cutoff,¹⁹ we have decided to use a “Polity2&FH1” version of the variable, which slightly expands the universe of “liberalizing moments.”

However, even with this lower threshold we would miss several prominent liberalization episodes, including the end of Apartheid in South Africa in 1993-4 and the political opening in Slovakia following the electoral defeat of Vladimir Meciar’s HZDS in the September 1998 elections. In both cases the problem stems from the fact that the 2-point Polity score improvement occurs in the year preceding the FH-improvement. Since this discrepancy is due different approaches to coding changes²⁰ not to disagreements about the nature of the liberalizing event, our variable version also captures such episodes with artificial coding lags.²¹

¹⁹ Howard and Roessler (2006:369) argue that a 1-point change on the 7-point FH scale is mathematically equivalent to a 3-point change on the 21-point Polity scale. However, these changes are not necessarily theoretical equivalents, both because of the extensive disagreements between the two sources and because 1-point FH improvements are almost three times more frequent than 3-point Polity improvements for the countries in our sample.

²⁰ Thus, Polity indicates a specific date for a regime score change (10/30/1998 for Slovakia) while Freedom House updates scores once a year and attempts to capture civil and political freedoms in a given year, which means that political changes occurring late in the year (as in Slovakia) are only reflected in the scores for the following year.

²¹ We decided to assign such lagged liberalizing moments to the first year in which one of the two sources (usually Polity) recorded a change. Moreover, we made sure that this approach did not result in the artificial proliferation of consecutive liberalizing moments (e.g. in situations with two consecutive one-year FH improvements and a Polity improvement in only one of those years).

Electronic Appendix 2: Countries, Years and Liberalizing Moment Type

Country	Year	Lib. Mom. Type	Country	Year	Lib. Mom. Type	Country	Year	Lib. Mom. Type
Albania	1992	5	Ghana	1996	3	Mozambique	1994	2
Albania	2001	3	Ghana	2000	5	Nepal	2006	1
Algeria	1995	3	Ghana	2004	2	Nicaragua	1995	1
Algeria	2004	3	Guatemala	1996	2	Niger	1992	1
Armenia	1998	2	Guinea-Bissau	1994	2	Niger	1993	5
Azerbaijan	1992	2	Guinea-Bissau	2005	2	Niger	1999	2
Bahrain	2001	1	Guyana	1992	2	Nigeria	1998	1
Bahrain	2002	3	Haiti	1994	1	Nigeria	1999	3
Burundi	1998	1	Haiti	2006	4	Paraguay	1992	1
Burundi	2001	1	Indonesia	1998	1	Peru	1993	1
Burundi	2005	3	Indonesia	1999	5	Peru	2000	6
Cambodia	1993	5	Indonesia	2004	5	Peru	2001	2
Cambodia	1998	4	Jordan	1992	1	Romania	1996	5
Cameroon	1992	4	Kenya	1997	4	Senegal	2000	5
Central African Republic	1993	5	Kenya	2002	5	Serbia and Montenegro	2000	6
Comoros	2002	4	Kuwait	1992	2	Sierra Leone	1996	2
Comoros	2004	4	Kyrgyz Republic	2005	6	Sierra Leone	1998	1
Comoros	2006	5	Lesotho	1993	2	Sierra Leone	2002	2
Congo, Rep.	1992	2	Lesotho	2002	4	Slovak Republic	1998	5
Congo, Rep.	2001	1	Liberia	1997	3	South Africa	1993	1
Cote d'Ivoire	2000	6	Liberia	2003	1	South Africa	1994	3
Croatia	2000	5	Liberia	2005	2	Taiwan, China	1992	3
Djibouti	1999	3	Macedonia, FYR	2002	5	Tajikistan	1997	1
Dominican Republic	1996	5	Madagascar	1992	2	Tanzania	1995	3
Ecuador	1998	2	Malawi	1994	2	Tanzania	2000	3
Egypt	2005	2	Mali	1992	2	Thailand	1992	6
Ethiopia	1995	2	Mauritania	2006	3	Uganda	1993	1
Gambia	2001	3	Mexico	1997	3	Ukraine	1994	5
Georgia	1995	3	Mexico	2000	5	Ukraine	2005	6
Georgia	2004	6	Moldova	1994	4	Zambia	2001	2
Ghana	1992	3	Mongolia	1992	2			

Key: 1 = non-electoral liberalization, 2 = elections as finishing touch to largely non-electoral liberalization, 3 = voluntary electoral liberalization, 4 = forced electoral liberalization, 5 = electoral turnover, 6 = electoral revolution.

Electronic Appendix 3: Statistical Measures and Sources

	Measure	Source
Liberalizing Moment	Improvement of 2 points on Polity 2 and 1 point on Freedom House Political Rights associated with the same political process. Where both sources noted a one-point improvement or where one of the sources noted a large improvement (at least 2 points on FH or 3 points on Polity) while the other source did not, we used changes in two additional sources (Coppedge 2008 and Cingranelli and Richards 2009) to decide whether the case constitutes a liberalizing moment.	PolityIV Project, Freedom House, Coppedge (2008), Cingranelli and Richards (2009)
Election year and Election Schedule	Dummy for National Executive and Legislative Election	Lindberg (2006) Interparliamentary Union www.ipu.org ; www.electionguide.org ; Binghamton Election Results Archive http://www.binghamton.edu/cdp/era/index.html ; OSCE www.osce.org ; African Elections Database www.africanelections.tripod.com Economistic Intelligence Unit Country Profiles www.eiu.org Lexis-Nexis Academic
Election Quality	Sham election: Elections without any competition, including single party or uncontested elections. Seriously flawed elections: Limited or highly unfair competition rendering results meaningless. Somewhat flawed elections: Elections with significant violations of international electoral norms but that nevertheless produce a competitive result. Free and fair elections: Elections that conform to international democratic standards	Primary Codings were created consulting Executive Summaries of Election monitoring reports of the OSCE, European Union, Council of Europe, Carter Center, National Democratic Institute, Organization of American States and African Union. For African elections, we adopted all codings from Lindberg (2006) Where none of these sources were available codings were made on the basis of searching: Interparliamentary Union www.ipu.org ; www.electionguide.org ; African Elections Database www.africanelections.tripod.com Economistic Intelligence Unit Country Profiles www.eiu.org Lexis-Nexis Academic
Type of Liberalization	Non-electoral liberalizations: Elections play no part. Finishing-touch elections: Elections complete a liberalization but play no causal role. Electoral liberalizations: Authoritarian incumbents initiate liberalization including at least semi-competitive elections, further liberalization takes place subsequent to the elections. Electoral turnover: Illiberal incumbents are defeated at the ballot box, accept defeat and exit from office. Electoral revolutions: Incumbents prevail in dubious elections, provoking protests and demonstrations that lead either to new improved elections or to authoritarian withdrawal.	Lexis-Nexis Academic Economistic Intelligence Unit Country Profiles www.eiu.org
GDP	Gross Domestic Product in constant (1995) US dollars	World Bank
Population		World Bank
Inflation	Consumer Price Inflation	World Bank
Natural resource	Log of Gas and Oil Rents per capita	USAID/Dunning 2008

rents		
Income inequality	Income Share of Highest Quintile	World Development Indicators
Ethnic fractionalization	Index of ethno-linguistic fractionalization is an average of the Annett and the two Fearon indices of ethnolinguistic fractionalization (Annett 2001; Fearon 2003; Fearon and Laitin 2003).	USAID
Regional democracy	Regional Average of Freedom House Political Rights Scores.	Freedom House: www.freedomhouse.org
Urbanization	Percentage of Population living in urban areas	World Bank
Corruption index	Index of Transparency International Corruption Perceptions Index, ICRG and World Bank Corruption Control Index	Transparency International, ICRG and World Bank
Anti-government demonstrations	Number of peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority, excluding demonstrations of a distinctly anti-foreign nature.	Banks et al. Cross-National Time-Series Data Archive
Democracy aid/GDP	Log of Total USAID Support for Democracy and Governance Programs in constant 1995 US Dollars	USAID
Non-Democracy aid/GDP	Log of Total USAID support for sectors other than Democracy and Governance Programs in constant 1995 US Dollars	USAID
Debt Service	Log of debt service obligations as percentage of GDP	USAID

Electronic Appendix 4: First stage regression results for election timing and election type

	(1)	(2)	(3)	(4)	(5)
	Election year	Sham election	Seriously flawed election	Somewhat flawed election	Free & fair election
Election scheduled	5.387** (.276)	2.886** (.515)	1.962** (.277)	1.964** (.230)	2.275** (.343)
Regional proportion – sham elections		-516 (1.284)			
Sham election proportion * Prior sham election		-1.241 (1.952)			
Prior sham election		3.280** (.611)			
Regional proportion – seriously flawed elections			1.561* (.689)		
Seriously flawed election prop* Prior seriously flawed election			-2.928** (1.090)		
Prior seriously flawed election			3.561** (.459)		
Regional proportion – somewhat flawed elections				.012 (.580)	
Somewhat flawed election prop* Prior somewhat flawed election				1.542 (1.132)	
Prior somewhat flawed election				1.864** (.498)	
Regional proportion – free & fair elections					-.282 (.764)
Free & fair election prop * Prior free & fair election					.988 (1.234)
Prior free & fair election					2.583** (.571)
Military spending	-.205 (.214)	.159 (.531)	.164 (.273)	-.123 (.241)	-.483 (.426)
Anti-govt demonstrations	.242 (.211)	-.607 (.581)	.222 (.288)	.278 (.249)	.577# (.337)
GDP/capita (t-1)	.054 (.149)	.581 (.374)	-.149 (.204)	-.221 (.180)	.446 (.273)
GDP chg (t-1)	-.037** (.011)	-.007 (.022)	-.010 (.016)	-.013 (.014)	-.055* (.025)
Natural resource rents	-.064 (.064)	-.224 (.161)	.043 (.089)	-.022 (.077)	-.017 (.116)
Income inequality	-.038* (.015)	.020 (.044)	-.047* (.022)	-.005 (.016)	-.012 (.020)
Ethnic fractionalization	.061 (.420)	-1.726# (1.026)	.719 (.595)	.910# (.526)	-.695 (.831)
Population	-.158# (.081)	-.050 (.181)	-.100 (.113)	-.191# (.099)	-.035 (.145)
Urbanization	-.004 (.007)	-.015 (.019)	.005 (.010)	-.003 (.009)	-.012 (.014)
FH pol rights (t-1)	-.002 (.065)	-1.100** (.289)	-.238* (.095)	.104 (.079)	.567** (.137)
Observations	1611	1584	1584	1584	1584

Logistic regression coefficients with standard errors in parentheses # significant at 10% * significant at 5%; ** significant at 1%.

Electronic Appendix 5: Robustness tests

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Election year	1.702** (.328)	1.553** (.371)	1.612** (.325)	2.180** (.396)				
Sham election					-1.183 (1.135)	-.960 (1.071)	-1.441 (1.224)	1.472 (1.978)
Seriously flawed election					1.816** (.530)	1.761** (.531)	1.641** (.534)	2.366** (.790)
Somewhat flawed election					3.673** (.573)	3.252** (.682)	3.650** (.565)	3.428** (.697)
Free & fair election					-.106 (1.953)	1.385 (2.414)	.151 (1.813)	.333 (1.612)
Military spending	-.289 (.336)	-.459 (.398)	-.321 (.343)	.489 (.675)	-.283 (.350)	-.459 (.406)	-.285 (.350)	.420 (.717)
Anti-government demonstrations	.835** (.277)	.672* (.316)	.933** (.283)	.507 (.407)	.756** (.288)	.560# (.305)	.862** (.288)	.453 (.428)
GDP/capita (t-1)	-.079 (.291)	-.263 (.309)	-.113 (.302)	-1.354 (1.066)	.046 (.309)	-.155 (.338)	-.001 (.322)	-1.243 (1.121)
GDP chg (t-1)	-.022 (.016)	-.023 (.017)	-.021 (.015)	.002 (.024)	-.026 (.017)	-.024 (.019)	-.024 (.017)	-.011 (.027)
Natural resource rents	-.179 (.120)	-.133 (.132)	-.198# (.120)	.048 (.503)	-.229# (.121)	-.199 (.134)	-.242* (.120)	.101 (.541)
Income inequality	-.006 (.024)	-.011 (.027)	-.002 (.024)	-.033 (.041)	.002 (.025)	-.009 (.027)	.005 (.025)	-.017 (.043)
Ethnic fractionalization	.571 (.814)	-.081 (.813)	.666 (.818)		-.089 (.797)	-.607 (.822)	.072 (.795)	
Regional democracy	.091 (.188)	.294 (.212)	.055 (.195)	.751 (.774)	.065 (.174)	.245 (.214)	.025 (.181)	.494 (.840)
Population	-.120 (.130)	-.030 (.143)	-.129 (.126)	-2.204 (2.687)	-.030 (.126)	.034 (.137)	-.051 (.123)	-3.621 (2.890)
Urbanization	.006 (.012)	.016 (.011)	.006 (.012)	.158 (.110)	.002 (.012)	.011 (.013)	.002 (.012)	.187# (.113)
FH pol rights (t-1)	-.364** (.092)	-.130 (.119)	-.380** (.088)	-1.014** (.189)	-.498** (.101)	-.305* (.132)	-.533** (.100)	-1.011** (.197)
Lower regime cutoff	No	Yes	No	No	No	Yes	No	No
Exclude countries w/o elections	No	No	Yes	No	No	No	Yes	No
Fixed effects	No	No	No	Yes	No	No	No	Yes
Observations	1587	1081	1496	602	1561	1058	1473	594

Logistic regression coefficients with standard errors in parentheses # significant at 10% * significant at 5%; ** significant at 1%.

For additional robustness tests of our main findings in Table 2, we re-ran the regressions in models 6 and 7 of Table 2 in a number of different ways. In models 2 and 6, to make sure that our findings were not driven by the inclusion of fairly democratic regimes, we used a lower regime score cutoff for a country to be included in our dataset (from 8 to 6 for the Polity regime score and from 2 to 3 on the Freedom House Political Rights score), which resulted in the loss of almost a third of our observations. In models 3 and 7, we only excluded countries (such as Saudi Arabia or Libya) which during the time period of our analysis did not have provisions for elections, in order to test whether the election-liberalization link is due to the fact that the world's worst regimes do not even bother to hold elections. In models 4 and 8 we used country-fixed effects to deal with the possibility that our findings could be driven by unobservable factors

at the country level. Such an approach leads to the elimination of almost two thirds of the observations, since countries that experienced no liberalizations have no variation on the DV and are dropped from the analysis. Finally, models 1 and 5 simply reproduce the baseline results from models 6 and 7 in Table 2.

The results above confirm that our results are remarkably robust despite the large changes in sample composition and estimation method. Thus, the substantive and statistical significance for the coefficients of the election timing and election type variables barely changed when we changed the sample to exclude either more democratic countries or the countries without election provisions. The only partial exception was the increase in the size of the free and fair election coefficient in model 6, but even in that case the results were very modest in statistical terms, and therefore fail to question our overall findings. Meanwhile, the results of the fixed effects models differed more substantially but they suggested *larger* substantive effects for election timing (model 4) and seriously flawed elections (model 4), while the coefficient was slightly reduced of somewhat flawed elections (model 4).