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Abstract

This paper explores the role of threats from below in the emergence of electoral authoritarianism. Mass uprisings for democratic regime change undermine closed authoritarian regimes by making it difficult for autocrats to maintain their regimes through repression and co-optation. Anti-regime uprisings also promote the establishment of electoral authoritarianism by toppling existing closed regimes or by compelling autocrats to offer political reform as a survival strategy. My analysis of closed authoritarian regimes, from 1961 to 2006, reveals that anti-regime mass uprisings are significantly associated with transitions to electoral authoritarianism. I also find that nonviolent uprisings are more likely than violent uprisings to result in the establishment of electoral authoritarianism and that the effect of anti-regime uprisings on transitions to electoral authoritarianism is greater when a country is surrounded by more democracies or is ethnically or religiously homogeneous.

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Przeworski (2009, p.291) poses a question fundamental to democratic political reform: "Why would people who monopolize political power ever decide to put their interests or values at risk by sharing it with others? Specifically, why would those who hold political rights in the form of suffrage decide to extend these rights to anyone else?" He argues that revolutionary threats compel elites to acquiesce to demands for institutional reform. This article asks a similar question regarding the introduction of multiparty elections for the national executive and legislature in authoritarian regimes. Why would autocrats embrace electoral competition that puts their own interests at risk?

Given the widespread adoption of authoritarian elections, a growing body of studies purports to explain the functional roles of multiparty elections in autocracies.[1] These studies tend to "view the establishment of elections as a means by which dictators hold onto power" (Gandhi & Lust-Okar, 2009, p.404). Yet as Brancati (2014, p.321) points out, researchers often "infer leaders' motivation for adopting nominally democratic institutions from the outcomes they produce." Inferring the reasons for the emergence of multiparty elections from the roles those elections play in regimes, however, assumes that the functions served by authoritarian elections also explain their causes, which is not necessarily true (Brancati, 2014, p.321; Gandhi & Lust-Okar, 2009, p.407).

Consequently, the current literature is plagued by a lack of systematic cross-national studies on the establishment of electoral authoritarianism (EA). EA regimes have multiparty elections with universal suffrage for the executive and legislature. This absence is in marked contrast to the accumulation of sophisticated empirical studies on the determinants of democratization (e.g., Acemoglu, Johnson, Robinson, & Yared, 2008). Researchers have yet to develop a systemic understanding of what factors are significantly associated with regime change to EA as well as whether the determinants of democratization also promote such

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[1]According to recent studies, authoritarian elections 1) provide information about the underlying support for a regime (Magaloni, 2006) and the strength of the opposition (Cox, 2009); 2) efficiently distribute patronage to regime insiders, citizens, and the opposition (Blaydes, 2010; Magaloni, 2006); and 3) co-opt the opposition (Gandhi & Przeworski, 2007).

transitions.

In this article, I analyze the role of mass uprisings[2] in prompting transitions from closed regimes to EA regimes,[3] drawing on mass-based perspectives about democratization (Acemoglu & Robinson, 2006; Bratton & Walle, 1997; Bunce & Wolchik, 2010; Przeworski, 1991; Schedler, 2013; Wood, 2000). Widespread and sustained mass uprisings demanding democratic reform produce significant social unrest and political instability, undermining the regime's legitimacy and thereby precipitating regime overthrow. Therefore, anti-regime mass uprisings pose a credible threat to leader tenure, making it difficult for autocrats to maintain their rule through repression and co-optation. I propose that mass uprisings promote the emergence of EA in two ways: 1) They can topple existing closed regimes, which may lead to the establishment of new EA regimes, or 2) they can compel authoritarian elites to offer political reform as a survival strategy without producing leadership change.

In my analysis of closed authoritarian regimes from 1961 to 2006, I find strong evidence for a relationship between mass uprisings for regime change and transitions to electoral autocracies. Anti-regime uprisings prompt both EA transitions with and without leadership turnover. Furthermore, my analyses confirm that EA transitions follow anti-regime uprisings, not the other way around. Last, consistent with previous studies on nonviolent movements (Celestino & Gleditsch, 2013; Chenoweth & Stephan, 2011; Schock, 2005; Sharp, 1973), I find that nonviolent uprisings are more likely than violent uprisings to result in the establishment of EA and that the effect of nonviolent anti-regime uprisings on EA transitions is enhanced when a country is both surrounded by more democracies and less ethnically fractionalized.

This article contributes to the burgeoning literature on EA by systematically exploring the role of popular protests in initiating specific regime changes and by evaluating such protests against the political and socio-economic factors emphasized by competing explanations. My

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[2]I use the terms "mass uprisings," "mass mobilization," and "mass protests" interchangeably throughout the article.

[3]Transitions from closed authoritarianism account for 82% of transitions to EA. See Table A2.

study also weighs in on the ongoing debate over the extent to which popular protests prompt the collapse of authoritarian regimes and promote political liberalization. These results contribute to a growing body of quantitative evidence demonstrating the importance of popular protests in prompting suffrage extensions (Aidt & Jensen, 2014; Przeworski, 2009) and democratization (Celestino & Gleditsch, 2013; Teorell, 2010; Ulfelder, 2005). Last, this study provides a rare cross-national examination of transitions to EA regimes, highlighting the importance of both mass protests and international factors.

Electoral Authoritarianism

Scholars generally agree over two defining characteristics of electoral authoritarianism: the existence of electoral contestation and the violation of democratic principles of freedom and fairness. The first attribute distinguishes electoral authoritarian regimes from "closed" authoritarian regimes (Howard & Roessler, 2006; Schedler, 2013). EA regimes regularly allow electoral contest for executive power, although elections are often flawed and minimally competitive. Hence, EA regimes also differ from multiparty autocracies, which emphasize party pluralism without subjecting the head of government to electoral competition (Schedler, 2013, p.82). Thus, authoritarian regimes, such as Jordan, Kuwait and Morocco, that allow for multiparty competition only in legislative or subnational elections do not qualify as electoral autocracies.

On the other hand, the formal properties of representative institutions do not distinguish between electoral autocracies and democracies. As Diamond (2002, p.28) notes, "the distinction between electoral democracy and electoral authoritarianism turns crucially on the freedom, fairness, inclusiveness, and meaningfulness of elections." When an electoral regime fully violates at least one of these minimum attributes of democratic elections, it qualifies as EA (Schedler, 2013, p.80). In EA regimes, violations of the democratic principles through electoral manipulation are both frequent and serious enough that the regime fails to meet conventional minimum standards for democracy (Levitsky & Way, 2010; Schedler, 2013).

Theoretical Discussion

I argue that mass uprisings demanding regime change promote institutional reform. In making this argument, I follow extant scholarship on political liberalization and democratization from below, focusing on the conflict between regime insiders and opposition actors (Acemoglu & Robinson, 2006; Bratton & Walle, 1997; Bunce & Wolchik, 2010; Chenoweth & Stephan, 2011; Howard & Roessler, 2006; Wood, 2000). According to this perspective, multiparty politics are "extorted concessions" (Cox, 2009, p.4) in that autocrats are compelled to hold elections in response to popular revolutionary threats. Below, I describe how mass protests for regime change undermine closed authoritarian regimes and promote the introduction of multiparty politics. I also explain why nonviolent protests are more effective in doing so than violent protests.

Anti-regime Uprisings and Emergence of Multiparty Elections

Widespread and sustained mass protests seeking regime change pose a direct threat to incumbent authoritarian regimes simply because they can expel long-ruling autocrats and overthrow incumbent regimes (Teorell, 2010; Ulfelder, 2005). Such protests signal not only widespread discontent with the government but also the potential for regime change, demonstrating that many obstacles to mobilizing and organizing popular support, to a degree, have been overcome. Mass movements often serve as focal points for facilitating coordination against the government. When anti-regime movements mobilize a large number of people, they enjoy substantial resources and are thus more capable of producing significant social and political unrest and undermining the regime legitimacy (Sharp, 1973).

Autocratic leaders facing these mass uprisings face many political hazards. Repressive strategies targeting large numbers of people entail considerable costs, though high costs do not always deter autocratic elites (Bellin, 2004). Repression risks undermining support for the incumbent regime by creating dissent among regime supporters and provoking international condemnation (Chenoweth & Stephan, 2011; Levitsky & Way, 2010; Teorell,

2010). Additionally, agents responsible for perpetrating repression may refuse to follow orders due to moral constraints, fears of international prosecution, or concerns about other forms of public retribution (Levitsky & Way, 2010; Nepstad, 2013). For example, military defections were critical to the outcome of several popular uprisings, in particular the "Color Revolutions" of the early 2000s and the "Arab Spring" of 2010-2012 (see Beissinger, 2007; Brownlee, Masoud, & Reynolds, 2015; Nepstad, 2013).

Figure 1 about here

Supporting this claim, Figure 1 demonstrates that mass uprisings threaten not only autocratic leaders' tenure but also autocratic regime survival. The risks of leader removals and regime breakdowns are significantly higher in the presence of popular uprisings seeking to overthrow the regime. Similarly, Geddes, Wright, and Frantz's (2014) data on autocratic regimes show that one in four autocratic collapses and one in three coerced autocratic breakdowns are due to violent or nonviolent popular uprisings.

Therefore, mass uprisings make it difficult for autocrats to maintain closed regimes through repression and co-optation. Accumulating costs of popular uprisings induces other elites to pressure the government into making democratic concessions to regime opponents (Wood, 2000). When mobilization reaches a sufficient magnitude, widespread protests compel dictators to gamble on whether to resist popular uprisings or concede to demands for far-reaching institutional reforms (Acemoglu & Robinson, 2006). Either option is not attractive because embracing multiparty elections can create opportunities for periodic challenges. Indeed, even authoritarian multiparty elections sometimes produced close election results, electoral defeats, and leadership turnovers (Bunce & Wolchik, 2010; Howard & Roessler, 2006; Levitsky & Way, 2010).

Figure 2 about here

Nevertheless, political reforms establishing multiparty elections can give ruling elites the opportunity to retain or regain political power when faced with mass unrest. Elites may be

confident that they can control the electoral process and survive multiparty elections (Joseph, 1997). Additionally, losing power through competitive elections results in better post-ousting fates than losing power through irregular means. As illustrated in Figure 2, only around 35% of autocrats who were ousted through elections suffered exile, jail, or death while more than 80% of autocrats who were irregularly removed suffered similar fates. Ruling elites may thus prefer conceding to multiparty elections to risking violent exits (see also Debs, 2016). This is true particularly when popular protests increase the risk of irregular leader removal. Hence, mass protests can induce elites to calculate the costs of allowing multiparty elections as lower than the risks of maintaining the status quo.

This discussion suggests two pathways from closed to electoral authoritarianism. First, popular uprisings can topple a long-standing dictator and lead to the establishment of a new electoral regime by building representative institutions, including multiparty elections. However, the emergence of the new electoral regime does not necessarily lead to democratization since newly elected elites could manipulate election results and continue to restrict political and civil liberties. Post-communist countries Armenia, Romania, Russia, Serbia, and Ukraine followed this path (Levitsky & Way, 2010). Data show that ten of the ninety-one EA transitions during the period of 1946-2006 were preceded by large-scale anti-regime uprisings and irregular leader turnovers (see Table 1 below).

Second, popular threats can compel rulers to adopt multiparty competition as a partial concession. However, autocrats may continue to hold power through electoral manipulation. Many dictators in sub-Saharan African countries, such as Gambia, Niger, and Sudan, faced increased popular discontent accompanying the economic decline of the 1990s (Bratton & Walle, 1997; Herbst, 2001). Recognizing the need to renew their political legitimacy, they opted to adopt multiparty elections while remaining in power and controlling the transition process. According to Bratton and Walle (1997, p.117), twenty-eight of forty-two sub-Saharan African countries experienced mass protests between 1988 and 1992, and all of them underwent political liberalization by the end of that period. In this pathway to EA, the introduction of

multiparty politics is a response by ruling elites to popular threats. My calculation shows that twenty-four EA transitions were preceded by a large-scale anti-regime uprising without irregular leader turnovers. Accordingly, my first hypothesis is as follows:

H1 Closed authoritarian regimes are more likely to introduce multiparty politics when faced with anti-regime uprisings.

Widespread and sustained popular protests also trigger democratization, thereby precipitating the introduction of multiparty politics. As Schedler (2013, p.60) argues, democratization is "a two-stage fight, first over the introduction of representative institutions and then over their effectiveness." O'Donnell and Schmitter (1986, p.3) characterize the move to multiparty politics as "transitions from certain authoritarian regimes toward an uncertain 'something else'." Thus, when regime actors successfully control the process of multiparty elections to thwart opposition challenges, and opposition actors cannot prevent electoral and institutional manipulations, transitions will fall short of democratization (Levitsky & Way, 2010). Even where mass protests force incumbent autocrats out of power, transitions may give rise to new authoritarian regimes with nominally democratic institutions.[4]

Violent vs. Nonviolent uprisings

Several scholars have argued that nonviolent uprisings are more effective at promoting regime transition than violent uprisings (Celestino & Gleditsch, 2013; Chenoweth & Stephan, 2011; Schock, 2005; Sharp, 1973). Examining all known 323 cases of violent and nonviolent uprisings from 1900 to 2006, Chenoweth and Stephan (2011) demonstrate that nonviolent campaigns are more likely to oust incumbent governments and result in transitions to democracy than violent campaigns. Teorell (2010) and Celestino and Gleditsch (2013) similarly find that nonviolent mobilization is more likely to promote democratic transitions than violent mobilization.

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[4]An important question is under what conditions anti-regime uprisings lead to democratization rather than to electoral authoritarianism. This question is beyond the scope of this paper and is the domain of future research.

Previous studies have also identified a number of explanations for the efficacy of nonviolent uprisings at toppling closed authoritarian regimes and prompting transitions to EA. First, nonviolent movements mobilize more participants both because they tend to occur in urban areas and because they make a greater effort to attract participants. Second, repressing nonviolent uprisings is riskier than repressing violent uprisings, as the repression of nonviolent uprisings can prompt defections by members of coercive agencies and initiate even more mobilization against the regime. These two characteristics enable nonviolent uprisings to pose a greater threat to regimes. Last, nonviolent uprisings are more likely to result in bargaining with the regime, creating a greater schism between elite hard-liners and soft-liners. Authoritarian elites are thus more likely to make political concessions in the face of nonviolent protests. Overall, this discussion leads to my second hypothesis:

H2 Nonviolent anti-regime uprisings are more effective than violent anti-regime uprisings in promoting the establishment of EA.

Conditional Effects of Anti-regime Uprisings

The effect of anti-regime uprisings may vary in different contexts. Building on previous research on regime changes, I explore three contextual factors that may condition the effect of mass protests on EA transitions.[5]

First, elite-based theories emphasize the importance of divisions within ruling elites in precipitating political liberalization (e.g., O'Donnell & Schmitter, 1986). Elite splits increase the likelihood of negotiation between soft-liners of the ruling group and moderate elements of the opposition. In addition, Svolik (2012) shows that more than two-thirds of dictators who lost power in an irregular fashion from 1945 to 2008 were removed by coups executed by regimes insiders. However, these arguments do not invalidate the importance of popular uprisings in precipitating transitions to EA as threats from below interact with threats from within Schedler, 2013, p. 36; Przeworski, 1991, p. 57; Wood, 2000. Popular

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[5]Space constraints do not allow me to elaborate on these mechanisms, but they deserve more investigation.

protests often cause splits within regimes and coups in that they can signal dissatisfaction with the incumbent ruling elites or facilitate coordination among elites (Beissinger, 2007; Casper & Tyson, 2014) Additionally, Miller (2012, p.1006) claims that "[v]iolent turnover removes the regime's aura of invincibility, providing a clear signal to citizens that the regime can be changed by concerted action" and "can serve as a coordination signal, or triggering event, for regime opponents." Accordingly, where mass movements for regime change coincide with important divisions within regimes, they may be more effective in bringing about EA transitions.

Next, social cleavages based on ascriptive identities, such as ethnicity or religion, may impact the effectiveness of anti-regime uprisings.[6] In more ethnically or religiously fractionalized societies, ethnic or religious ruling groups are more likely to be smaller in size. Furthermore, ethnic or religious tensions can make conflict between ruling groups and excluded groups intractable (Horowitz, 1985). Thus, authoritarian elites in more heterogeneous societies may find multiparty elections less attractive, making them more likely to resist popular protests and refuse to offer political concessions. Meanwhile, social diversity may pose coordination problems for opposition groups, impeding the emergence of unified opposition against the regime (Weingast, 1997).[7] Accordingly, in ethnically or religiously diverse countries, anti-regime protests may be less successful in undermining incumbent regimes or pressuring ruling elites to adopt political reform.

Finally, international context also may shape the power of domestic actors and their preferences for institutions (Celestino & Gleditsch, 2013; Gleditsch & Ward, 2006). When a country has a higher proportion of democratic neighbors, mass movements may be more effective in achieving domestic institutional changes. Regime opponents are more likely to mobilize in order to demand political reform when they seek to emulate the political

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[6]I thank an anonymous reviewer for suggesting this point.

[7]This does not necessarily mean that anti-regime uprisings are less likely to emerge in more heterogeneous societies since shared identities may decrease collective action costs, and ethnic or religious grievances may motivate anti-regime movements.

liberalization and democratization of neighboring, structurally equivalent countries. At the same time, they will be better equipped to engage in anti-regime struggles because they will have greater access to resources from neighboring countries. Last, repression costs to dictators are likely to increase when democracy becomes relatively more common among neighbors. Therefore, the proportion of neighboring democracies will increase the likelihood that popular uprisings lead to institutional changes.

Data

To examine the relationship between mass uprisings for regime change and transitions from closed to EA regimes, I examine all closed authoritarian regimes from 1961 to 2006.[8] A country leaves the risk set in year t when the closed authoritarian regime at year $t-1$ is replaced by an EA regime or by a democracy at year t.

Dependent Variable

The dependent variable is a transition from closed authoritarianism to EA. For the definition of EA, I follow Schedler (2013). Fundamental attributes underpinning EA include the following: 1) elections should be regular; 2) elections should be inclusive in the sense that they are held under universal suffrage; 3) opposition candidates are allowed to participate in national elections; 4) opposition parties are allowed to win votes and seats; and 5) the head of government is subject to electoral competition (Schedler, 2013, p.82). These institutional requirements exclude *de jure* or *de facto* single party regimes that prohibit multiparty competition as well as multiparty autocracies that establish only legislative or subnational elections (e.g., monarchies allowing for only legislative elections).

To measure EA, I rely on the dataset recently developed by Skaaning, Gerring, and Bartusevičius (2015), which covers all independent countries from 1800 to 2013. Skaaning et al. propose a lexical index of electoral democracy that is "a series of necessary-and-sufficient conditions arrayed in an ordinal scale" (p.1492). A regime that establishes and

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[8]I remove periods of foreign occupation, as defined in the Polity IV data. The inclusion of these periods does not change the result.

maintains "minimally competitive, multiparty elections with universal suffrage for legislature and executive" qualifies as an electoral democracy (Skaaning et al., 2015, p.1497).

This dataset provides information on six binary variables to identify electoral democracy: 1) elections for the legislature, 2) elections for the national executive, 3) multiparty competition, 4) male suffrage, 5) female suffrage, and 6) the quality of elections. The first five variables capture all the institutional requirements of electoral authoritarianism proposed by Schedler. The quality of elections measures whether "the elections are, in principle, sufficiently free to enable the opposition to gain power if they were to attract sufficient support from the electorate" (Skaaning et al., 2015, p.1501). This variable is crucial for differentiating democracy, minimally defined, from electoral authoritarianism. Accordingly, a regime is coded as EA when the components 1 through 5 equal one and the quality of elections equals 0.

As a robustness check, I use two alternative measures to define the universe of autocracies. I employ democracy measures from two other datasets on political regimes: Boix, Miller, and Rosato (2013) and Geddes et al. (2014). In their coding of democracy, these datasets explicitly consider electoral quality using multiple sources of information on elections rather than focusing only on election outcomes while holding a procedural definition of democracy.

Independent Variable

To measure large-scale anti-regime uprisings, I draw on the Nonviolent and Violent Campaigns and Outcomes (NAVCO) dataset developed by Chenoweth and Lewis (2013). The dataset provides detailed information on 250 campaigns defined as "a series of observable, continuous, purposive mass tactics or events in pursuit of a political objective" (Chenoweth & Lewis, 2013, p.416) from 1945 to 2006 and on each campaign's onset year and end year. To qualify as a campaign, an uprising must have had at least 1,000 observed participants and discernible leadership. Additionally, the NAVCO dataset includes only major campaigns that at one time claimed "maximalist" goals of removing the existing regime, expelling foreign occupations, or achieving self-determination.

I create *Anti-regime uprising* that includes only campaigns whose goals are related to either "regime change" or "significant institutional reform." *Anti-regime uprising* is a sum of anti-regime campaigns in the previous three years. I also use a different, five-year period, as well as a dichotomous measure of whether an anti-regime campaign has occurred within one-year, three-year, and five-year time frames. The main results remain similar (reported in Section 6 of the Supporting Appendix). I also construct *Other uprising* to include all remaining campaigns pursuing the goals of "territorial secession," "greater autonomy," "anti-occupation," or "policy change." Last, using the information from the NAVCO dataset, I differentiate between primarily nonviolent and violent campaigns.

Table 1 about here

Table 1 presents a cross-tabulation of anti-regime uprisings (in the previous three years) and EA transitions.[9] Nearly 40% of all EA transitions from 1947 to 2006 (thirty-six cases) are preceded by anti-regime uprisings.[10] The table shows that the likelihood of EA transitions significantly varies across different types of popular uprisings, demonstrating the importance of uprisings' strategies and goals. To illustrate, the probability of EA transition given no anti-regime uprising is only 2%. It jumps to 6% following a violent anti-regime uprising and 14% following a non-violent anti-regime uprising. The bottom panel of Table 1 distinguishes EA transition with and without irregular leader turnover in the two-year period before EA transition. Half of EA transitions accompanied by irregular leader turnovers followed anti-regime uprisings. Both types of EA transitions are more likely to occur in the wake of anti-regime uprisings, particularly non-violent ones.

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[9]In the case of multiple campaigns in a country-year, I prioritize nonviolent uprisings and anti-regime uprisings.

[10]When I include anti-government demonstrations from Banks and Wilson (2013) in the measure of anti-regime uprisings, the percentage of EA transitions following popular protests is 70%.

Control Variables

To control for potential confounding variables and alternative explanations, I include a number of control variables based on the existing literature on political liberalization and democratization.

First, I control for domestic political conditions that might affect both popular uprisings and the likelihood of transitions to EA. A more liberalized and open autocracy might allow more mobilization against the regime and be more likely to establish multiparty elections. If so, the estimate of anti-regime uprisings could simply pick up the effect of the prior level of political liberalization. To ensure against this possibility, I include the liberal democracy index taken from the Varieties of Democracy data (Coppedge et al., 2015). In addition, the incumbent regime's strength will be negatively associated with both anti-regime mobilization and political reform. Greater coercive capacity discourages the opposition from mobilizing and organizing, enhancing the regime's survival and dampening prospects for political liberalization (Albertus & Menaldo, 2012; Levitsky & Way, 2010). To proxy *Coercive capacity*, I follow Albertus and Menaldo (2012) in using the size of military personnel per capita taken from the Correlates of War Project. I log-transform this variable after adding 1 to each value since it is right-skewed.

Similarly, political instability can open windows of opportunity during which mass protests are more likely to occur. To control for intra-elite conflicts, I create a binary indicator *Elite unrest* that flags whether failed coup attempts, coup plots, and alleged coup plots occurred in the previous three years. These coup attempts may signal fissure within the ruling elite. Additionally, I include a dichotomous variable *Irregular leader turnover* for whether irregular leadership change has occurred within the last three years.

Economic factors are among the most studied determinants of democratization. As the modernization theory suggests, economic development may generate greater domestic pressure for multiparty elections as well as increase the likelihood of popular uprisings. On the other hand, short-term economic growth may have the opposite effect on regime changes.

I include GDP per capita and and an annual percentage change in per capita GDP (taken from Maddison (2010).)

International factors may also affect EA transitions. Many scholars argue that autocrats establish multiparty elections to obtain international economic and political benefits (Bratton & Walle, 1997; Joseph, 1997; Levitsky & Way, 2010). Thus, I include the degree of aid dependence, operationalized as a natural log of net official development assistance per capita in the previous year (obtained from World Bank (2014)), an indicator of the post-Cold War era, and an interaction term between foreign aid and the post-Cold War period. I also include the proportion of neighboring democracies and electoral autocracies to control for the diffusion effects of democratic institutions (Gleditsch & Ward, 2006). I define a country's neighbors to be countries with a minimum distance of 501 km, as reported in the cshapes R library.

Last, I include a natural log of the duration of non-electoral authoritarian regimes in order to control for negative duration dependence, which indicates that the rate at which a closed authoritarian regime transitions to EA or democracy decreases over time.

Results

Main Results

I estimate several regression models to examine the effect of anti-regime uprisings on the probability of transitions to EA regime. Table 2 reports the results of logit models of EA transitions. Model 1 includes only *Anti-regime uprising*, *Other uprising*, a linear time trend, and *ln(Regime age)*. Model 2 adds economic and international variables that may influence both anti-regime uprisings and transitions to EA regime. To ensure that the estimate of *Anti-regime uprising* is not a proxy for the regime's instability or weakness, Models 3 through 5 control for political variables measuring prior political liberalization, coercive capacity, irregular leadership changes, and intra-elite conflict. Last, Models 4 and 5 reestimate Models 3 and 4 on ten multiply-imputed datasets since many observations have missing data among

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control variables, and listwise deletion of these observations may result in biased inference.[11]

<center>Table 2 about here</center>

Across all specifications, anti-regime protests are significantly associated with the probability of transitions to EA regime. Regarding the substantive impact, a change from zero to one anti-regime uprising in the past three years is associated with a 40% increase in the probability of EA transitions (2.5% per year to 3.5% per year), and a change from zero to three is associated with a 2.6-fold increase in the probability of EA transitions (from 2.5% per year to 6.6% per year).[12] In contrast, little evidence suggests a significant relationship between *Other uprising* and EA transitions. This finding demonstrates that it is not social and political unrest in general but a popular push for democratic reform that drives political opening.

Moreover, the magnitude of the estimate of *Anti-regime uprising* remains quite consistent, regardless of whether I include full control variables. This demonstrates two important findings about the effect of *Anti-regime uprising*. First, *Anti-regime uprising* does not simply reflect the political and social environment that produced the anti-regime mobilization in the first place. Second, the stability of the coefficient of *Anti-regime uprising* indicates that the observed result is less likely to be driven by selection bias. According to Altonji, Elder, and Taber (2005), the degree of similarity between the coefficient estimated in a restricted model with no or few controls and one estimated in a full model provides a good heuristic for evaluating the robustness of the result to potential bias from unobservables. Below I assess the likelihood that the main estimates are driven by selection bias.

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[11]The comparison between Models 3 and 5 shows that missing data reduce the sample size by about 30%. Missing data on control variables are imputed using Amelia II (Honaker, King, Blackwell, et al., 2011), and Models 4 and 5 show averages of ten estimation results using Stata's `mi estimate` command. See the Supporting Appendix for details of multiple imputation.

[12]I use Model 3 of Table 2 to calculate these predicted probabilities. I set all the other covariates to the values observed for each observation and obtain average effects.

<center>16</center>

Among other political variables included in the models, *Coercive capacity* and *Liberal democracy index* have a systemic relationship with the likelihood of transition to EA. When a closed authoritarian regime is more politically liberalized or when it has weaker coercive capacity, it is more likely to transition to EA. *Elite unrest* and *Irregular leader turnover* are, as expected, positive although *Irregular leader turnover* is not statistically significant.

The importance of external factors, as stressed by current literature (Levitsky & Way, 2010), is also borne out by the results in Table 2. Regional environments favorable to democracy makes closed authoritarian regimes more likely to transition to EA regimes. Additionally, more foreign aid inflows increase the prospects for the adoption of multiparty elections, but only during the post-Cold War period. During the Cold War, however, the same change in aid dependence does not improve the probability of transitions to electoral autocracies. The end of the Cold War period also significantly increases the likelihood of transition to electoral authoritarianism to the extent that a country is dependent on foreign aid. The results indicate that internal and external pressure for democracy promote the emergence of EA regimes.

Table 3 about here

Table 3 distinguishes between nonviolent and violent anti-regime campaigns and estimates the same set of models from Table 2.[13] Supportive of **H2**, the coefficient estimates of *Nonviolent anti-regime uprising* are consistently positive, statistically significant at the 1% level, and remarkably stable across different models. They are also greater in magnitude than those of violent campaigns. The one-tailed test for the equality of the two coefficients rejects the null hypothesis at the 1% level. Substantively, an increase from zero to one in *Nonviolent anti-regime uprising* more than doubles the probability of transition to EA, and an increase from zero to three is associated with a nine-fold increase in that probability. On the other hand, the same change in *Violent anti-regime uprising* produces a 65% increase in that probability. Consistent with existing studies on nonviolent resistance (e.g., Celestino

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[13]The full estimation results are available in the appendix.

& Gleditsch, 2013; Chenoweth & Lewis, 2013), these results suggest that nonviolent mass mobilization against the government is more effective than violent insurrection in undermining closed autocracies and inducing political concessions from incumbent governments.

Additional Analyses

I further examine whether the temporal pattern of events conforms to the temporal sequence postulated in the theoretical discussion introduced above. Figure 3 plots the evolution of the annual number of *Anti-regime uprising* and *Other uprising* around electoral transition, with year 0 corresponding to the year of transition. The top panel of the figure shows that the average number of *Anti-regime uprising* sharply jumps in the years leading up to the transition and sharply declines immediately after. This temporal pattern in anti-regime uprisings is consistent with what we would observe if mass-based theories are correct. Contrarily, the number of *Other uprising* does not change systemically before the transition year. This again confirms the importance of uprisings' goals in prompting political reform.

Figure 3 about here

I also conduct a placebo test to examine whether political reform follows mass protests. I regress transitions to EA on anti-regime uprisings in year $t + 1$, controlling for the same set of variables in Model 3 of Table 2. If this argument is correct, protests in year $t + 1$ should not predict EA transition in year t. Otherwise, my results may be simply picking up the correlation between political instability and regime transitions. I also test for different lags of anti-regime uprisings. The results of the placebo test are reported in Figure 4. Political uprisings in year $t+1$ are uncorrelated with regime changes in year t. In contrast, the estimates on contemporaneous and lagged uprisings are consistently positive and statistically significant. This mitigates a concern that the estimates of popular uprisings I have documented above could be driven by political turmoil in the regime transition period and confirms the temporal sequence from protests to EA transition illustrated in Figure 3. Importantly, anti-regime uprisings in year $t - 2$ has the strongest impact on the probability of transitions to EA in the

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current year. This indicates that it may take some time, possibly years, for an incumbent or new regime to establish multiparty elections. In sum, Figures 3 and 4 provide additional support for a causal relationship between popular threats and transitions.

Figure 4 about here

Next, I differentiate between EA transitions with and without leadership turnover. My theoretical discussion suggests that anti-regime protests can topple existing closed regimes, which may lead to the establishment of new EA regimes, or they can compel authoritarian elites to offer political reform as a survival strategy without producing leadership change. If this argument is correct, anti-regime protests should make both types of EA transitions more likely to occur. Table 4 presents the results of multinomial logit models in which the dependent variable can take three possible values: a survival of closed regime, a transition to EA without leader turnover, and a transition to democracy with leader turnover. This allows me to compare the effect of anti-regime uprisings on two different types of EA transitions. As expected, only *Anti-regime uprising* are significantly associated with both types of EA transitions. When I compare nonviolent and violent anti-regime uprisings, nonviolent uprisings are more strongly correlated with both types of EA transitions than are violent uprisings.

Figure 5 about here

Last, I explore how popular uprisings interact within transnational contexts to shape a country's prospects of transitions to EA. For space reasons, I therefore report results tables in the appendix and discuss only the substantive impact of anti-regime uprisings. Supporting **H3a**, the leftmost panel of Figure 5 shows that anti-regime uprisings are more likely to prompt EA transitions as the proportion of neighboring democracies is higher. Contrarily, I fail to find evidence that anti-regime uprisings are more effective when the incumbent regime has experienced intra-elite conflicts (the second panel of Figure 5). Last, the third panel includes an interaction between ethno-linguistic fractionalization index (Fearon & Laitin,

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2003) and anti-regime uprisings. Ethnic fractionalization significantly decreases the effect of anti-regime uprisings on EA transitions.[14] In a similar vein, anti-regime uprisings are less likely to promote EA transition when the country has previously experienced ethnic wars. Taken together, the results suggest that domestic and international contexts significantly condition the effect of anti-regime mobilization on political reform to establish multiparty elections.

Assessing Potential Selection Bias

The biggest challenge to the empirical analysis is the endogenous nature of popular uprisings: Protesters choose their targets and goals strategically. Anti-regime uprisings will be more likely to erupt in regimes that are weaker or more politically liberalized, and these regimes may be more likely to transition to EA. Similarly, protesters may be more likely to challenge the regime nonviolently when they believe that their target regime is weaker. I thus include the measures of coercive capacity, political liberalization, and regime instability and show that the results are strongly robust to controlling these factors. Nevertheless, I recognize that these controls will not perfectly capture unobserved factors that may be correlated with anti-regime uprisings and EA transitions, which may bias my findings. Additionally, I cannot exclude the possibility that country-years with anti-regime protests are fundamentally different from those without anti-regime protests.

To mitigate these concerns, I adopt two strategies. First, I use a matching technique to facilitate comparison of treated and control units which are similar in terms of their observable characteristics. Using the method of coarsened exact matching (Iacus, King, & Porro, 2011), I pre-process the data to minimize any potential differences between cases with and without *Anti-regime uprising* (or *Nonviolent anti-regime uprising*) before conducting the parametric analysis. I match on *Urban population, GDP per capita, Economic growth, Prior liberalization, Coercive capacity, Elite unrest*, and *Neighboring democracies*. Table A19 of the

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[14]I find similar results when I use an ethno-linguistic fragmentation measure of Alesina, Devleeschauwer, Easterly, Kurlat, and Wacziarg (2003) or a religious fractionalization measure.

appendix shows that the use of the matching technique does not alter the central findings.

Second, I rely on the strategy proposed by Altonji et al. (2005) to evaluate the likelihood that selection bias due to unobservables may be driving the results. This strategy assesses how many times stronger selection on unobservables would have to be relative to selection on observables, included in my empirical model, to explain away the estimated effect of *Anti-regime uprising.* If unobserved factors left out of the model have only a weak effect, I can be more confident that selection bias does not drive the main result. Table A20 of the appendix shows that to attribute the estimated effect of *Anti-regime uprising*, reported in Model 3 of Table 2, to selection bias, unobserved factors would have to explain a variation in the outcome between 3.6 and 19 times larger than what the observed covariates explain.[15] Given that I already control for several factors determining the onset of anti-regime uprising, the large ratios suggest that it is unlikely that unobserved confounders are driving the central results. I also repeat this sensitivity test for the estimates of *Nonviolent uprising.* Table A20 shows that selection on unobservables would have to be at least 8 times, and at most 12 times, greater than selection on observables. Thus, it is unlikely that selection bias explains away the entire effect.

Robustness Checks

To ensure the robustness of my results, I perform several additional analyses (the results are available in the Supporting Appendix). The main finding is robust to the following analyses:

- Employing alternative measures of EA by removing short-lived EA cases (less than three years) or using different regime type data: Boix et al. (2013) and Geddes et al. (2014) (Table A7).

- Using alternative codings of *Anti-regime uprising* (Tables A8-A11).

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[15]The calculation is based on the ratio $\hat{\beta}^F/(\hat{\beta}^R - \hat{\beta}^F)$ where $\hat{\beta}^F$ is the coefficient of *Anti-regime uprising* in Model 3 with full controls and $\hat{\beta}^R$ is the coefficient of *Anti-regime uprising* in models with a set of restricted controls. Following Nunn and Wantchekon (2011), I use linear probability models.

- Using anti-government demonstration from Banks and Wilson (2013) to measure *Anti-regime uprising* (Tables A12 and A13).

- Including year fixed effects, regional fixed effects and/or country random effects to control for common time shocks and unobserved country effects (Table A14).

- Including additional variables including oil income per capita, inequality, trade openness or different autocratic regime type (taken from Geddes et al. (2014)). (Tables A15 and A16).

- Examining the results' sensitivity to adding or deleting control variables. Using the Stata program developed by Young and Holsteen (2015), I estimate 4,096 models, which are all possible combinations of control variables in Model 3 of Table 1. In every model, the estimated coefficient on *Anti-regime uprising* is positive and statistically significant at the 5% level (Figure A2).

Conclusion

This article explores the political dynamics that lead to the emergence of EA, with a focus on the role of mass movements demanding regime change. The findings provide several insights on the relationship between mass protests and transitions to multiparty politics. While anti-regime mass protests promote the establishment of multiparty elections, socio-economic factors, potential long-term determinants of democracy, do not seem to promote the establishment of electoral authoritarianism. This suggests that immediate popular threats, not a broader societal demand for democracy, drive the emergence of EA regimes. This is consistent with previous findings that extensions of suffrage constitute a response by political elites to revolutionary threats from the excluded (Aidt & Jensen, 2014; Przeworski, 2009).

These findings have further implications about the effect of certain types of mass protests on regime change. First, only popular protests with a clear goal of regime change affect the establishment of EA. Second, strategies employed by uprisings also seem to matter: Nonviolent

anti-regime uprisings are associated with a greater likelihood of multiparty transitions in authoritarian regimes than violent uprisings. This study also provides compelling evidence for the strong influence of international factors on EA's emergence. The end of the Cold War and the regional diffusion of multiparty elections improve prospects for transitions to electoral authoritarianism. Greater aid dependence also prompts such transitions, but only following the Cold War period. The results indicate that authoritarian elites adopt multiparty elections in response to pressures both from below and from outside.

One interesting question for future research is whether the mode of transition to EA affects electoral outcomes, electoral conduct and quality, duration of EA regime, and prospects for democratization. Although this study focuses on pressure from below, multiple pathways and multiple combinations of actors and strategies can lead to the establishment of EA. Considering that opposition actors have overcome obstacles to mobilizing and coordinating popular support, competitive elections adopted in response to popular threats would have, on average, a greater electoral competitiveness and a higher rate of leadership turnover than competitive elections voluntarily introduced by authoritarian elites.

As discussed above, widespread and sustained popular protests also trigger democratization. Another important remaining question is thus when do popular protests produce democratization rather than EA transition? Levitsky and Way (2010) emphasize that the international linkage and leverage provide conditions favorable for democratization. If this argument is correct, anti-regime protests will be more likely to prompt democratization than transition to EA in countries that are highly integrated with the West. Where such favorable international conditions are absent, regime actors are better adept at manipulating elections to thwart opposition challenges, and protest-driven transitions will fall short of democratization. Future studies could test this expectation.

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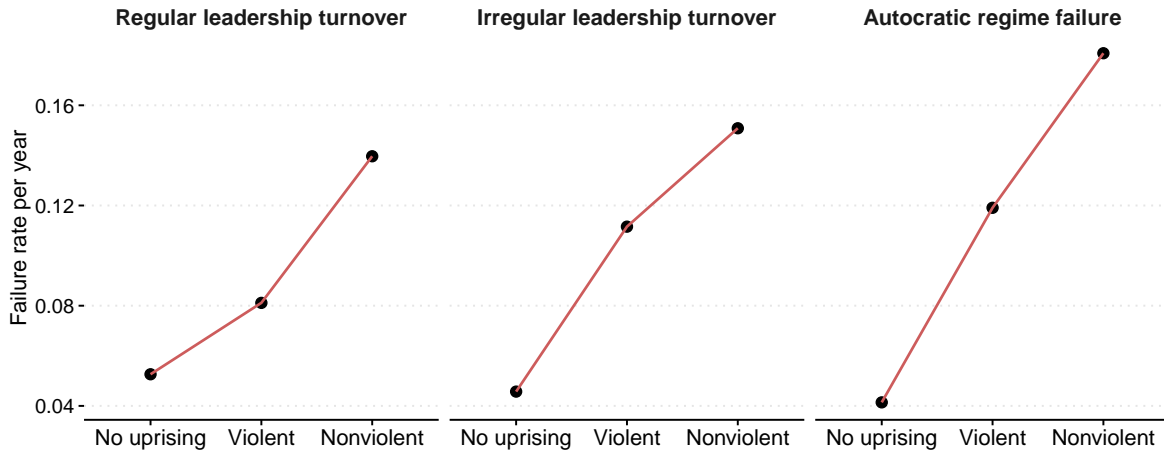
Figure 1. Autocratic leadership and regime failure rates by anti-regime uprisings in the previous year. Uprisings are measured from Chenoweth and Lewis (2013), leadership turnovers from the Archigos dataset (Goemans, Gleditsch, & Chiozza, 2009), and autocratic regime failures from Geddes et al. (2014).
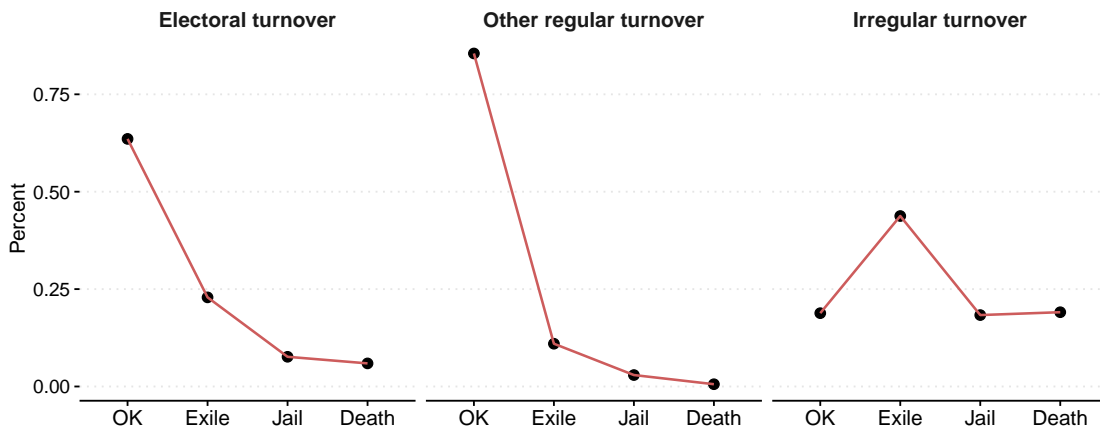
Figure 2. Dictators' turnover mode and their post-tenure fate. Electoral turnovers from Hyde and Marinov (2012) and other types of leader turnovers and post-tenure fates from the Archigos dataset
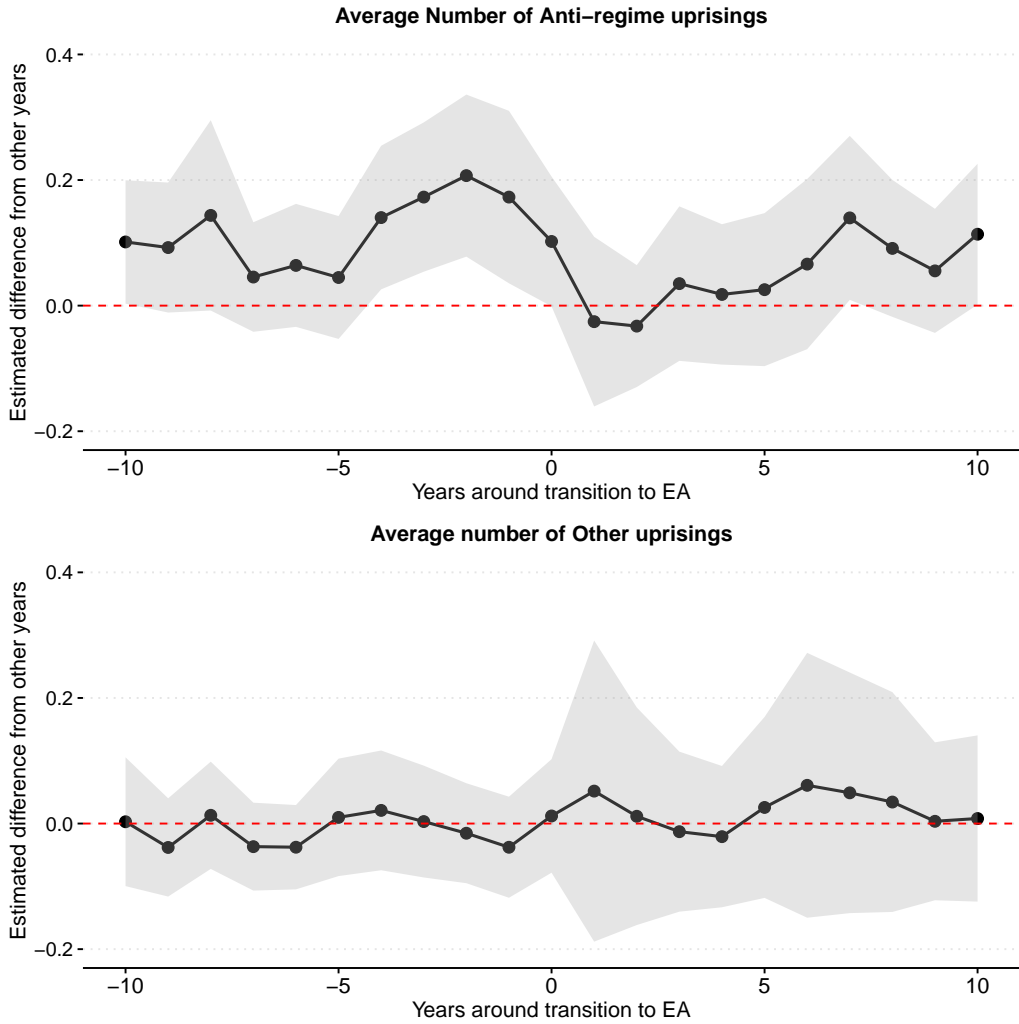
Figure 3. Uprisings around political reform. Year 0 corresponds to the year of transition. I regress the number of each type of uprisings on 21 binary indicators of years around a transition to electoral authoritarianism, $\{t-10, t-9, \ldots, t+9, t+10\}$. All other autocratic country-years are set to zero. I plot estimated coefficients on these 21 dummy variables (line) and 95% confidence intervals (shaded area).
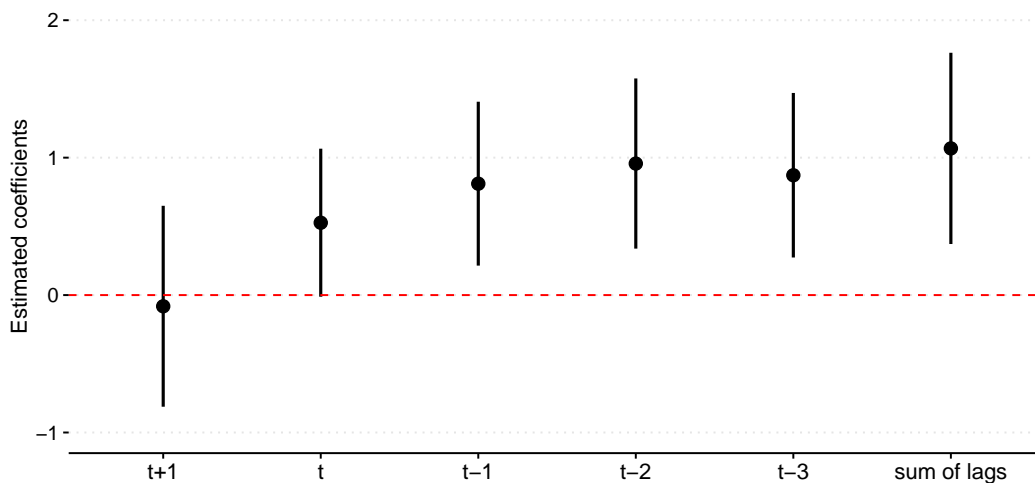
Figure 4. Falsification Tests. Dots show the coefficient estimates on each variable, and vertical lines display the 95% confidence intervals. The "sum of lags" reports the sum of three lags' coefficients.
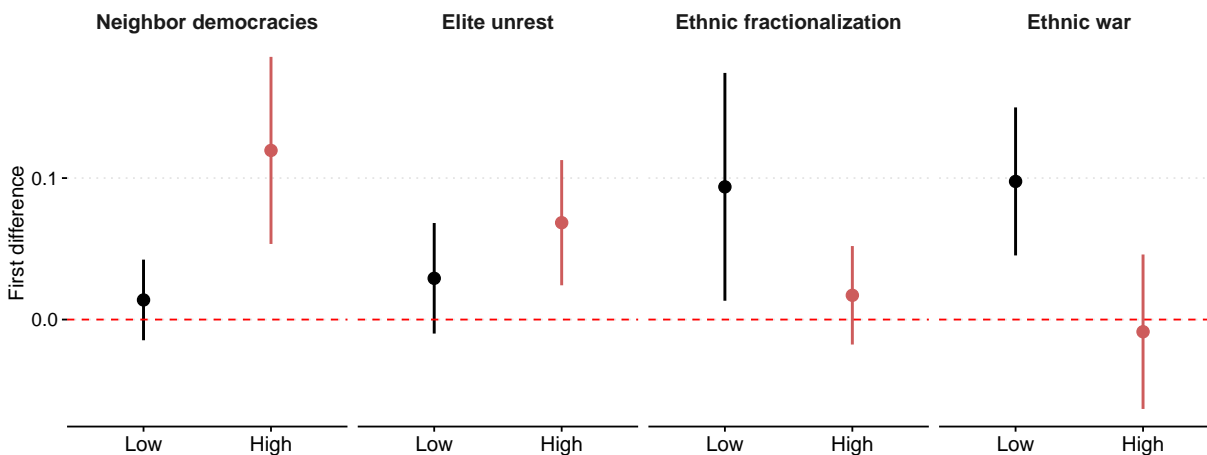
Figure 5. Substantive impact of anti-regime uprisings on the probability of EA transitions at different values of each variable. *High*: the 90th percentile of a continuous variable or the value one of a discrete variable and *Low*: the 10th percentile of a continuous variable or the value zero of a discrete variable. Dots display the first differences, and vertical lines present the 95% confidence intervals. First difference is defined as $Pr(\text{Transition} = 1 \,|\, \text{Uprising} = 3) - Pr(\text{Transition} = 1 \,|\, \text{Uprising} = 0)$. I set all the other covariates to the values observed for each observation, and obtain average effects.

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	Uprising types					
	No uprising	Violent Other	Nonviolent Other	Violent Anti-regime	Nonviolent Anti-regime	Total
No transition	2795 (98.3%)	195 (96.1%)	52 (100.0%)	317 (94.3%)	92 (86.0%)	3451 (97.4)
EA transition	49 (1.7%)	8 (3.9%)	0 (0.0%)	19 (5.7%)	15 (14.0%)	91 (2.6)
Total	2844	203	52	336	107	3542
	EA transitions are divided					
Transition without irregular leader change	38 (1.3%)	8 (3.9%)	0 (0.0%)	15 (4.5%)	9 (8.4%)	70 (2.0)
Transition with irregular leader change	11 (0.4%)	0 (0.0%)	0 (0.0%)	4 (1.2%)	6 (5.6%)	21 (0.6)

Table 1. EA transitions and popular uprising in closed authoritarian regimes (1946–2006). Conditional probabilities are in parentheses. P-values of χ^2 test < 0.001.

| | | | | Multiply imputed | |
	(1)	(2)	(3)	(4)	(5)
Anti-regime uprising	0.468***	0.367***	0.362***	0.472***	0.451***
	(0.090)	(0.112)	(0.118)	(0.113)	(0.110)
Other uprising	0.050	0.100	0.104	0.098	0.099
	(0.129)	(0.119)	(0.118)	(0.125)	(0.123)
ln(Regime age)	-0.300***	-0.376***	-0.275**	-0.291**	-0.135
	(0.106)	(0.118)	(0.114)	(0.118)	(0.110)
Linear trend	0.023**	0.030	0.036	0.033	0.041*
	(0.011)	(0.022)	(0.022)	(0.021)	(0.021)
GDP per capita		-0.062	0.477**	-0.040	0.454**
		(0.155)	(0.192)	(0.152)	(0.185)
Economic growth		-0.011	-0.015	-0.028*	-0.030*
		(0.014)	(0.016)	(0.015)	(0.016)
Neighboring democracies		1.391***	1.350***	1.160***	1.245***
		(0.395)	(0.434)	(0.430)	(0.422)
Neighboring EAs		0.762*	0.783*	0.928**	1.323***
		(0.415)	(0.403)	(0.395)	(0.370)
Post-Cold War		-5.718***	-6.722**	-5.195***	-7.120***
		(1.857)	(2.780)	(1.763)	(2.260)
ln(Aid per capita)		-0.240	-0.357	-0.047	-0.265
		(0.242)	(0.343)	(0.233)	(0.278)
Post-Cold*Aid		1.355***	1.550***	1.193***	1.535***
		(0.396)	(0.598)	(0.372)	(0.471)
Prior liberalization			4.254**		5.355***
			(1.723)		(1.732)
Coercive capacity			-1.778**		-1.917***
			(0.758)		(0.679)
Elite unrest			0.456		0.718***
			(0.281)		(0.277)
Irregular leader change			0.008		0.200
			(0.359)		(0.333)
Constant	-3.410***	-2.345	-1.918	-3.865**	-2.771
	(0.361)	(1.703)	(2.403)	(1.717)	(2.169)
Anti-regime=Others (p-value)	0.01	0.06	0.07	0.02	0.02
N	3542	2363	2094	3030	3030
Countries	128	97	92	124	124
Years	47-06	61-06	61-06	61-06	61-06
Transitions	91	71	67	77	77
Log-Likelihood	-397.20	-278.17	-249.31	.	.

Table 2. Logit estimates of EA transitions. Robust standard errors clustered at the country level are in parentheses: $^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. Models 4 and 5 use ten multiply-imputed datasets.

	(1)	(2)	(3)	Multiply imputed	
				(4)	(5)
Nonviolent anti-regime uprising	1.136***	1.096***	0.951***	1.275***	1.164***
	(0.185)	(0.175)	(0.179)	(0.180)	(0.196)
Violent anti-regime uprising	0.302***	0.186	0.200	0.240*	0.252**
	(0.097)	(0.123)	(0.135)	(0.124)	(0.123)
Nonviolent other uprising	-0.652	-0.672	-0.962	-0.819	-1.203
	(0.711)	(0.771)	(0.859)	(0.795)	(0.966)
Violent other uprising	0.067	0.095	0.168	0.120	0.181
	(0.139)	(0.143)	(0.118)	(0.147)	(0.120)
Controls	no	short	full	short	full
Nonviolent anti-regime = Violent anti-regime (p-value)	<0.01	<0.01	<0.01	<0.01	<0.01
N	3542	2363	2094	3030	3030
Log-Likelihood	-388.30	-270.80	-243.81	.	.

Table 3. Differentiating between nonviolent and violent uprisings. Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. Models 4 and 5 use ten multiply-imputed datasets. *Short* controls: controls in Model 2 of Table 2, and *full* controls: controls in Model 3 of Table 2.

	(1)		(2)	
	Without	With	Without	With
		Irregular leader change		
Anti-regime uprising	0.374***	0.782***		
	(0.118)	(0.267)		
Other uprising	0.160	-13.081***		
	(0.112)	(0.843)		
Nonviolent anti-regime uprising			1.055***	1.632***
			(0.207)	(0.353)
Violent anti-regime uprising			0.197	0.481*
			(0.132)	(0.248)
Nonviolent other uprising			-1.035	-15.155***
			(0.921)	(1.150)
Violent other uprising			0.229*	-11.445***
			(0.118)	(0.635)
Controls	full		full	
Anti-regime=Others (p-value)	0.10	<0.01		
Nonviolent anti-regime=Violent anti-regime (p-value)			<0.01	<0.01
N	3030		3030	

Table 4. Distinguishing EA transitions with and without leadership turnover (multinomial logit estimates). Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. Results are from 10 multiply imputed datasets.

Supporting Appendix

to the paper

Anti-regime Uprisings and the Emergence of Electoral Authoritarianism

(not for publication)

This document presents the results of statistical models that I conducted but, due to space constraints, was not able to report in the paper.

Contents

1 Summary statistics

This section presents descriptive statistics.

- Table A1 provides summary statistics on variables used in the analysis.

- Figure A1 displays the yearly evolution of political regimes from 1945 until 2012. Closed authoritarian regimes, including non-electoral and single-party regimes, were the most common type during the period of Cold War, yet declined after the 1980s. The proportion of electoral autocracies, along with democracies, has increased since the end of the Cold War era, such that they are the modal type of authoritarian regime. In 2012, 21% of the country-year observations were electoral autocracies, and 62% were democracies.

- Table A2 reports the regime transition matrix that shows relative stability of the different authoritarian regimes as well as their patterns of regime transitions. The matrix shows that EA is the least stable and that a transition from closed autocracies to EA is the main pathway to EA.

Variable	Obs	Mean	Std. Dev.	Min	Max	Median
EA transition	3030	.03	.16	0	1	0
Anti-regime uprising	3030	.31	.87	0	6	0
Other uprising	3030	.27	.97	0	9	0
Nonviolent anti-regime uprising	3030	.05	.3	0	3	0
Violent anti-regime uprising	3030	.27	.8	0	4	0
Nonviolent other uprising	3030	.03	.27	0	3	0
Violent other uprising	3030	.24	.93	0	9	0
Anti-government demos	2704	.33	1.02	0	14.33	0
Prior liberalization	2688	.11	.06	.02	.39	.1
Coercive capacity	2791	2.86	.41	2.33	4.46	2.76
New/Unstable regime	2847	.17	.38	0	1	0
Elite unrest	3030	.19	.39	0	1	0
Irregular leader change	2846	.16	.36	0	1	0
GDP per capita	2794	7.51	.92	5.33	10.67	7.35
Economic growth	2794	1.39	7	-61.49	76.85	1.56
Neighboring democracies	2970	.18	.27	0	1	0
Neighboring EAs	2970	.14	.27	0	1	0
Post-Cold War	3030	.2	.4	0	1	0
ln(Aid per capita)	2476	4.69	.56	3.64	7.71	4.58
ln(Regime age)	3030	3.28	1.24	0	5.33	3.18
Linear trend	3030	20.93	11.62	1	46	20
ln(Oil income per capita)	2857	2.49	3.22	0	11.37	.03
Inequality	2197	.42	.11	.16	.7	.41
Trade openness	2545	4.01	.78	.08	6.43	4.11
ELF	2707	.42	.3	0	.93	.38
Religious fractionalization	2624	.38	.22	0	.78	.44
Ethnical fragmentation	2688	.52	.26	0	.93	.59
Ethnic wars	2647	.14	.35	0	1	0

Table A1. Summary statistics
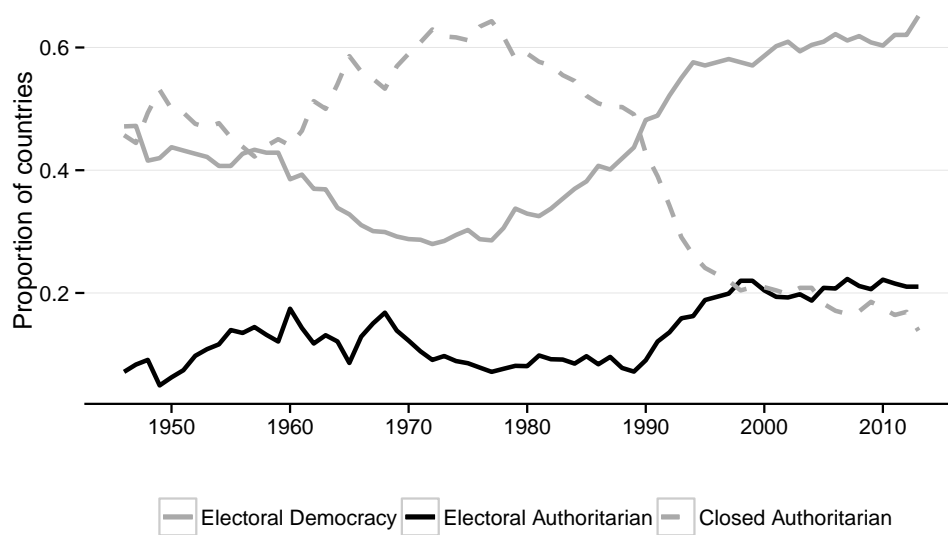
Figure A1. Regime types across time from 1946 to 2012. I use Skaaning et al.'s (2015) measures of democracy and multiparty elections to classify regimes. See the Data section for details.

$t-1$	t			
	Closed	EA	Demo.	Total
Closed	95.3 (3,792)	2.8 (112)	1.9 (74)	100.0 (3,978)
EA	6.1 (85)	90.4 (1,267)	3.6 (50)	100.0 (1,402)
Demo.	1.2 (51)	0.6 (24)	98.3 (4,256)	100.0 (4,331)

Table A2. Regime transition matrix, 1946–2012. Numbers in parentheses are frequencies. See the Data section for the details of regime type measures.

2   List of EA transitions and Anti-regime Uprisings, 1946–2006

NAVCO anti-regime uprising=1
(in the past three years)

Albania 1990
Algeria 1996
Angola 1991
Burundi 1992
Cambodia 1992
Chad 1996
Chile 1988
Congo Brazzaville 2001
Djibouti 1992
Dominican Republic 1965
Egypt 2004
El Salvador 1981
Ethiopia 1993
Guatemala 1965
Guatemala 1984
Kenya 1991
Korea, South 1962
Korea, South 1980
Liberia 1996
Maldives 2004
Nigeria 1998
Pakistan 1984
Peru 1994
Portugal 1974
Romania 1989
Sierra Leone 1995
Sudan 2004
Tanzania 1994
Thailand 1978
Thailand 2006
Uganda 2005
Vietnam, South 1960
Zimbabwe 1978

N=34

NAVCO anti-regime uprising=0
CNTS anti-govt. demonstration=1
(in the past three years)

Bolivia 1951
Burkina Faso 1997
Comoros 1991
Comoros 2001
Congo, Democratic Republic 2005
Cote d'Ivoire 1999
Cuba 1954
El Salvador 1966
Gabon 1992
Haiti 1950
Haiti 1989
Indonesia 1972
Liberia 1984
Malaysia 1970
Mexico 1952
Pakistan 1964
Panama 1951
Philippines 1980
Syria 1953
Togo 1992
Yugoslavia 1991

N=21

NAVCO anti-regime uprising=0
CNTS anti-govt. demonstration=0
(in the past three years)

Azerbaijan 1991
Bangladesh 1972
Bangladesh 1978
Bolivia 1966
Burkina Faso 1977
Cambodia 1955
Cameroon 1989
Central African Republic 2004
China 1946
Congo Brazzaville 1991
Cote d'Ivoire 1989
Dominican Republic 1946
El Salvador 1949
Equatorial Guinea 1992
Gambia 1996
Georgia 1994
Ghana 1991
Guinea 1994
Indonesia 1954
Kenya 1965
Kyrgyzstan 1994
Lesotho 1997
Liberia 1954

Mauritania 1991
Mauritania 2006
Mauritania 2008
Nicaragua 1956
Nicaragua 1971
Panama 1982
Paraguay 1962
Poland 1946
Romania 1945
Rwanda 2002
Senegal 1977
Sierra Leone 1967
Suriname 1986
Tanzania 1962
Thailand 1945
Thailand 1947
Thailand 1951
Tunisia 1998
Turkey 1945
USSR 1989
Uganda 1966
Uzbekistan 1993
Yemen, North 1989

N=46

3 Summarizing conceptions related to electoral autocracies

Table A3 provides the summary of notions related to electoral autocracies.

	Multiparty autocracies	Electoral authoritarianism	Competitive authoritarianism
Institutional attributes			
Multiparty elections for the national legislature	✓	✓	✓
Multiparty elections for the national executive		✓	✓
Universal suffrage	✓	✓	✓
Civilian controls			✓
Meaningful level of competition			✓
Democratic boundary			
Procedural integrity of elections	✓	✓	✓
Substantive democratic qualities	?		✓
Scholars	Magaloni et al. Hadenius and Teorell	Schedler	Levitsky and Way

Table A3. Summary of electoral authoritarian regime concepts.

4 Presenting Full Results

Tables A4 through A6 reports the full estimation results of Tables 3 and 4 and Figure 5 in the main text.

	(1)	(2)	(3)	Multiply imputed (4)	(5)
Nonviolent anti-regime uprising	1.136***	1.096***	0.951***	1.275***	1.164***
	(0.185)	(0.175)	(0.179)	(0.180)	(0.196)
Violent anti-regime uprising	0.302***	0.186	0.200	0.240*	0.252**
	(0.097)	(0.123)	(0.135)	(0.124)	(0.123)
Nonviolent other uprising	-0.652	-0.672	-0.962	-0.819	-1.203
	(0.711)	(0.771)	(0.859)	(0.795)	(0.966)
Violent other uprising	0.067	0.095	0.168	0.120	0.181
	(0.139)	(0.143)	(0.118)	(0.147)	(0.120)
ln(Regime age)	-0.342***	-0.395***	-0.290***	-0.335***	-0.173
	(0.105)	(0.113)	(0.113)	(0.115)	(0.109)
Linear trend	0.025**	0.027	0.032	0.030	0.035*
	(0.011)	(0.022)	(0.022)	(0.021)	(0.021)
GDP per capita		-0.210	0.324	-0.189	0.285
		(0.163)	(0.214)	(0.156)	(0.209)
Economic growth		-0.012	-0.015	-0.029*	-0.031*
		(0.015)	(0.017)	(0.016)	(0.017)
Neighboring democracies		1.193***	1.209***	0.981**	1.126***
		(0.391)	(0.424)	(0.420)	(0.421)
Neighboring EAs		0.797*	0.753*	1.060**	1.391***
		(0.430)	(0.407)	(0.414)	(0.390)
Post-Cold War		-5.587***	-6.225**	-4.772***	-6.507***
		(1.874)	(2.899)	(1.778)	(2.353)
ln(Aid per capita)		-0.116	-0.237	0.107	-0.133
		(0.235)	(0.337)	(0.228)	(0.277)
Post-Cold*Aid		1.364***	1.501**	1.139***	1.462***
		(0.392)	(0.614)	(0.367)	(0.480)
Prior liberalization			4.186**		5.528***
			(1.718)		(1.687)
Coercive capacity			-1.737**		-1.705**
			(0.766)		(0.679)
Elite unrest			0.529*		0.835***
			(0.291)		(0.290)
Irregular leader change			-0.025		0.101
			(0.354)		(0.320)
Constant	-3.326***	-1.727	-1.388	-3.307*	-2.581
	(0.337)	(1.711)	(2.348)	(1.727)	(2.142)
Nonviolent=Violent (p-value)	0.00	0.00	0.00	0.00	0.00
N	3542	2363	2094	3030	3030
Log-Likelihood	-388.30	-270.80	-243.81	.	.

Table A4. Presenting the full estimation results of Table 2. Robust standard errors clustered at the country level are in parentheses: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$.

	(1)		(2)	
	Without	With	Without	With
		Irregular leader change		
Anti-regime uprising	0.374***	0.782***		
	(0.118)	(0.267)		
Other uprising	0.160	-13.081***		
	(0.112)	(0.843)		
Nonviolent anti-regime uprising			1.055***	1.632***
			(0.207)	(0.353)
Violent anti-regime uprising			0.197	0.481*
			(0.132)	(0.248)
Nonviolent other uprising			-1.035	-15.155***
			(0.921)	(1.150)
Violent other uprising			0.229*	-11.445***
			(0.118)	(0.635)
Prior liberalization	4.583***	9.848**	4.874***	8.877**
	(1.713)	(4.828)	(1.712)	(4.268)
Coercive capacity	-2.455***	-0.469	-2.286***	-0.078
	(0.681)	(1.343)	(0.705)	(1.163)
Elite unrest	0.553*	1.455**	0.615**	1.735***
	(0.297)	(0.713)	(0.303)	(0.664)
GDP per capita	0.381*	0.677*	0.245	0.395
	(0.199)	(0.402)	(0.219)	(0.403)
Economic growth	-0.028	-0.044	-0.028	-0.043
	(0.018)	(0.032)	(0.018)	(0.034)
Neighboring democracies	0.814	2.338**	0.700	2.200**
	(0.509)	(0.990)	(0.507)	(0.956)
Neighboring EAs	1.407***	1.056	1.455***	1.154
	(0.414)	(0.942)	(0.426)	(0.950)
Post-Cold War	-7.494***	-2.738	-6.729***	-3.703
	(2.463)	(6.031)	(2.573)	(5.695)
ln(Aid per capita)	-0.151	-0.657	-0.032	-0.417
	(0.297)	(0.716)	(0.290)	(0.757)
Post-Cold*Aid	1.662***	0.459	1.553***	0.726
	(0.501)	(1.277)	(0.518)	(1.206)
ln(Regime age)	-0.003	-0.605**	-0.038	-0.681***
	(0.114)	(0.270)	(0.115)	(0.261)
Linear trend	0.038*	0.032	0.032	0.029
	(0.022)	(0.053)	(0.022)	(0.049)
Constant	-1.655	-8.025	-1.564	-7.906
	(2.051)	(5.611)	(2.080)	(5.687)
Anti-regime=Others (p-value)	0.10	<0.01		
Nonviolent anti-regime=Violent anti-regime (p-value)			<0.01	<0.01
N	3030		3030	

Table A5. Presenting the full estimation results of Table 3 (multinomial logit estimates). Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. Results are from 10 multiply imputed datasets.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Anti-regime uprising	0.166	0.299*	0.400***	0.768***	1.140***	0.826***	0.654***
	(0.153)	(0.157)	(0.148)	(0.208)	(0.260)	(0.190)	(0.111)
Other uprising	0.345	0.671*	0.561	0.114	0.905	-0.311	-0.204
	(0.492)	(0.404)	(0.473)	(1.351)	(0.965)	(0.962)	(0.964)
Anti-regime uprising×Neighboring democracies	0.940***						
	(0.308)						
Other uprising×Neighboring democracies	0.363						
	(0.943)						
Anti-regime uprising×Elite unrest		0.162					
		(0.162)					
Other uprising×Elite unrest		-1.075					
		(0.947)					
Anti-regime uprising×Irregular leader change			-0.138				
			(0.213)				
Other uprising×Irregular leader change			-0.687				
			(0.827)				
Anti-regime uprising×ELF				-0.765**			
				(0.341)			
Other uprising×ELF				0.313			
				(2.010)			
Anti-regime uprising×Ethnical fragmentation					-1.267***		
					(0.402)		
Other uprising×Ethnical fragmentation					-0.450		
					(1.799)		
Anti-regime uprising×Religious fractionalization						-1.168**	
						(0.454)	
Other uprising×Religious fractionalization						1.484	
						(2.069)	
Anti-regime uprising×Ethnic wars							-0.678**
							(0.303)
Other uprising×Ethnic wars							0.614
							(1.165)
Neighboring democracies	0.500	1.309***	1.303***	1.563***	1.414***	1.442***	1.304***
	(0.559)	(0.438)	(0.440)	(0.441)	(0.448)	(0.448)	(0.421)
Elite unrest	0.355	0.423	0.412	0.377	0.511*	0.330	0.306
	(0.294)	(0.355)	(0.280)	(0.283)	(0.282)	(0.280)	(0.282)
Irregular leader change	0.106	0.001	0.249	-0.132	-0.044	-0.170	-0.088
	(0.365)	(0.357)	(0.429)	(0.381)	(0.354)	(0.391)	(0.373)
ELF				1.032*			
				(0.584)			
Ethnical fragmentation					0.692		
					(0.670)		
Religious fractionalization						0.825	
						(0.936)	
Ethnic wars							0.454
							(0.756)
N	2094	2094	2094	2031	1997	2016	2033
Log-Likelihood	-245.42	-248.13	-248.62	-239.01	-237.91	-236.27	-238.21

Table A6. Presenting the full estimation results of models summarized in Figure 5. ELF: Ethno-linguistic fractionalization index. Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

5 Using Alternative EA Measures

Table A7 reports the estimation results of models in which I use alternative measures of electoral authoritarian regimes. Model 1 of Table A7 includes only EA transitions in which EA was maintained at least for three years. This removes short-lived cases (5 cases) including democratizing cases after the adoption of multiparty elections. In order to demarcate autocracies from democracies, Model 2 uses the democracy measure from Boix et al. (2013) and Model 3 from Geddes et al. (2014) instead of the COMPETITION variable from Skaaning et al. (2015). In their coding of democracy, these datasets explicitly consider electoral quality using multiple sources of information on elections rather than focusing only on election outcomes while holding a procedural definition of democracy. For instance, Boix et al. (2013, p.1531) define "elections as free if voters are given multiple options on ballots and as fair if electoral fraud is absent and incumbents do not abuse government power to effectively eliminate the chance of opposition victory through peaceful contestation." Similarly, Geddes et al. (2014) consider an election uncompetitive under the following conditions: "if one or more large party is not allowed to participate; and/or if there are widespread reports of violence, jailing, and/or intimidation of opposition leaders or supporters; and/or if there are credible reports of vote fraud widespread enough to change election outcome (especially if reported by international observers); and/or if the incumbent so dominates political resources and the media that observers do not consider elections fair." The results are not sensitive to alternative measures of electoral authoritarianism.

	Remaining	Democracy measure		Remaining	Democracy measure	
	3 years	BMR	GWF	3 years	BMR	GWF
Anti-regime uprising	0.271**	0.319***	0.326**			
	(0.107)	(0.119)	(0.129)			
Other uprising	0.064	0.148	0.137			
	(0.102)	(0.127)	(0.111)			
Nonviolent anti-regime uprising				0.650***	0.743***	0.670***
				(0.219)	(0.185)	(0.219)
Violent anti-regime uprising				0.173	0.184	0.236
				(0.129)	(0.135)	(0.145)
Prior liberalization	2.310	5.407***	4.545**	1.735	4.850***	4.221**
	(1.751)	(1.776)	(1.961)	(1.770)	(1.745)	(1.932)
Coercive capacity	-1.877**	-1.751**	-1.447**	-1.731**	-1.616**	-1.354**
	(0.823)	(0.736)	(0.717)	(0.801)	(0.704)	(0.687)
Elite unrest	0.446	0.521*	0.319	0.458	0.523*	0.334
	(0.290)	(0.281)	(0.291)	(0.292)	(0.291)	(0.293)
Irregular leader change	0.242	0.066	0.072	0.227	0.034	0.049
	(0.385)	(0.351)	(0.364)	(0.385)	(0.344)	(0.358)
GDP per capita	-0.009	0.396*	0.327*	-0.107	0.271	0.239
	(0.213)	(0.203)	(0.184)	(0.224)	(0.216)	(0.196)
Economic growth	-0.027	-0.011	-0.006	-0.026	-0.010	-0.005
	(0.024)	(0.015)	(0.015)	(0.024)	(0.016)	(0.015)
Neighboring democracies	0.786	1.415***	1.249***	0.672	1.250***	1.156**
	(0.491)	(0.454)	(0.445)	(0.507)	(0.436)	(0.460)
Neighboring EAs	0.387	0.891**	0.721*	0.348	0.832*	0.728*
	(0.469)	(0.410)	(0.388)	(0.472)	(0.438)	(0.418)
Post-Cold War	-3.968	-7.531**	-6.433**	-4.662*	-8.258***	-7.029**
	(2.460)	(2.942)	(2.728)	(2.425)	(2.962)	(2.870)
ln(Aid per capita)	0.032	-0.534	-0.252	0.031	-0.548	-0.279
	(0.379)	(0.361)	(0.358)	(0.364)	(0.349)	(0.368)
Post-Cold*Aid	1.037**	1.618**	1.547***	1.194**	1.799***	1.682***
	(0.521)	(0.635)	(0.578)	(0.509)	(0.632)	(0.597)
Linear trend	0.001	0.061***	0.023	0.001	0.058***	0.022
	(0.023)	(0.021)	(0.022)	(0.023)	(0.021)	(0.022)
ln(Regime age)	0.395***	-0.312**	-0.326*	0.386***	-0.333**	-0.338*
	(0.082)	(0.143)	(0.174)	(0.083)	(0.145)	(0.178)
Constant	-1.186	-1.122	-1.870	-0.693	-0.227	-1.199
	(2.614)	(2.609)	(2.438)	(2.537)	(2.660)	(2.519)
N	2779	2024	2005	2779	2024	2005
Log-Likelihood	-268.12	-248.78	-239.48	-266.56	-246.42	-238.53

Table A7. Alternative measures of electoral authoritarianism (logit estimates). BMR: Boix et al. (2013) and GWF: Geddes et al. (2014). Robust standard errors clustered at the country level are in parentheses: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$.

6 Using Alternative Measures of Popular Protest

Tables A8 through A11 examine whether the central findings are robust to alternative codings of popular uprisings. In the main text, I use a sum of uprisings in the previous three years. Tables A8 and A10 use a five-year sum of popular uprisings. Tables A9 and A11 use a binary indicator of whether each type of popular uprisings has occurred in the past. They apply three different time windows: one-year, three-year, and five-year. The results show that the main finding is robust to different measures of popular uprisings.

Tables A12 and A13 use anti-government demonstrations taken from Cross-National Time-Series (CNTS) Data Archive (Banks & Wilson, 2013) instead of the NAVCO dataset. Anti-government demonstration is defined as "any 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 & Wilson, 2013). Accordingly, the CNTS data identifies dissident activities of smaller scale than the NAVCO data. Table A12 uses a sum, a logged sum, and a binary indicator of anti-government demonstrations in the past three years. Table A13 uses a five-year time frame instead of a three-year frame. I find that anti-government demonstration are significantly associated with EA transition.

| | 5-year sum | | |
	(1)	(2)	(3)
Anti-regime uprising	0.289***	0.237***	0.238***
	(0.066)	(0.074)	(0.079)
Other uprising	0.027	0.034	0.036
	(0.092)	(0.079)	(0.081)
ln(Regime age)	-0.343***	-0.348***	-0.238**
	(0.121)	(0.124)	(0.118)
Linear trend	0.048***	0.034	0.039*
	(0.013)	(0.023)	(0.024)
GDP per capita		-0.110	0.411**
		(0.167)	(0.203)
Economic growth		-0.004	-0.008
		(0.013)	(0.017)
Neighboring democracies		1.452***	1.368***
		(0.399)	(0.438)
Neighboring EAs		0.669	0.761*
		(0.438)	(0.424)
Post-Cold War		-6.854***	-7.640***
		(1.916)	(2.891)
ln(Aid per capita)		-0.307	-0.413
		(0.263)	(0.366)
Post-Cold*Aid		1.565***	1.715***
		(0.409)	(0.623)
Prior liberalization			4.211**
			(1.798)
Coercive capacity			-1.592**
			(0.746)
Elite unrest			0.520*
			(0.282)
Irregular leader change			0.084
			(0.360)
Constant	-4.049***	-1.807	-1.846
	(0.457)	(1.874)	(2.586)
N	2949	2306	2053
Log-Likelihood	-312.94	-265.99	-238.76

Table A8. Using a 5-year sum of popular uprisings 1. Robust standard errors clustered at the country level are in parentheses: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$.

	One-year lag			3-year period			5-year period		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Anti-regime uprising	1.290***	0.941***	0.875***	1.370***	1.046***	1.049***	1.393***	1.069***	1.129***
	(0.285)	(0.323)	(0.337)	(0.296)	(0.314)	(0.330)	(0.301)	(0.328)	(0.339)
Other uprising	0.548	0.378	0.302	0.416	0.420	0.307	0.249	0.400	0.292
	(0.475)	(0.476)	(0.478)	(0.409)	(0.411)	(0.438)	(0.361)	(0.378)	(0.400)
ln(Regime age)	-0.382***	-0.368***	-0.265**	-0.374***	-0.370***	-0.269**	-0.339***	-0.350***	-0.244**
	(0.114)	(0.117)	(0.114)	(0.116)	(0.119)	(0.114)	(0.117)	(0.122)	(0.117)
Linear trend	0.052***	0.031	0.038*	0.051***	0.032	0.036*	0.049***	0.037*	0.039*
	(0.012)	(0.021)	(0.021)	(0.013)	(0.021)	(0.022)	(0.013)	(0.022)	(0.023)
GDP per capita		-0.095	0.439**		-0.035	0.500***		-0.067	0.458**
		(0.156)	(0.196)		(0.154)	(0.184)		(0.167)	(0.194)
Economic growth		-0.009	-0.013		-0.009	-0.011		-0.000	-0.003
		(0.015)	(0.017)		(0.013)	(0.015)		(0.013)	(0.017)
Neighboring democracies		1.363***	1.300***		1.322***	1.252***		1.369***	1.217***
		(0.399)	(0.436)		(0.387)	(0.430)		(0.399)	(0.445)
Neighboring EAs		0.784*	0.796*		0.840*	0.855**		0.813*	0.889**
		(0.423)	(0.412)		(0.431)	(0.415)		(0.455)	(0.438)
Post-Cold War		-5.743***	-6.882**		-5.781***	-6.837**		-6.960***	-7.774***
		(1.848)	(2.740)		(1.846)	(2.766)		(1.857)	(2.763)
ln(Aid per capita)		-0.260	-0.412		-0.206	-0.316		-0.222	-0.329
		(0.247)	(0.351)		(0.243)	(0.341)		(0.261)	(0.364)
Post-Cold*Aid		1.358***	1.582***		1.353***	1.565***		1.569***	1.733***
		(0.394)	(0.590)		(0.392)	(0.596)		(0.395)	(0.596)
Prior liberalization			4.114**			4.086**			4.285**
			(1.695)			(1.729)			(1.810)
Coercive capacity			-1.743**			-1.788**			-1.620**
			(0.730)			(0.728)			(0.714)
Elite unrest			0.474*			0.453			0.537*
			(0.283)			(0.276)			(0.274)
Irregular leader change			0.043			0.022			0.045
			(0.371)			(0.347)			(0.349)
Constant	-4.047***	-2.032	-1.488	-4.116***	-2.808*	-2.285	-4.215***	-2.693	-2.604
	(0.421)	(1.750)	(2.436)	(0.420)	(1.703)	(2.386)	(0.461)	(1.908)	(2.607)
N	3030	2363	2094	3030	2363	2094	2949	2306	2053
Log-Likelihood	-326.04	-279.31	-250.81	-322.62	-276.92	-248.26	-308.52	-264.14	-236.80

Table A9. Using binary measures of popular uprisings 1. Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

	5-year sum		
	(1)	(2)	(3)
Nonviolent anti-regime uprising	0.858***	0.783***	0.663***
	(0.138)	(0.124)	(0.138)
Violent anti-regime uprising	0.190***	0.132*	0.145*
	(0.069)	(0.079)	(0.085)
ln(Regime age)	-0.407***	-0.374***	-0.267**
	(0.112)	(0.119)	(0.117)
Linear trend	0.050***	0.034	0.037
	(0.012)	(0.023)	(0.023)
GDP per capita		-0.252	0.251
		(0.170)	(0.210)
Economic growth		-0.002	-0.005
		(0.015)	(0.017)
Neighboring democracies		1.225***	1.167***
		(0.406)	(0.432)
Neighboring EAs		0.687	0.691
		(0.460)	(0.462)
Post-Cold War		-7.419***	-8.506***
		(1.938)	(2.855)
ln(Aid per capita)		-0.211	-0.351
		(0.252)	(0.337)
Post-Cold*Aid		1.695***	1.924***
		(0.405)	(0.605)
Prior liberalization			3.774**
			(1.753)
Coercive capacity			-1.398*
			(0.723)
Elite unrest			0.543*
			(0.293)
Irregular leader change			0.047
			(0.355)
Constant	-3.919***	-1.127	-1.272
	(0.418)	(1.749)	(2.433)
N	2949	2306	2053
Log-Likelihood	-302.79	-258.20	-234.06

Table A10. Using a 5-year sum of popular uprisings 2. Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

	One-year lag			3-year period			5-year period		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Nonviolent anti-regime uprising	2.093***	1.882***	1.408***	2.228***	1.988***	1.668***	0.858***	0.783***	0.663***
	(0.331)	(0.350)	(0.391)	(0.303)	(0.309)	(0.380)	(0.138)	(0.124)	(0.138)
Violent anti-regime uprising	0.928***	0.560	0.577	0.780***	0.479	0.540	0.190***	0.132*	0.145*
	(0.302)	(0.358)	(0.391)	(0.274)	(0.315)	(0.350)	(0.069)	(0.079)	(0.085)
ln(Regime age)	-0.407***	-0.382***	-0.277**	-0.435***	-0.388***	-0.301***	-0.407***	-0.374***	-0.267**
	(0.111)	(0.112)	(0.114)	(0.105)	(0.109)	(0.111)	(0.112)	(0.119)	(0.117)
Linear trend	0.052***	0.028	0.036*	0.054***	0.030	0.034	0.050***	0.034	0.037
	(0.012)	(0.021)	(0.021)	(0.011)	(0.021)	(0.022)	(0.012)	(0.023)	(0.023)
GDP per capita		-0.178	0.368*		-0.160	0.388**		-0.252	0.251
		(0.155)	(0.199)		(0.150)	(0.195)		(0.170)	(0.210)
Economic growth		-0.011	-0.015		-0.010	-0.011		-0.002	-0.005
		(0.015)	(0.017)		(0.014)	(0.016)		(0.015)	(0.017)
Neighboring democracies		1.286***	1.247***		1.102***	1.102***		1.225***	1.167***
		(0.403)	(0.442)		(0.390)	(0.426)		(0.406)	(0.432)
Neighboring EAs		0.786*	0.759*		0.894**	0.827*		0.687	0.691
		(0.423)	(0.417)		(0.433)	(0.423)		(0.460)	(0.462)
Post-Cold War		-5.904***	-7.286***		-5.937***	-7.425***		-7.419***	-8.506***
		(1.815)	(2.757)		(1.831)	(2.718)		(1.938)	(2.855)
ln(Aid per capita)		-0.229	-0.426		-0.169	-0.333		-0.211	-0.351
		(0.237)	(0.337)		(0.238)	(0.333)		(0.252)	(0.337)
Post-Cold*Aid		1.415***	1.689***		1.417***	1.734***		1.695***	1.924***
		(0.383)	(0.590)		(0.386)	(0.583)		(0.405)	(0.605)
Prior liberalization			3.778**			3.313*			3.774**
			(1.659)			(1.798)			(1.753)
Coercive capacity			-1.683**			-1.694**			-1.398*
			(0.698)			(0.696)			(0.723)
Elite unrest			0.487*			0.560**			0.543*
			(0.282)			(0.274)			(0.293)
Irregular leader change			0.016			-0.079			0.047
			(0.361)			(0.343)			(0.355)
Constant	-3.913***	-1.427	-0.905	-3.966***	-1.912	-1.359	-3.919***	-1.127	-1.272
	(0.415)	(1.713)	(2.442)	(0.388)	(1.660)	(2.362)	(0.418)	(1.749)	(2.433)
N	3030	2363	2094	3030	2363	2094	2949	2306	2053
Log-Likelihood	-324.72	-277.27	-250.25	-317.04	-272.47	-246.05	-302.79	-258.20	-234.06

Table A11. Using binary measures of popular uprisings 2. Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

	Sum			Logged sum			Binary indiator		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Anti-government demos	0.094*	0.214**	0.182*	0.617***	0.728**	0.696*	0.965***	0.645**	0.528*
	(0.056)	(0.102)	(0.110)	(0.216)	(0.311)	(0.361)	(0.213)	(0.303)	(0.313)
ln(Regime age)	-0.296***	-0.298**	-0.204*	-0.307***	-0.294**	-0.210*	-0.306***	-0.301**	-0.200*
	(0.105)	(0.122)	(0.121)	(0.102)	(0.120)	(0.119)	(0.096)	(0.120)	(0.120)
Linear trend	0.029***	0.032	0.043*	0.028***	0.033	0.043*	0.030***	0.037*	0.048**
	(0.010)	(0.022)	(0.023)	(0.010)	(0.022)	(0.023)	(0.009)	(0.022)	(0.022)
GDP per capita		-0.220	0.354*		-0.218	0.345		-0.206	0.360*
		(0.167)	(0.212)		(0.165)	(0.212)		(0.161)	(0.207)
Economic growth		-0.025	-0.027		-0.024	-0.026		-0.022	-0.026
		(0.017)	(0.019)		(0.017)	(0.019)		(0.017)	(0.019)
Neighboring democracies		1.170**	1.162**		1.122**	1.078**		1.181***	1.137**
		(0.467)	(0.495)		(0.455)	(0.491)		(0.458)	(0.514)
Neighboring EAs		1.022**	1.045**		1.052**	1.102**		0.999**	1.009**
		(0.427)	(0.434)		(0.436)	(0.444)		(0.432)	(0.431)
Post-Cold War		-6.516***	-7.576***		-6.548***	-7.970***		-6.711***	-8.095***
		(1.801)	(2.705)		(1.789)	(2.628)		(1.857)	(2.733)
ln(Aid per capita)		-0.140	-0.275		-0.116	-0.229		-0.189	-0.341
		(0.257)	(0.353)		(0.258)	(0.351)		(0.259)	(0.352)
Post-Cold*Aid		1.502***	1.722***		1.501***	1.802***		1.511***	1.809***
		(0.364)	(0.578)		(0.362)	(0.559)		(0.375)	(0.577)
Prior liberalization			3.938**			3.827**			3.543*
			(1.894)			(1.897)			(1.860)
Coercive capacity			-1.649**			-1.635**			-1.635**
			(0.762)			(0.758)			(0.774)
Elite unrest			0.653**			0.662**			0.653**
			(0.298)			(0.298)			(0.300)
Irregular leader change			0.185			0.134			0.159
			(0.390)			(0.393)			(0.387)
Constant	-3.341***	-1.806	-2.084	-3.392***	-2.017	-2.300	-3.637***	-1.864	-1.968
	(0.346)	(1.664)	(2.455)	(0.329)	(1.693)	(2.451)	(0.333)	(1.768)	(2.527)
N	3255	2251	1983	3255	2251	1983	3255	2251	1983
Log-Likelihood	-389.20	-261.71	-228.98	-386.55	-260.53	-227.95	-381.77	-260.64	-228.60

Table A12. Using Banks and Wilson measures of anti-regime demonstrations in the past three years. Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

	Sum			Logged sum			Binary indiator		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Anti-government demos	0.169**	0.309**	0.281**	0.805***	0.891***	0.920**	0.979***	0.670**	0.599*
	(0.086)	(0.127)	(0.136)	(0.256)	(0.336)	(0.382)	(0.230)	(0.310)	(0.309)
ln(Regime age)	-0.335***	-0.300**	-0.201	-0.344***	-0.294**	-0.205	-0.345***	-0.315**	-0.205
	(0.108)	(0.125)	(0.127)	(0.104)	(0.125)	(0.125)	(0.098)	(0.125)	(0.125)
Linear trend	0.029***	0.030	0.040*	0.028***	0.031	0.040	0.030***	0.038*	0.047**
	(0.010)	(0.023)	(0.024)	(0.010)	(0.023)	(0.024)	(0.009)	(0.023)	(0.024)
GDP per capita		-0.277	0.291		-0.279	0.274		-0.268	0.302
		(0.177)	(0.215)		(0.175)	(0.216)		(0.168)	(0.210)
Economic growth		-0.018	-0.020		-0.017	-0.019		-0.013	-0.016
		(0.017)	(0.020)		(0.017)	(0.019)		(0.016)	(0.020)
Neighboring democracies		1.231***	1.202**		1.196***	1.121**		1.277***	1.185**
		(0.459)	(0.489)		(0.449)	(0.483)		(0.455)	(0.516)
Neighboring EAs		1.032**	1.055**		1.065**	1.115**		1.003**	0.993**
		(0.429)	(0.443)		(0.436)	(0.448)		(0.448)	(0.447)
Post-Cold War		-7.048***	-7.967***		-7.136***	-8.430***		-7.361***	-8.491***
		(1.866)	(2.748)		(1.871)	(2.673)		(1.966)	(2.880)
ln(Aid per capita)		-0.085	-0.218		-0.049	-0.142		-0.157	-0.309
		(0.260)	(0.362)		(0.263)	(0.363)		(0.264)	(0.363)
Post-Cold*Aid		1.595***	1.785***		1.602***	1.880***		1.614***	1.861***
		(0.381)	(0.594)		(0.383)	(0.577)		(0.400)	(0.614)
Prior liberalization			4.092**			4.017**			3.616*
			(1.969)			(1.983)			(1.962)
Coercive capacity			-1.674**			-1.682**			-1.685**
			(0.743)			(0.754)			(0.796)
Elite unrest			0.657**			0.664**			0.656**
			(0.297)			(0.298)			(0.297)
Irregular leader change			0.147			0.091			0.122
			(0.398)			(0.396)			(0.384)
Constant	-3.246***	-1.567	-1.772	-3.324***	-1.837	-2.054	-3.644***	-1.555	-1.572
	(0.376)	(1.723)	(2.487)	(0.356)	(1.767)	(2.494)	(0.347)	(1.839)	(2.605)
N	3002	2130	1886	3002	2130	1886	3002	2130	1886
Log-Likelihood	-359.87	-250.18	-219.11	-356.50	-248.98	-217.87	-353.44	-249.38	-218.88

Table A13. Using Banks and Wilson measures of anti-regime demonstrations in the past five years. Robust standard errors clustered at the country level are in parentheses: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$.

7 Testing Alternative Model Specifications

This section examines whether the central findings are robust to different model specifications. First, I attempt to control for country-unit effects and/or common temporal shocks. To control for country-unit effects, I include country random effects or regional fixed effects. To control for common shocks, I add year fixed effects. Table A14 shows that the estimates of anti-regime uprisings are robust to the inclusion of these factors.

Second, Table A15 presents the estimates of models including additional socio-economic variables: oil income per capita, inequality, and trade openness. I fail to find evidence that these controls are significantly correlated with EA transitions. However, the estimates on anti-regime uprisings remain robust.

Third, Table A16 examines how prior regime types influence the effect of mass uprisings. I use regime types taken from Geddes et al. (2014) and include military regimes or party-based regimes. Results remain similar.

Finally, I further examine whether the estimates I have reported are sensitive to adding or deleting other control variables. Using the program developed by Young and Holsteen (2015), I estimated 4,096 models, all possible combinations of controls, and store all of the estimates on anti-regime uprisings. Figure A2 displays the distribution of all the estimates on *Anti-regime uprising*. In every model, the estimated coefficient remains positive, ranging from 0.27 to 0.54, and statistically significant at the 5% level. This demonstrates that the main results are strongly robust to different model specifications.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Anti-regime uprising	0.380***	0.380***	0.362***	0.380***				
	(0.132)	(0.143)	(0.107)	(0.115)				
Other uprising	0.057	0.090	0.104	0.057				
	(0.150)	(0.163)	(0.138)	(0.150)				
Nonviolent anti-regime uprising					0.917***	0.958***	0.824***	0.917***
					(0.253)	(0.250)	(0.193)	(0.222)
Violent anti-regime uprising					0.232	0.224	0.221*	0.232*
					(0.146)	(0.154)	(0.124)	(0.132)
Prior liberalization	3.715*	5.036**	4.254**	3.714*	2.988	4.425**	3.646*	2.987
	(1.955)	(2.020)	(1.949)	(2.051)	(1.920)	(2.007)	(1.975)	(2.083)
Coercive capacity	-1.787**	-1.511**	-1.778***	-1.787***	-1.618**	-1.364*	-1.633***	-1.618***
	(0.718)	(0.749)	(0.635)	(0.635)	(0.670)	(0.711)	(0.628)	(0.628)
Elite unrest	0.396	0.534	0.456	0.396	0.392	0.533*	0.473	0.392
	(0.299)	(0.327)	(0.295)	(0.311)	(0.304)	(0.323)	(0.297)	(0.317)
Irregular leader change	-0.001	-0.063	0.008	-0.001	-0.020	-0.082	-0.022	-0.020
	(0.384)	(0.428)	(0.321)	(0.337)	(0.373)	(0.404)	(0.322)	(0.340)
GDP per capita	0.572***	0.593**	0.476**	0.572**	0.427**	0.408	0.339	0.427*
	(0.209)	(0.247)	(0.218)	(0.231)	(0.216)	(0.255)	(0.222)	(0.235)
Economic growth	-0.025	-0.024	-0.015	-0.025	-0.022	-0.021	-0.014	-0.022
	(0.021)	(0.023)	(0.018)	(0.021)	(0.022)	(0.024)	(0.019)	(0.021)
Neighboring democracies	1.358***	0.916	1.350***	1.357***	1.272***	0.832	1.191***	1.272***
	(0.464)	(0.646)	(0.431)	(0.463)	(0.446)	(0.599)	(0.439)	(0.471)
Neighboring EAs	0.886**	0.633	0.783*	0.885*	0.782	0.526	0.735	0.782
	(0.450)	(0.540)	(0.467)	(0.494)	(0.484)	(0.593)	(0.479)	(0.509)
Post-Cold War	-8.026	-7.268	-6.722**	-8.028	-5.646	-4.212	-7.588**	-5.648
	(14.535)	(14.822)	(3.300)	(17.400)	(15.381)	(15.638)	(3.312)	(17.712)
ln(Aid per capita)	-0.369	-0.089	-0.357	-0.369	-0.273	0.073	-0.331	-0.273
	(0.340)	(0.394)	(0.441)	(0.442)	(0.322)	(0.385)	(0.437)	(0.434)
Post-Cold*Aid	1.528***	1.657**	1.550**	1.527**	1.691***	1.795***	1.760**	1.691**
	(0.569)	(0.673)	(0.688)	(0.717)	(0.577)	(0.675)	(0.690)	(0.717)
ln(Regime age)	-0.280**	-0.194	-0.275**	-0.280**	-0.305**	-0.217*	-0.293**	-0.305**
	(0.120)	(0.132)	(0.115)	(0.121)	(0.121)	(0.129)	(0.117)	(0.124)
Linear trend	0.065	-0.025	0.036*	0.066	-0.147	-0.273	0.034*	-0.147
	(0.984)	(0.987)	(0.020)	(1.166)	(1.041)	(1.043)	(0.020)	(1.192)
Constant	-2.081	-0.840	-1.918	-2.085	4.875	7.234	-1.183	4.872
	(30.791)	(31.225)	(2.825)	(36.126)	(32.536)	(32.820)	(2.783)	(36.946)
lnsig2u			-11.571	-12.723			-12.717	-11.055
			(30.531)	(19.903)			(19.927)	(20.233)
Region FE	no	yes	no	no	no	yes	no	no
Country RE	no	no	yes	yes	no	no	yes	yes
Year FE	yes	yes	no	yes	yes	yes	no	yes
N	1341.00	1325.00	2094.00	1341.00	1341.00	1325.00	2094.00	1341.00
Log-Likelihood	-217.88	-210.08	-249.31	-217.88	-214.23	-206.14	-246.06	-214.23

Table A14. Controlling for country effects and year fixed effects. Robust standard errors clustered at the country level are in parentheses: $^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	(1)	(2)	(3)	(4)	(5)	(6)
Anti-regime uprising	0.388***	0.361***	0.371***			
	(0.116)	(0.117)	(0.121)			
Other uprising	0.099	0.105	0.181			
	(0.126)	(0.115)	(0.113)			
Nonviolent anti-regime uprising				0.792***	0.835***	0.813***
				(0.191)	(0.190)	(0.191)
Violent anti-regime uprising				0.256*	0.215	0.223
				(0.134)	(0.132)	(0.139)
Prior liberalization	2.922*	4.216**	3.949**	2.438	3.480**	3.451**
	(1.695)	(1.761)	(1.759)	(1.642)	(1.743)	(1.710)
Coercive capacity	-1.258	-1.776**	-1.618**	-1.156	-1.623**	-1.502**
	(0.837)	(0.760)	(0.781)	(0.809)	(0.714)	(0.741)
Elite unrest	0.303	0.460	0.464	0.333	0.486*	0.479
	(0.297)	(0.281)	(0.292)	(0.299)	(0.284)	(0.296)
Irregular leader change	-0.020	0.009	0.066	-0.043	-0.022	0.039
	(0.376)	(0.360)	(0.361)	(0.364)	(0.348)	(0.351)
GDP per capita	0.480**	0.493**	0.454**	0.343	0.403*	0.333
	(0.230)	(0.216)	(0.196)	(0.247)	(0.232)	(0.215)
Economic growth	-0.017	-0.015	-0.015	-0.016	-0.015	-0.015
	(0.016)	(0.016)	(0.016)	(0.017)	(0.016)	(0.017)
Neighboring democracies	1.227***	1.337***	1.363***	1.095***	1.136**	1.203***
	(0.427)	(0.448)	(0.415)	(0.425)	(0.443)	(0.413)
Neighboring EAs	0.551	0.779*	0.824**	0.519	0.727*	0.805*
	(0.404)	(0.406)	(0.410)	(0.434)	(0.429)	(0.438)
Post-Cold War	-5.858*	-6.668**	-6.696**	-6.637**	-7.374**	-7.690**
	(3.006)	(2.926)	(2.919)	(3.137)	(2.953)	(3.014)
ln(Aid per capita)	-0.613*	-0.368	-0.328	-0.567	-0.374	-0.323
	(0.362)	(0.346)	(0.383)	(0.352)	(0.330)	(0.377)
Post-Cold*Aid	1.449**	1.540**	1.541**	1.637**	1.718***	1.777***
	(0.635)	(0.621)	(0.622)	(0.650)	(0.616)	(0.632)
ln(Regime age)	-0.324***	-0.273**	-0.236*	-0.336***	-0.287**	-0.259**
	(0.120)	(0.114)	(0.123)	(0.117)	(0.113)	(0.120)
Linear trend	0.024	0.036*	0.037	0.022	0.034	0.035
	(0.024)	(0.022)	(0.023)	(0.024)	(0.022)	(0.023)
Inequality	1.879			1.583		
	(1.364)			(1.358)		
ln(Oil income per capita)		-0.009			-0.037	
		(0.072)			(0.080)	
Trade openness			-0.090			-0.120
			(0.201)			(0.210)
Constant	-2.349	-1.981	-2.082	-1.520	-1.420	-1.151
	(2.520)	(2.515)	(2.518)	(2.469)	(2.476)	(2.517)
N	1818	2094	1878	1818	2094	1878
Log-Likelihood	-233.76	-249.30	-241.58	-231.23	-245.96	-238.94

Table A15. Including additional variables (logit estimates). Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

	(1)	(2)	(3)	(4)
Anti-regime uprising	0.341***	0.607*		
	(0.127)	(0.318)		
Other uprising	0.094	0.165		
	(0.117)	(0.407)		
Nonviolent anti-regime uprising			0.796***	1.164**
			(0.171)	(0.495)
Violent anti-regime uprising			0.195	0.574
			(0.149)	(0.375)
Military regime	1.031	1.152	0.944	1.170
	(0.627)	(0.847)	(0.645)	(0.901)
Party-based regime	1.013	0.978	0.935	1.207
	(0.683)	(0.874)	(0.691)	(0.908)
Personalist regime	1.282	1.868**	1.332*	2.035**
	(0.790)	(0.898)	(0.791)	(0.950)
Military regime×Anti-regime uprising		-0.010		
		(0.354)		
Party-based regime×Anti-regime uprising		-0.000		
		(0.392)		
Personalist regime×Anti-regime uprising		-0.718**		
		(0.350)		
Party-based regime×Other uprising		0.279		
		(0.478)		
Personalist regime×Other uprising		-0.033		
		(0.421)		
Military regime×Nonviolent anti-regime uprising				-0.417
				(0.555)
Party-based regime×Nonviolent anti-regime uprising				-0.137
				(0.587)
Military regime×Violent anti-regime uprising				-0.151
				(0.426)
Party-based regime×Violent anti-regime uprising				-0.260
				(0.503)
Personalist regime×Violent anti-regime uprising				-0.657*
				(0.389)
Controls	full	full	full	full
N	2033	1954	2033	2023
Log-Likelihood	-239.80	-231.59	-236.64	-232.49

Table A16. Examining how prior regime types influence the effect of mass uprisings (logit estimates). Robust standard errors clustered at the country level are in parentheses: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$.
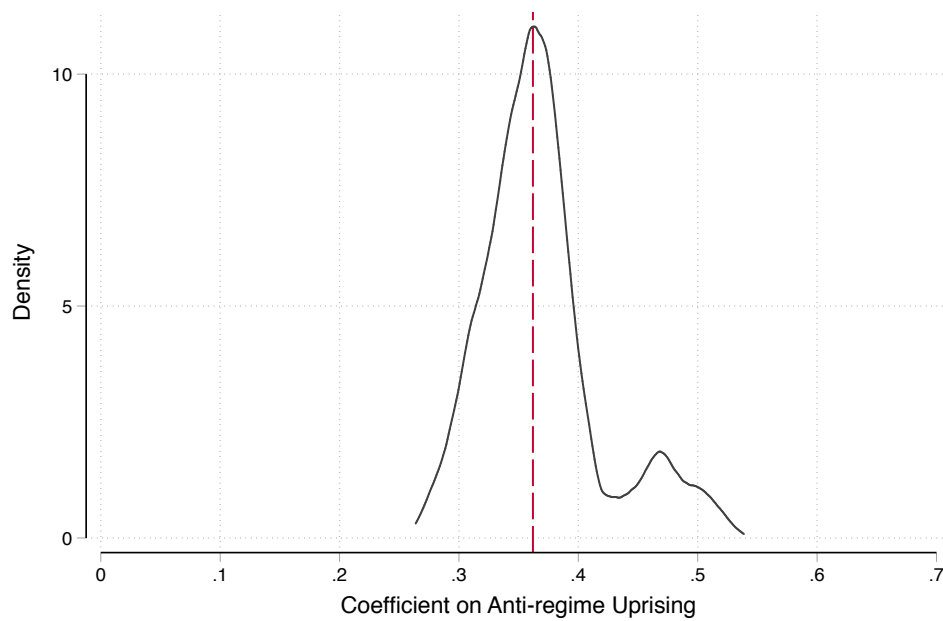
Figure A2. Modeling distribution of *Anti-regime uprising* estimate. This figure depicts the distribution of the estimates on *Anti-regime uprising*. Vertical line indicates the estimate of *Anti-regime uprising* as reported in Model 3 of Table 1 in the main text.

8 Matching analysis

Tab A17 presents the balance statistics before and after the coarsened exact matching. Table A19 reports logit estimates based on matched samples. As explained in the main text, I use the method of coarsened exact matching (Iacus et al., 2011) and pre-processed the data to minimize any potential differences between cases with *Anti-regime uprising* or *Nonviolent anti-regime uprising* and cases without *Anti-regime uprising* or *Nonviolent anti-regime uprising* before conducting the parametric analysis. I match on *Prior liberalization*, *Coercive capacity*, *Elite unrest*, *Urban population*, *GDP per capita*, *Economic growth*, *Neighboring democracies* and *Post-Cold War period*. Table A19 shows that the main finding is robust to the use of matched samples.

	Before matching		After CEM	
Variable	L1 distance	Diff-in-Means	L1 distance	Diff-in-Means
Prior liberalization	0.240	-0.143	0.119	-0.056
Coercive capacity	0.166	-0.039	0.128	0.009
Elite unrest	0.120	0.120	0.000	0.000
Urban population	0.173	-8.265	0.178	-0.136
GDP per capita	0.246	-0.568	0.104	-0.202
Economic growth	0.174	-1.528	0.107	0.026
Neighboring democracies	0.086	-0.049	0.136	-0.940
Post-Cold War	0.013	0.013	0.000	-0.000

Table A17. Balance statistics before and after matching on anti-regime uprisings

	Before matching		After CEM	
Variable	L1 distance	Diff-in-Means	L1 distance	Diff-in-Means
Prior liberalization	0.204	-0.066	0.123	-0.050
Coercive capacity	0.154	-0.035	0.164	-0.005
Elite unrest	0.042	0.042	0.000	-0.000
Urban population	0.201	1.942	0.262	-0.080
GDP per capita	0.299	-0.041	0.122	-0.364
Economic growth	0.169	-1.287	0.105	0.019
Neighboring democracies	0.227	0.086	0.159	1.735
Post-Cold War	0.030	0.030	0.000	-0.000

Table A18. Balance statistics before and after matching on nonviolent anti-regime uprisings

	Treatment:	
	Anti-regime uprisings	Nonviolent uprisings
	(1)	(2)
Anti-regime uprising	1.100***	
	(0.380)	
Nonviolent anti-regime uprising		1.421***
		(0.506)
Prior liberalization	9.118***	2.605
	(2.324)	(3.272)
Coercive capacity	-1.829**	-1.362
	(0.883)	(1.141)
Elite unrest	0.861*	0.540
	(0.450)	(0.571)
Irregular leader change	-0.549	-0.140
	(0.480)	(0.822)
GDP per capita	0.685***	-0.082
	(0.245)	(0.471)
Economic growth	-0.039	-0.008
	(0.027)	(0.069)
Neighboring democracies	1.424**	0.953
	(0.691)	(0.718)
Neighboring EAs	0.320	-0.470
	(0.729)	(0.854)
Post-Cold War	-4.211	-7.814
	(4.531)	(5.193)
ln(Aid per capita)	-0.566	-1.869**
	(0.500)	(0.767)
Post-Cold*Aid	0.907	1.937*
	(0.994)	(1.075)
ln(Regime age)	-0.261*	-0.320
	(0.151)	(0.216)
Linear trend	0.050	0.050
	(0.037)	(0.034)
Constant	-3.595	8.101
	(2.952)	(5.121)
N	1374	717
Log-Likelihood	-152	-117

Table A19. Using matched samples (logit estimates). Model 2 and 4 use 10 multiply imputed data. Robust standard errors clustered at the country level are in parentheses: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

9 Assessing bias from unobservables

As explained in the main text, I adopt the strategy proposed by Altonji et al. (2005) to evaluate the likelihood that selection bias due to unobservables may be driving the results. This strategy assesses how many times stronger selection on unobservables would have to be relative to selection on observables, included in my empirical model, to explain away the estimated effect of *Anti-regime uprising*. The calculation is based on the ratio $\hat{\beta}^F/(\hat{\beta}^R - \hat{\beta}^F)$ where $\hat{\beta}^F$ is the coefficient of *Anti-regime uprising* in Model 3 with full controls and $\hat{\beta}^R$ is the coefficient of *Anti-regime uprising* in models with a set of restricted controls. A large ratio suggests that it is implausible that bias from unobservables explains away the entire effect of *Anti-regime uprising*. Following Nunn and Wantchekon (2011), I use linear probability models to obtain $\hat{\beta}^F$ and $\hat{\beta}^R$.

Controls in the restricted set	Controls in the full set	Ratios
Coefficient of *Anti-regime Uprising*		
None	Full controls from Model 3 of Table 2	3.33
ln(Regime age), a linear time trend	Full controls from Model 3 of Table 2	16.67
ln(Regime age), a linear time trend, and *Other uprising*	Full controls from Model 3 of Table 2	19.36
Coefficient of *Nonviolent anti-regime Uprising*		
None	Full controls from Model 3 of Table 3	8.46
ln(Regime age)	Full controls from Model 3 of Table 3	10.62
ln(Regime age), a linear time trend, and *Violent uprising*	Full controls from Model 3 of Table 3	11.44

Table A20. Assessing the Bias from Unobservables by Using Selection on Observables.

10 Multiple Imputation

For multiple imputation, I use the Amelia II package for R (Honaker et al., 2011). I use countries and years to index the cross-section and time units. I include all the variables used in Table 2 and supplementary analyses reported in the appendix. Following the recommendations of Honaker et al. (2011), I also include lags and leads on the main variables of interest. In order to avoid implausible imputations in the analysis, I use only data since 1961, the first year that foreign aid data is available. Finally, I use a 5% ridge prior in order to improve the numerical stability of the imputations. After multiple imputation, the sample includes 124 countries in 3,030 country-years.