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Economic Crisis and Regime Transitions from Within[*]

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Abstract

We study how economic crises affect the likelihood of regime change brought about, in part or fully, by actors in the incumbent regime. While historically common, such processes remain far less studied than regime transitions forced by non-incumbent actors, such as coups or revolutions. We argue that economic crises may incentivize leaders to change the regime "from within" due to two different mechanisms, which we detail and illustrate with two cases. First, crises create "windows of opportunity" for leaders to change the regime in a direction they inherently prefer. Democratically elected leaders who use crises to conduct self-coups is one example. Second, economic crises sometimes allow for opposition actors to mobilize and threaten the regime with breakdown. In such circumstances, incumbents may prefer to change the regime from within to appease opponents in anticipation of even worse outcomes. We leverage new data on the timing and mode of regime change for more than 2000 regimes from about 200 countries, across 1789–2018, and find support for the hypothesis that economic crises induce transitions from within. However, when we distinguish incumbent-guided liberalization episodes from other guided transitions, including self-coups, we only find that economic crises systematically relate to the latter.

1   Introduction

Large-n empirical analysis of regime change are abundant in comparative politics, especially those that consider transitions between regimes with democratic and autocratic characteristics (e.g., Przeworski et al., 2000; Boix, 2003). But, there are also growing empirical literatures that instead focus on distinct modes of breakdown and related processes of regime change, especially changes being forced by actors external to the incumbent regime. Such actors could be large groups of citizens or smaller groups of military officers driving processes of, respectively, popular uprisings/revolutions (e.g., Chenoweth and Stephan, 2011; Celestino and Gleditsch, 2013; Kendall-Taylor and Frantz, 2014) or coups d'état (e.g., Powell and Thyne, 2011; Powell, 2012; Olar, 2019). These literatures have generated empirically based insights into *how* and *when* regimes die. One key determinant of both successful popular revolutions (Knutsen, 2014) and coups (Gassebner, Gutmann and Voigt, 2016) is economic crisis, typically operationalized in the literature as slow or even negative growth in GDP per capita (p.c.) within a restricted time-frame, typically a year.[1]

In this paper, we develop the argument that economic crises *also* spur processes of regime change that originate from "within" the regime. As we detail in Section 3, we define regimes as the formal and informal rules that are essential for selecting leaders. Regime transitions from within are therefore defined as substantial changes to these rules that are, at least in part, guided by regime incumbents. These regime changes include, first, liberalization processes of previously autocratic regimes, managed by incumbent regime elites. One example is the guided process of democratization in Spain after Franco's death. Second, "transitions from within" include other incumbent-guided transition processes not accompanied by sub-

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[1]Also the large literatures on all regime transitions from autocracy to democracy, or vice versa, find that economic crises are conducive to regime transitions. For example, Przeworski and Limongi (1997) find that slow short-term GDP p.c. growth increase transitions both to and from democracy (see also, e.g., Kennedy, 2010; Ciccone, 2011; Aidt and Leon, 2015). Geddes, Wright and Frantz (2018) find that slow growth increases the chances of autocratic regimes breaking down, more generally (i.e., not only when leading to democratic transitions), although the relationship depend on the incumbent regime's institutional structure. Likewise, Khrishnarajan (2019) finds that the negative relationship between crisis and irregular leader exits in autocracies is context-dependent, and strongly moderated by natural resources income. Further, several studies suggest that high inflation, another measure of economic crisis, increase the risk of democratic breakdown, at least in certain time periods and institutional contexts (Gasiorowski, 1995; Gasiorowski and Power, 1998; Bernhard, Nordstrom and Reenock, 2001). Going beyond regime change, systematic studies find that economic crises affect several other outcomes associated with political stability, more broadly, ranging from government change in democracies (Lindvall, 2017) to civil war onset (Hegre and Sambanis, 2006).

stantial liberalization, such as managed changes from a military regime ruled by a junta to an institutionalized one-party autocracy or to a personalized dictatorship (Geddes, Wright and Frantz, 2018). One such guided transition occurred in post-Mao China in 1982, when the Communist Party approved a new constitution that, e.g., introduced term limits on leaders. Finally, transitions from within include self-coups, where a sitting, democratically elected leader concentrates power in his/her own hands under a more autocratic regime (Svolik, 2015). One example is the imposition of Martial Law in the Philippines in 1972, by President Ferdinand Marcos. While different in many respects, these regime changes have in common that the process of transforming the regime is, at least to some extent, managed by representatives of the sitting regime. We hypothesize that such regime changes are more likely to occur once a country experiences economic crisis.

Scholars have highlighted that incumbent elites are often part of negotiating transitions from autocracy to democracy, and that the outcomes of such negotiations affect the type of regime that emerges (O'Donnell, Schmitter and Whitehead, 1986) and policy outcomes under the new regime (Albertus and Menaldo, 2018). Yet, by focusing on (various kinds of) incumbent-guided regime transitions, and theoretically and empirically scrutinizing the link between economic crises and such transitions, this paper makes important contributions to the literature on regime change. In fact, we are not aware of any existing large-n study that exclusively focuses on processes of regime change from within and determinants of such changes.[2] This lack of empirical studies is not due to regime changes from within being rare phenomena—for large parts of modern history, such changes have outpaced regime changes generated by, for instance, military coups or popular revolutions (see Section 3). Instead, the missing empirical studies, we surmise, are due to the previous lack of comprehensive data on these particular changes. This situation has changed with the new "Historical Regime Data" (HRD; Djuve, Knutsen and Wig, 2019), embedded in the Varieties of Democracy (V-Dem) dataset (Coppedge et al., 2017a,b). We employ these data—which include more than 2000

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[2]The recent work on "Gamed Democracy" by Albertus and Menaldo (e.g., 2018) is related. But, these authors focus on democratic transitions rather than dealing with any kind of regime change, and only indirectly consider the guided nature of transitions, empirically, by coding the continuation of constitutions from autocracy to democracy. Their argument highlights the relevance of incumbent autocratic elites negotiating or even leading the transition to democracy, thereby designing the new democratic system so that they have considerable decision-making power.

political regimes and about 700 regime changes from within, drawn from 201 countries and the years 1789–2018—in our empirical analysis below.

In contrast with the lack of large-n empirical studies, several theoretical contributions have been made on the dynamics of regime changes from within (e.g., Acemoglu and Robinson, 2006; Boix, 2003; Svolik, 2012), generating several intriguing hypotheses. Among them is that economic crises spur (at least specific forms of) regime changes from within. While often discussed as an argument predicting a relationship between economic crisis and popular revolution (see, e.g., Doorsch and Maarek, 2014), the core formal model of Acemoglu and Robinson (2006) implies the discussed hypothesis; anticipating revolutionary action during times of crisis, incumbent elites will often pre-empt such enforced transitions by initiating a guided liberalization that, in turn, diffuses the popular threat. In-depth case studies—on regimes drawn from a wide variety of regions and historical time periods (see, e.g., Berger and Spoerer, 2001; Morales and McMahon, 1996; Bratton and van de Walle, 1997a)—have also elaborated how economic crises spur not only uprisings and revolutions, but also engender regime changes from within. Thus, our empirical study informs an already large theoretical and case study literature on the topic, and allows for testing prominent hypotheses on extensive data material.

But, why would incumbents accept changes to their current regimes, and why would they be more likely to do so after an economic crisis? By further detailing, developing and synthesizing notions from the existing theoretical and case study literatures, we argue that economic crises may motivate leaders to change the regime through two main mechanisms. First, crises sometimes weaken various opposition actors, increase general distress and create "windows of opportunity" for leaders to change the regime in a direction that they inherently prefer. Democratically elected leaders who use crises as pre-text to conduct self-coups is one example. Second, an economic crisis may sometimes also weaken the regime's power resources and help opposition actors to mobilize, threatening the regime with breakdown. In such circumstances, incumbents might prefer to negotiate regime change with the opposition as a "lesser evil", to avoid direct confrontation.

In the following sections, we first present the general theoretical argument. Next, we present two illustrative cases studies, which are selected to exemplify how each of the two

mechanisms contained in the argument may play out in practice, namely early-1990s Peru and early-1990s Zambia. Thereafter, we discuss the core concepts and introduce the measures and data that we use in our large-n analysis. Before concluding, we present our empirical analyses, first on an aggregated measure of regime transitions from within and then on disaggregated measures capturing different types of such changes. We find a fairly robust relationship between various measures of economic crises and the aggregate measure of regime changes from within. When we disaggregate, we find a clear link with self-coups and transitions from within that are not associated with liberalization. But we do not find a clear relationship with incumbent-guided liberalization/democratization episodes. Thus, our empirical analysis yields support for the proposed "window of opportunity" mechanism, but not for the "lesser evil" mechanism suggested by, among others, Acemoglu and Robinson (2006).

2 Argument

Our argument consists of two proposed mechanisms, both of which suggest that an economic crisis increases the probability of regime transition from within. These mechanisms relate to how economic crises impact on the *opportunities* that incumbent elites have for changing the regime—either through altering the resources or support of the incumbent, or the resources or coordination abilities of opposition groups—or on the *preferences* that incumbents have regarding deliberately altering the regime versus trying to maintain the status quo. Yet, concerning the more specific nature of such preferences, the two mechanisms differ. One mechanism—let's call it the "window of opportunity" mechanism—suggests that crises create opportunities for incumbent elites to transform the regime to one that they inherently prefer over the status quo. The second, "lesser evil" mechanism suggests that crisis may induce elites to transform the regime to one they find less desirable than the status quo, but more desirable than the regime that could result from their inaction.

We specify and exemplify these mechanisms in the coming sections, which contain two illustrative case studies. Briefly summarized, the first mechanism suggests that an economic crisis, in certain situations, create a "window of opportunity" for leaders to "reform" the

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political regime in a direction that they inherently prefer. We illustrate this mechanism with Peru and the self-coup by Alberto Fujimori. The second mechanism presupposes that economic crises mobilize and empower opposition actors, thus creating incentives for sitting leaders to enter negotiations about regime change with the opposition or otherwise set in motion a managed change to avoid forced regime transition. In other words, economic crises can pressure incumbents into accepting regime change, notably guided liberalizing regime changes, as the lesser of two evils. In these instances, the incumbent is unlikely to inherently prefer the post-transition regime to the pre-transition one, but the transition is nonetheless accepted as the *expected costs of resisting* a transition are higher than the utility loss of the guided transition (see Acemoglu and Robinson, 2000, 2006). Several factors can play into this calculation; notably, being thrown out of office through extra-constitutional means such as a revolution or coup substantially increases risks of leaders experiencing death and other forms of punishment (Goemans, 2008). We illustrate the second mechanism by the guided liberalization occurring in early-1990s Zambia.

Common to both mechanisms are assumptions about how economic crises affect the behavior of actors outside the incumbent regime elite. Several scholars have explicitly or implicitly assumed that economic crises lead to coups d'état, civil wars, and revolutions largely because of the discontent they induce (or exacerbate) for either coup-plotters, rebels, or the population at large. The link between economic crises and grievances in the population, mediated by individuals experiencing income loss, unemployment, or high inflation, is highlighted in various contributions (e.g., Davies, 1962; Gurr, 1970). Such increased grievances—especially if the regime is perceived to be responsible for the crisis—may increase (elites' perceptions of) risks of a forced regime breakdown brought about by external actors. This, in turn, could spur incumbent elites to steer the country through a guided regime transition to mitigate these grievances. However, aggrieved population groups could also direct their anger towards other groups whom they perceive as responsible for their distress, such as economic elite groups not associated with the regime, foreign business interests, or foreign governments. Clever incumbents could then even take advantage of this situation to change the regime in a direction they prefer.[3]

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[3]This argument is agnostic to the specific incumbent motivation. Often, we surmise, increased personal

Economic crisis can also alter the behavior of non-incumbents through other mechanisms. Several contributions (e.g., Acemoglu and Robinson, 2006) highlight how economic crises may function as coordination devices for collective action among different groups. Being both demarcated in time and of a public nature, crises can serve as "coordination signals", for instance enabling citizens to take to the streets knowing they will not be alone in protesting (see, e.g., Kuran, 1989). Expectations of such dynamics could also put pressure on incumbent elites to reform the regime from within in order to avoid a revolution.

Finally, an economic crisis may alter the resources available to incumbents and to opposition actors, thereby altering the power balance between them, depending on the nature of the crisis and where the actors draw their resources from. If the regime's core supporters are agricultural elites whereas the opposition consists of industrial elites, as in many 19th century European autocracies (Ansell and Samuels, 2014), an economic crisis that mainly pertains to the production or prices of major agricultural export products should tilt the power balance in favor of the opposition. Economic crises that reduce tax revenues may render regime elites less capable of co-opting or diffusing threats by eating into funds used for repression or buying support from key groups, be it through social policy spending (Ponticelli and Voth, 2011) or patronage (Bratton and van de Walle, 1997b). This, in turn, strengthens incumbent incentives to find other ways to maintain support, including regime transitions from within.

In the following, we detail the two different mechanisms, or "paths", through which economic crisis may spur regime change. For both paths, we start out with an illustrative case narrative, before we provide a short and more general, stylized description.

2.1   Path 1: Economic crises as windows of opportunity (Peru)

One case that illustrates how crisis can induce a transition from within, and more specifically a self-coup, through providing the leader with a window of opportunity is the ascent of Alberto Fujimori to autocrat of Peru on April 5th 1992. Known as an economic reformer that promised to combat stagnation, Fujimori first came to power in 1990, after four years of

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power or private economic gain are key motivations, but altruistic or idealistic leaders could pursue regime changes intended to ensure "better governance".
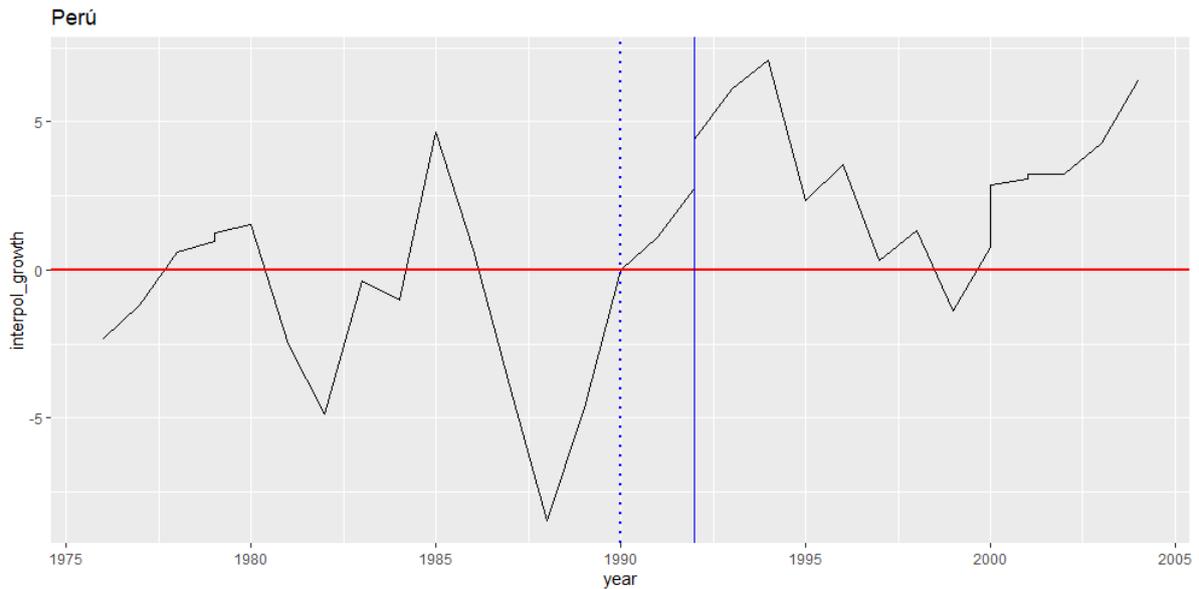
Figure 1: Yearly growth: Peru

negative GDP p.c. growth. Growth remained slow also in the two years before his self-coup (see Figure 1). In total, Fujimori would govern Peru for ten years, eight of which after the self-coup and without any credible electoral and parliamentary opposition.

Fujimori's predecessor was Alan Garcia, a member of the centre-left American Popular Revolutionary Alliance (APRA) (Crabtree, 1992). Garcia's five-year term in office was characterized by a drastic and protracted economic downturn, resulting in a large spike in poverty. Emphasizing nationalization and government interference, Garcia represented rather different ideas on economic policy than his successor, Fujimori. This clear divergence in economic platforms, and the negative experiences with crisis during the more left-wing economic policies of Garcia, may have contributed to Fujimori's popularity in the early 1990s in different segments of the Peruvian population. Alberto Fujimori, now often termed neopopulist (Weyland, 2006), thus came to power in 1990, and did so initially through free and fair elections.

Yet, Fujimori's policies for dealing with the economic crisis he inherited remained very controversial among opponents, contributing to the intensity of the conflict that eventually provided the window of opportunity for Fujimori's self-coup. After imposing a series of strict austerity measures, the opposition was inflamed, and Fujimori eventually dissolved Congress in the autogolpe of April 5, 1992, with substantial support from the military branch. Subsequently, he revised the constitution and undertook a drastic process of eco-

nomic liberalization without being curtailed by the checks and balances of the previous democratic system (Mauceri, 2006).

Admittedly, the economic crisis that Peru had experienced, and the intense conflict over what policies should be selected to resolve it, was not the only factor behind Fujimori's 1992 self-coup. For it to succeed, a myriad of factors had to align, including the consolidation of a sufficiently strong ruling coalition and, crucially, the support of the military. The military had relinquished direct rule of Peru in 1980, but remained a critical political actor due to years of counterinsurgency campaigns against the communist armed insurgency, Sendero Luminoso (Shining Path) (McClintock, 1984). Parallel with the economic downturn, political violence intensified over the 80s, and had spread from Sendero's point of origin, the Ayacucho region, to over thirty provinces across Peru (McClintock, 1989). Obando (1996) argues that the mutual support between Fujimori and the military leadership was a "marriage of convenience", in which Fujimori was given political and fiscal power in return for increased military control over the conflict with Sendero Luminoso. Therefore, the ongoing political violence seems crucial for ensuring the military–Fujimori alliance that allowed for the self-coup to be successful. Yet, the insurgency itself was intensifying, in part, by the deteriorating living standards of peasants and merchants who increasingly dedicated themselves to Sendero Luminoso. While high-ranking members were dedicated to the ideological cause, economic grievances was a core motivation for other members (see Berg, 1986; Portugal, 2008). Hence, the protracted and deep economic crisis of Peru, at least indirectly, contributed to opening up the window of opportunity for Fujimori's self-coup.

Finally, a major factor in letting Fujimori execute a successful autogolpe was the popular support he secured for suspending the constitution (Levitsky, 1999). Public opinion polls suggested that almost 80 percent of the Peruvian population supported Fujimori's authoritarian turn in 1992 (McClintock, 1996). As noted by Pastor and Wise (1992), these factors where thoroughly intertwined with, and to an extent preconditioned by, the state of the Peruvian economy—presumably, Fujimori's popularity was affected especially by the very poor economic performance experienced under his predecessor.

The Peruvian case illustrates the following general story: An economic crisis contributes to erode support for institutions of the existing regime in key constituencies, thus making
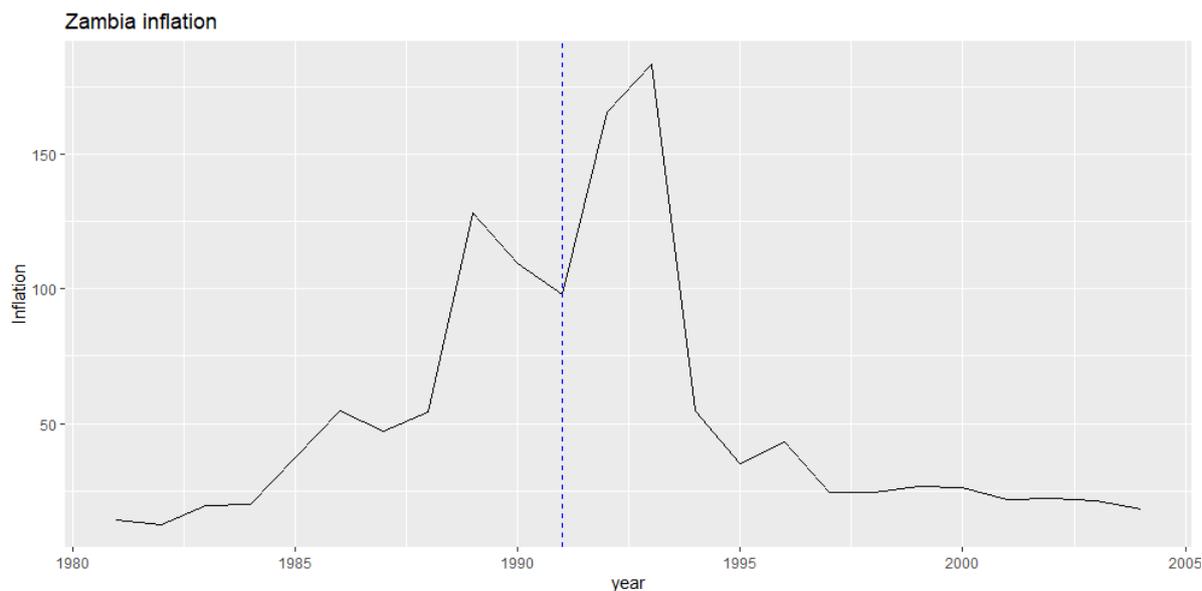
Figure 2: Yearly inflation: Zambia

it less controversial and risky for regime insiders to transform the regime to another system that they prefer. Further, economic crisis may exacerbate tensions between opposing societal forces, and alter the power balance between them, so that regime incumbents can more easily push through their desired regime change, even when facing some opposition. In sum, economic crises can spur grievances and alter the preferences and power resources of different constituencies, thus creating a window of opportunity that clever elites can exploit to change the political regime in a direction they inherently prefer.

2.2 Path 2: Economic crises creating pressure for change (Zambia)

We illustrate the second path through which an economic crisis may spur regime change from within with the end of United National Independence Party (UNIP) rule in Zambia in 1991. UNIP, under president Kenneth Kaunda, had ruled Zambia for 27 years—a formalized one-party state had existed for 18 of them. Yet, in 1991, multi-party elections were held, and a relatively peaceful transfer of power to the Movement for Multi-Party Democracy (MMD) followed (Baylies and Szeftel, 1992). A short account of the decline and liberalization of UNIP's rule follows.

The beginning of Zambia's economic difficulties, which would only worsen over the next
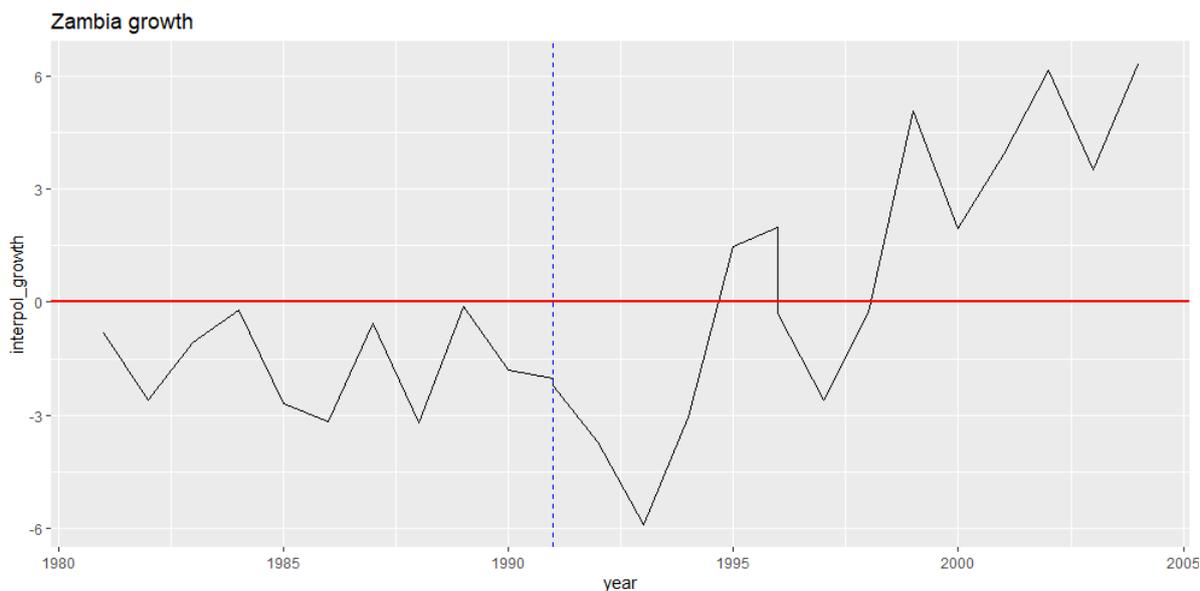
Figure 3: Yearly growth: Zambia

two decades, came in the mid-70s, after the international oil crisis and steep decline in copper prices. As such, the discontent that surged in the late 80s—with many years of negative GDP p.c. growth and a spike in inflation (see Figures 2 and 3)—had built up over years, and economic grievances intertwined with other sources of disgruntlement. The initial UNIP reaction to the visible discontent of the late 80s was to ban debate within the party structure and tighten control over national media, including the two main national newspapers (Bratton, 1992). Yet, these efforts did not prevent the intensification of political engagement in civil society, the business community, and labour movement (VonDoepp, 1996). MMD was a coalition of these interests, with Frederick Chiluba, long time chairman of the Zambia Congress of Trade Unions (ZCTU), as party president. ZCTU led the campaign for a referendum on the restoration of multi-party politics, which President Kaunda tentatively accepted in 1989. In June 1989, a government-imposed doubling of the price on maize—presumably a direct response to the financial troubles the government now found itself in—led to three days of looting and riots in Lusaka and several other towns.

Beyond domestic trends and pressure for change, international pressure also affected political developments (as in several other African countries in the early 1990s; Bratton and van de Walle, 1997a). The IMF, with whom the UNIP government had an uneasy relationship, was one international actor applying pressure. Zambia's debt/GDP ratio soared from 90.9% in 1980 to 261.3% in 1990 (Bank, 1992)—contracting GDP p.c. during the 1980s

helped fuel this development. After accepting IMF regulations to obtain sorely needed loans, the Zambian government eventually broke with the IMF in 1987. Although the break only lasted a short while, this worsened the regime's ability to satisfy various popular demands with spending (Bradshaw, 1993). After an extended period of negative growth, and presiding over a poor and aid-dependent economy, the Zambian regime was vulnerable to pressures both from international actors such as the IMF and internal opposition (Levitsky and Way, 2006).

It was in this context the (predecessor of) MMD solidified its push for immediate elections, and UNIP under Kaunda subsequently legalized political parties, but planned to stay the course in the new multi-party regime by partaking in elections. The first multi-party elections in Zambia since 1968 were held on 31 October 1991, giving MMD 74% of the vote for the national assembly and Chiluba 76% of the vote for president (Macola, 2008; Bratton, 1992; Baylies and Szeftel, 1992). Kaunda received 24% of the vote for president and UNIP received 25% of the national assembly votes, giving it 25 seats compared to the MMD's 125.

The general story that the Zambian case illustrates, is one where economic crisis builds up substantial pressure on the sitting regime (from various actors). Under such conditions, the regime may ultimately opt to reform into what regime elites consider a less favourable regime type than the status quo. They do so simply because this outcome, arrived at via a guided regime transition, is preferable to (the perceived high-probability event of) forced regime change by outside actors. The latter may not only lead to incumbent elites losing power altogether, but dramatically increase risks of death or other punishment to former leaders (Goemans, 2008). The pressures for change created by an economic crisis can come from the signalling- and coordination functions that a crisis can play in uniting a fragmented opposition, but also through increasing grievances with the regime—and thus the willingness to fight it—in different population groups. Finally, a crisis may force change simply through siphoning off the sitting regime's financial resources, and thus weakening its ability to co-opt, or effectively repress, crucial coalition partners and the wider populace.

3 Concepts, measures and data

3.1 Regime transitions from within

Following Djuve, Knutsen and Wig (2019), we define a political regime as the set of formal and informal rules that are essential for selecting leaders (see also Geddes, Wright and Frantz, 2014). A regime change is thus defined as a substantial change in these rules (for a longer elaboration, see Djuve, Knutsen and Wig, 2019). A "regime change from within" is a substantial change in the formal or informal rules for selecting leaders that is, at least in part, guided by incumbent regime elites. The crucial distinction between mere policy changes and regime changes from within thus rests on what threshold we use for categorizing *substantial* changes. There is an inherent trade-off between capturing more fine-grained changes in (especially informal) rules that *de facto* alter a regime's nature and sifting out irrelevant policy shifts. We apply the same threshold and operationalization as Djuve, Knutsen and Wig (2019), which is lower—giving about twice as many regime changes for identical country-year observations—than the one used by Geddes, Wright and Frantz (2014). Regime transitions from within are often associated with government or leadership changes, such as in 1991-Zambia. But, regime transitions from within can also occur without any changes to the incumbent leadership, notably for non-democratizing transitions such as self-coups. In these instances, small, incremental changes over protracted periods of time may sometimes accumulate to a substantial shift in rules. We aim to capture also such changes, despite the difficulties of pinning down the exact date of regime change.

The data for our dependent variable are from HRD, which is constructed to deal with the tricky operational questions raised above. These data are described and evaluated in Djuve, Knutsen and Wig (2019), and notes and sources are publicly available for all recorded regime changes. The data were originally collected for 1789–1920 as part of Historical V-Dem (Knutsen et al., 2019), but have later been expanded to 2018 and to cover more countries, and are integrated as part of V-Dem (Coppedge et al., 2017a). HRD comprises information on more than 2000 political regimes with high temporal resolution, denoting the beginnings and ends of regimes down to their precise dates in most cases. HRD also records the type of regime breakdown, employing a 14-category scheme (see Appendix A). Types of breakdown

are recorded on a single-selection variable, where the most important process leading to breakdown is recorded, and a multiple-selection variable recording all relevant processes. We rely on the single-selection variable when constructing our dependent variable. The 14-category scheme covers, for instance, military coups, civil war, foreign intervention, popular uprisings *and* the three categories of regime transition from within that we focus on here.

The three categories of transitions from within are self-coups, non-liberalizing incumbent-guided transitions, and liberalizing incumbent-guided transitions. Liberalizing guided transitions are regime changes where the incumbent elite is directly involved in steering or negotiating the transition *and* that either substantially improve level of democracy in existing partial democracies, or dismantle decisive components of existing autocracies. 1991-Zambia exemplify the latter, as a one-party regime legalized opposition parties and introduced elections. Typical examples of the former include substantial suffrage extensions and removal of restraints from non-elected executives (typically monarchs) on elected bodies (e.g., an elected parliament). As discussed briefly above and in depth in Djuve, Knutsen and Wig (2019), such rule changes must be of a certain magnitude and practical importance to register as a regime change.

The other two types of regime change from within are other incumbent-guided transitions (not accompanied by political liberalization) and self-coups conducted by sitting leaders. Admittedly, these two modes of regime breakdown are sometimes hard to distinguish in practice.[4] We find it helpful to think of this distinction as a continuum ranging from very clear self-coups (such as Fujimori's self-coup in 1992), which lead the old regime to be replaced by a more autocratic new one under the same leader(s), via difficult intermediate cases where there may be some additional concentration of power in the leader's hands, to guided transitions between regimes, where the new regime is often no more autocratic/democratic (or only slightly more autocratic/democratic) than the previous one. An example of the latter is the end of the Fourth Republic in France 1959, instigated by Charles de Gaulle after the Algiers crisis of 1958. HRD dates the transition to the effectuation of the new constitution on January 8, 1959, with the beginning of the current semi-presidential

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[4]Mitigating measurement error is therefore one benefit of combining these two categories. Thus, also when testing our two theorized paths from economic crisis to transition from within, we collapse them into a single "non-democratizing transitions" category.

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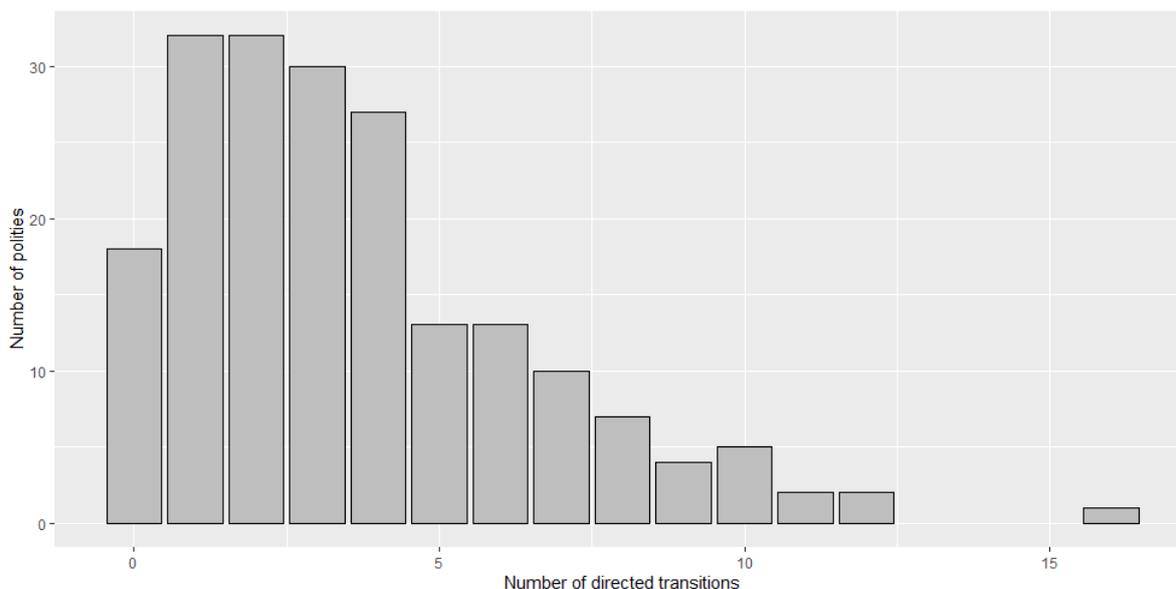
Figure 4: Frequency of polities (y-axis) by number of regime transitions from within throughout a country's history (as registered in the HRD data; x-axis).

Fifth Republic. Regarding the intermediate cases, these are often characterized by some legislative action being made to transform the rules of the political game, for example restricting the role of the opposition or introducing a specific head of state or new legislative framework for the appointment of head of state. These changes may have (some) effects on the concentration of power with the leadership and lead to a somewhat more autocratic outcome, but stop short of a full-fledged self-coup.

In our main analysis, the three transition categories are grouped together when coding our dummy on "regime transitions from within". Guided transitions leading to political liberalization make up 251/2021 regime breakdowns recorded in HRD (12.4%), whereas self-coups account for 104/2021 (5.1%) and "other transitions from within" for 366/2021 (18.1%). Transitions from within thus make up more than a third of all regime changes. Since many countries have time series extending back to the late 18th- or early 19th century, and most others start in 1900 (see Appendix A for sample details), 75% of all countries have two or more such transitions recorded, as displayed by the histogram in Figure 4. Mexico tops the distribution with 16 regime transitions from within, six between 1812 and 1824 and the latest one being the guided liberalization of the PRI regime in 2000.

Figure 5 presents time-series lines on the proportions of countries, globally, that experienced at least one regime breakdown (of any kind) *and* at least one transition from within.
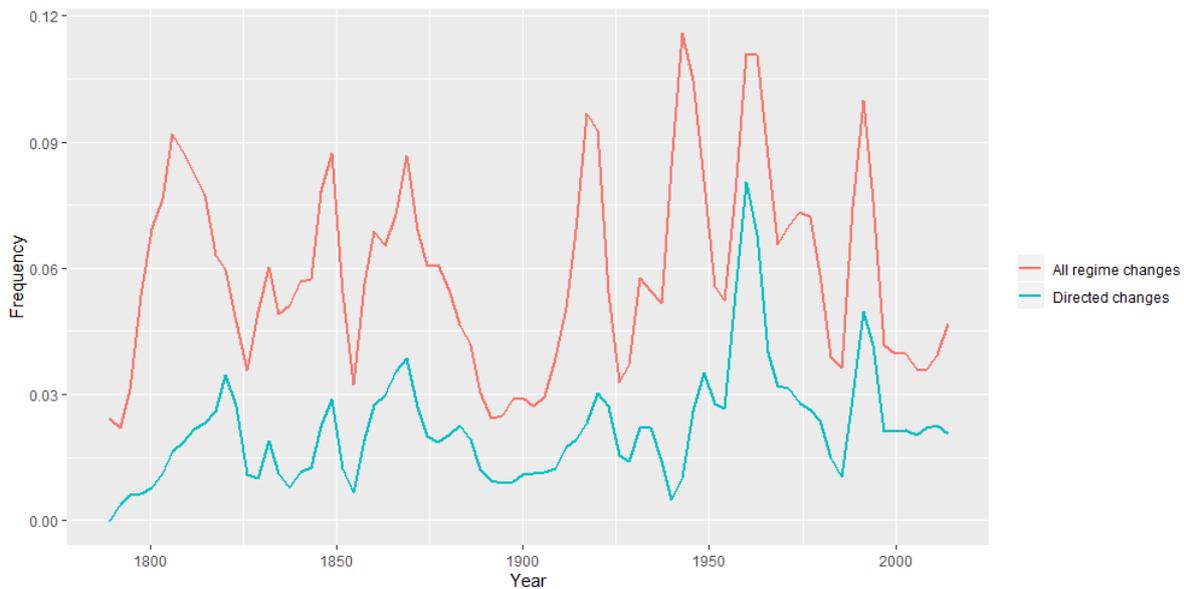
Figure 5: Share of countries globally that experienced at least one regime breakdown, in a year, and share of countries globally experiencing at least one regime transition from within, in a year. The time series are generated with a Loess smoother, with a span of 0.075, on annualized data.

The latter have made up a substantial share of all regime changes through most of modern history, but the absolute and relative frequencies have varied, with two high-water marks around 1960 and around 1990. Appendix Figure B.1 further details how transitions from within have varied, historically, in different geographical regions. For instance, such transitions accounted for more than half of all regime changes in Western Europe and North America during long stretches of the late 19th and early 20th centuries, including several guided liberalization episodes where incumbent elites expanded the franchise (e.g., Boix, 2003) or introduced parliamentarism and circumscribed the monarch's powers (e.g., Congleton, 2011).

3.2   Economic crises

Economic crises can have very different features and underlying causes—there are financial crises, exchange rate-induced crises, or crises from crashes in the property market. Some are associated with high inflation, others with high unemployment rates, and yet others with both features simultaneously. Some crises are abrupt and short, others are more protracted (as in the discussed Peruvian and Zambian cases). Nonetheless, one feature that is typical

for economic crisis is strongly reduced, and even negative rates of, GDP p.c. growth. In fact, the most common operationalization that economists use for a "recession" is negative GDP p.c. growth for at least two consecutive quarters (of a year). Yet, GDP p.c. growth is a continuous variable, and setting a threshold for what we should call an economic crisis is inevitably an arbitrary decision. Our benchmark measure is therefore the continuous measure of GDP p.c. growth in a year. Further, we test a dummy that distinguishes between positive and negative growth in a given year, coding instances of GDP p.c. growth < 0 as 1 (economic crisis) and all other non-missing observations as 0. Alternative operationalizations are dummies capturing lower than -3 and -5 percent annual GDP p.c. growth, hence using more conservative thresholds for identifying crisis. In addition, we test dummies for crises that require negative GDP p.c. growth over more than one year, in order to identify more protracted crises only. Longer crises could lead to stronger pressures for regime change. For instance, Lindvall (2017) highlights that longer crises are more likely than short ones to affect various population groups and thus create economic distress for a larger share of the population.

The GDP data are from (Fariss et al., 2017), who estimate (logged) income level by using a dynamic latent trait model and drawing on information from different GDP datasets. We use their estimates benchmarked in the long time series from the Maddison project (Bolt and van Zanden, 2013). One benefit of using the Fariss et al. data is that the latent model estimation mitigates various kinds of measurement error. A second benefit is that it mitigates missing values by imputation, allowing us to extend our time series back to 1789. Yet, we conduct robustness tests by using the original Maddison time series, which we then linearly interpolate by assuming constant growth rates across intervals with missing data.

The extensive coverage of the GDP data allow us to capture numerous economic crises *and* regime changes. Other key indicators of economic crisis, such as unemployment rates, only have cross-country data extending a few decades back, and are thus not feasible for the analysis presented below. However, one alternative measure with extensive time-series coverage is annual inflation rate, with data from Clio-Infra (de Zwart, 2015). We construct proxy measures of crises that capture episodes of high inflation, setting the thresholds for our high-inflation dummies to > 50, > 100 or > 150 percent. Yet, since such thresholds are

inevitably arbitrary, we mainly rely—as for GDP p.c. growth—on a continuous measure. Given the highly skewed nature of the inflation variable, and the notion that adding another, say, 100% to the inflation rate is likely more unsettling for consumers if inflation is initially 2% than 1,000,000%, we use a concave transformation. Specifically, we use $ln(i + i_{min} + 1)$, where i is the inflation rate and i_{min}) is the minimum inflation rate (or, rather deflation rate, since it is negative) in the sample.

3.3 Benchmark specification

Our benchmark specification is a logit regression with country-year as unit of analysis and errors clustered by country to account for panel-specific autocorrelation. In this benchmark we include a cubic polynomial of regime duration, following Carter and Signorino (2010), to account for differential survival rates throughout the life-span of a political regime (see, e.g., Svolik, 2012). We use the continuous measure of annual GDP p.c. growth as our main independent variable and a dummy capturing (at least one) "regime change from within" in a year as dependent variable. Our benchmark controls for a modest set of covariates that may influence the probability of experiencing economic crisis as well as regime change from within. These covariates include income level, operationalized as ln GDP p.c. (from Fariss et al., 2017) and ln population (same source). Further, we control for degree of democracy by including the Polyarchy index (Teorell et al., 2019) from V-Dem (Coppedge et al 2017a), and its squared term. We include both the linear and squared term in order to model the inverted u-curve relationship between level of democracy and regime breakdown found in previous studies (e.g., Gates et al., 2006; Goldstone et al., 2010; Knutsen and Nygård, 2015). All covariates are lagged one year after the dependent variable.

We further include either geographic region dummies, taken from (Coppedge et al., 2017a), *or* country-fixed effects. These controls are intended to capture fairly stable, unit-specific characteristics, for example geographic, climatic or political-historical features, that simultaneously affect breakdown and correlate with economic crisis. Further, we include year dummies to account for any (non-linear) time trends and global shocks that correlate with both crisis and regime transitions from within. The addition of dummies for both countries and years makes for a fairly stringent test, as we do not draw inferences from

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cross-country comparisons or comparisons across different time periods.

Our benchmark is intentionally sparse to mitigate the possibility for post-treatment bias. Yet, several guided regime transition processes (that span multiple years) may be inherently linked to change on the Polyarchy scale in the same year as the crisis occurs (i.e., in year $t-1$, if the transition is registered in t). Hence, even our sparse benchmark might suffer from post-treatment bias, as Polyarchy scores can be affected by change on our dependent variable. We therefore also report models without any controls except for the duration terms, year-fixed effects, and the region/country dummies. In yet other specifications, introduced in Section 4.2, we prioritize mitigating omitted variable bias over post-treatment bias, and add extra controls to the benchmark.

4   Empirical analysis

4.1   Main analysis

Table 1 reports the benchmark described in the previous section. Model 1.1 is the most parsimonious version without any controls except the cubic duration terms, year-fixed effects and geographic region dummies. This sparse specification draws on 18,243 country-year observations from 164 countries and the longest time-series extend from 1789–2014. Model 1.2 adds the (one-year lagged) time-variant controls, namely ln GDP p.c., ln population, and the linear and squared terms of Polyarchy. Model 1.3 is similar to 1.2, but substitute the region-fixed effects with country-fixed effects.

The results from these initial tests follow our expectations; GDP p.c. growth is negatively correlated with probability of observing a regime transition from within in the subsequent year. The predicted relationship from Model 1.1 is fairly sizeable. For instance, a change in GDP p.c. growth from +5 to -5—when setting all other covariates to their respective means—corresponds to the probability of observing a transition from within in $t+1$ increasing from 2.1 to 2.5 percent. A larger change, from +10 to -10, increases the predicted probability from 1.9 to 2.8 percent (see Appendix Figure B.2). The coefficient is slightly attenuated, also in terms of t-value, when we add the time-invariant controls in Model 1.2 (-0.014; t=-2.54) relative to in Model 1.1 (-0.019; t=-3.64). Yet, in both models the negative

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Table 1: Baseline model specifications: Aggregate transitions from within as dependent variable

	1.1	1.2	1.3
GDP pc growth	-0.019***	-0.014*	-0.008
	(-3.64)	(-2.54)	(-1.14)
Log GDP pc		-1.201*	-2.487*
		(-2.11)	(-2.33)
Log pop size		-0.378	-2.127
		(-1.25)	(-1.46)
Polyarchy		7.666***	7.994***
		(7.42)	(5.81)
Polyarchy^2		-10.548***	-11.571***
Cubic duration terms	✓	✓	✓
Year FE	✓	✓	✓
Region FE	✓	✓	
Country FE			✓
N	18243	13854	12986
ll	-2147.798	-1747.586	-1707.491

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary indicator on at least one transition in a year. Max time series is 1789–2014. All independent variables are lagged by 1 year. Duration terms, constant and fixed effects omitted from table.

relationship is statistically significant at 5%. This is not the case in Model 1.3, which adds country-fixed effects instead of region-fixed effects. Here, the t-value declines to -1.1. Yet, even if attenuated and insignificant, the predicted relationship remains at least moderately sized; a change in growth from +5 to -5, with all other covariates at their means, corresponds to an increase in the probability transition from within in $t+1$ from 1.7 to 2.0 percent. Yet, we remind that this growth coefficient fails to pass conventional levels of significance, and the relationship is thus not entirely robust.

4.2 Robustness tests

We conducted several extra tests to assess the sensitivity of our benchmark results. First, we assess how sensitive results are to different operationalizations of economic crisis, using alternative data sources and making alternative assumptions about the required depth and length of economic contractions. Next, we run linear probability models (LPM) instead of logit. Finally, we try out different sets of control variables to assess sensitivity.
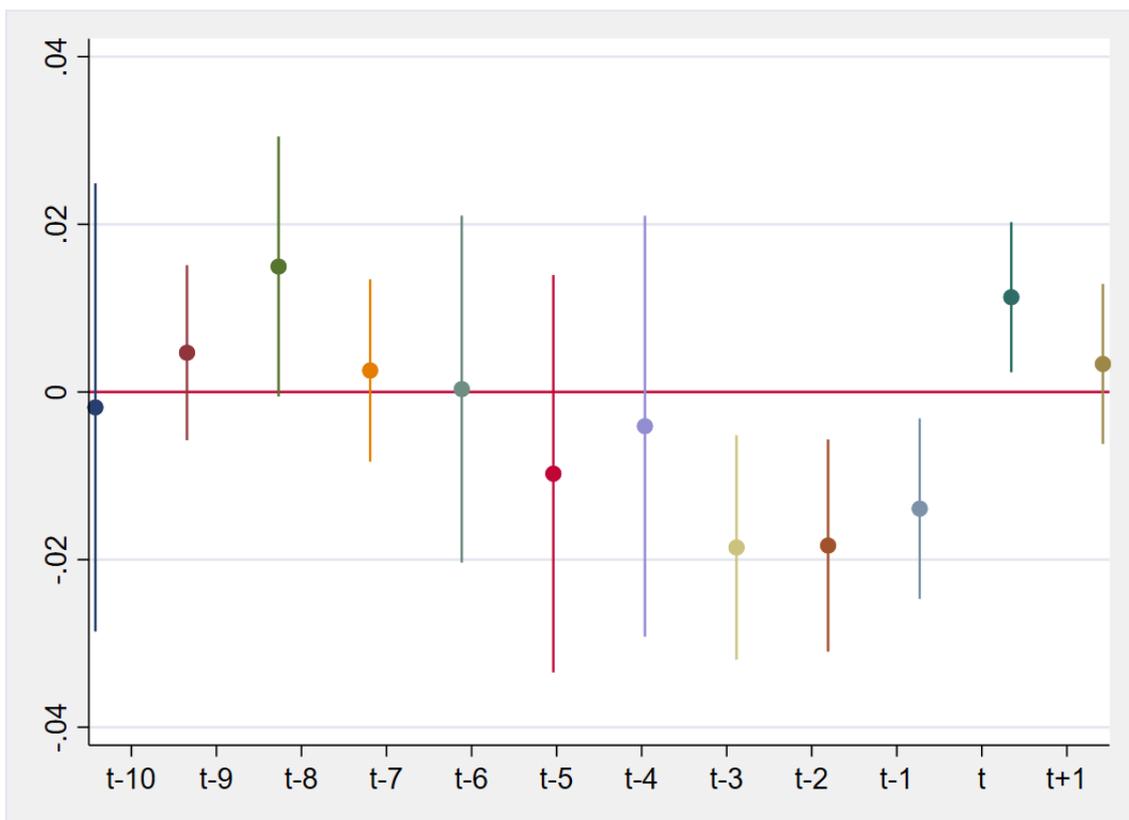
Figure 6: Coefficients and 95% confidence intervals for GDP p.c. growth, from models resembling Model 1.2, Table 1, but with growth measured from t-10 to t+1

We start by employing the same measure of (continuous) GDP p.c. growth—replicating Model 1.2, Table 1—but trying out different lag structures on the independent variables, from $t - 10$ to $t + 1$. Figure 6 the resulting growth coefficients and 95% confidence intervals. We note three patterns: First, GDP p.c. growth in years $t - 2$ and $t - 3$ are also significantly related to the outcome with the expected sign; growth in the relatively short-term, in addition to the very short-term (one year prior), is associated with transitions from within. Second, growth measured concurrently with regime change is positive and significant, which may reflect that crises are likely to produce both regime change from within and higher "rebound-growth" once the crises is over. Third, we did not theoretically expect growth measured relatively far back in history to carry any independent effect on regime outcomes in t. Indeed, growth is insignificant for all lags between $t - 4$ and $t - 10$. Hence, this analysis on different lags and leads on GDP p.c. growth does at least not weaken the empirical support for our argument.

We continue with a continuous growth measure and return to the $t - 1$ lag, but use

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Table 2: Baseline model specifications using Maddison data: Aggregate transitions from within as dependent variable

	3.1	3.2	3.3
GDP p.c. growth (Maddison)	-0.020**	-0.020**	-0.022**
	(-2.59)	(-2.74)	(-2.61)
Ln GDP p.c.		-1.073	-5.122*
		(-1.36)	(-2.53)
Ln population size		-0.650	-5.773*
		(-1.53)	(-2.56)
Polyarchy		8.297***	10.321***
		(6.44)	(5.78)
Polyarchy^2		-10.715***	-13.490***
		(-6.78)	(-6.48)
Cubic duration terms	✓	✓	✓
Year FE	✓	✓	✓
Region FE	✓	✓	✓
CountryFE			✓
N	12331	9014	7665
ll	-1407.695	-1132.531	-1059.546

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. All independent variables are lagged by 1 year. Duration terms, constant and fixed effects omitted from table.

GDP data from the Maddison project (Bolt and van Zanden, 2013) instead of Fariss et al. (2017). This change reduces the number of observations from 18,243 country-years in Model 1, Table 1 to 12,331 in Model 1, Table 2. However, the Farris et al. time series are imputed, and predictions are presumably poorer for observations without scores on any of the extant GDP series, the most extensive one being Maddison. Hence, many error-prone observations are likely dropped when using the Maddison data. This may be why results are at least equally clear for the Maddison data in Table 2, despite the reduced sample. The GDP p.c. coefficients are somewhat larger in size for all three model specifications—i.e., without time-varying controls (3.1); with time-varying controls and region-fixed effects (3.2.), and with time-varying controls and country-fixed effects (3.3)—when compared to the main results. And, the coefficients are now statistically significant at 1% for all specifications.

Returning to the Fariss data, we tested several categorizations of economic crisis events, based on a country's recent GDP p.c. growth. As discussed in Section 3.2, we constructed dummy variables requiring different thresholds on growth, i.e., requiring crises of different

Table 3: Various dummies on economic crisis on aggregate transitions from within: Country FE

	4.1	4.2	4.3	4.4	4.5
Dummy: Negative growth	0.071				
	(0.61)				
Dummy: Growth under –3%		0.703***			
		(4.69)			
Dummy: Growth under –5%			1.174***		
			(6.50)		
Dummy: 2 yrs of neg. growth				-0.128	
				(-0.91)	
Dummy: 3 yrs of neg. growth					0.902*
					(2.55)
Log GDP p.c.	-2.803*	-2.380*	-2.064*	-2.823*	-2.680*
	(-2.52)	(-2.28)	(-2.02)	(-2.52)	(-2.39)
Log pop size	-2.304	-2.106	-2.092	-2.316	-2.308
	(-1.62)	(-1.51)	(-1.53)	(-1.63)	(-1.60)
Polyarchy	7.215***	7.212***	7.262***	7.228***	7.205***
	(5.99)	(6.00)	(6.03)	(6.01)	(6.00)
Polyarchy^2	-10.690***	-10.690***	-10.763***	-10.687***	-10.671***
	(-7.21)	(-7.24)	(-7.25)	(-7.22)	(-7.20)
Cubic duration terms	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓
N	14079	14079	14079	14079	14079
ll	-1906.420	-1897.110	-1889.865	-1906.209	-1903.137

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. All independent variables are lagged by 1 year. Duration terms, constant and fixed effects omitted from table.

depths, to be coded as a "1". We also tested dummies requiring that the crisis extended over several years to be coded as "1". Table 3 presents results using the benchmark with country-fixed effects, hence a fairly conservative model.[5] Results are mixed in the sense that some dummies—and please note that a positive value indicates a crisis—are statistically significant with the expected sign, whereas others are not. Notably, a dummy registering whether or not there was negative growth in year $t-1$ is not systematically correlated with probability of transition from within in t (Model 4.1). When using stricter requirements for coding a crisis-year, for example requiring growth below -3% (Model 4.2) or -5% (Model 4.3), there is a strong and highly significant relationship. In other words, countries that

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[5]Results are fairly similar when we use region-fixed effects; see Appendix Table B.2).

Table 4: Linear Probability Model (LPM) on benchmark specification

	5.1	5.2	5.3
GDP p.c. growth	-0.001*	-0.001*	-0.001*
	(-2.43)	(-2.45)	(-2.48)
Ln GDP p.c.		-0.032*	-0.055*
		(-2.25)	(-2.17)
Ln population size		-0.008	-0.084*
		(-1.07)	(-2.15)
Polyarchy		0.136***	0.132***
		(6.58)	(4.39)
Polyarchy^2		-0.172***	-0.187***
Cubic duration terms	✓	✓	✓
Year FE	✓	✓	✓
Region-FE	✓	✓	✓
Country-FE			✓
N	18243	16452	16452
R^2	0.010	0.036	0.047

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. All independent variables are lagged by 1 year. Duration terms, constant and fixed effects omitted from table.

experience severe economic crises are systematically more likely to observe a transition from within than other countries. The same is true if we consider situations where at least three preceding years had negative growth (Model 4.5), finding a clear relationship with regime transitions from within when coding only longer periods of economic contraction as crises. However, this result is not robust to using a two-year requirement for consecutive negative growth (Model 4.4).

The picture is similar if we consider inflation instead of GDP p.c. growth. These tests, which are reported in Appendix Table B.3, show that our continuous (log-transformed) measure is systematically correlated with transitions from within in $t+1$. However, dummy variables coding crisis as very-high inflation episodes, are sensitive to the particular threshold used. A 100-percent threshold gives clearer results than a 50-percent threshold, for example. Moreover, the results using such high-inflation episode dummies only show significant results in models including country-fixed effects.

Next, we substituted our logit models with OLS models, or so-called Linear Probability Models (LPM). Table 4 reports LPM-versions of our benchmark without time-varying co-

variates (5.1), or with such covariates and either region- (5.2) or country-fixed effects (5.3). Independent of choice of controls, the growth coefficient is always negative and significant at 5%. The point estimates suggest that a 10-point drop in GDP p.c. growth rate, for example from +5 to -5, increases the chance of observing a regime transition from within in $t + 1$ by about 1 percentage point. This is a sizeable effect—the share of country-years in our sample that observed such transitions was 2.3 percent. LPM specifications also give very similar results to the logit models when testing the various crises dummies constructed and discussed above (Appendix Table B.4).

Finally, we tested several models with additional controls (Appendix Table B.7), including natural resource income (data from Haber and Menaldo, 2011), urbanization (via Coppedge et al., 2017a), and proxies of corruption and state capacity from V-Dem. We anticipated that some of these specifications would be affected by post-treatment bias; for example, crisis could affect corruption, which, in turn, could affect regime breakdown. Nonetheless, the growth coefficient and t-value are virtually unchanged when controlling for urbanization, corruption, or impartial public administration. The coefficient is slightly attenuated, and turns insignificant, when controlling for natural resources income. However, further analysis reveals that the attenuated coefficient and t-value result from the reduced sample (8659 instead of 13854 observations); when re-run on the restricted sample,the benchmark results are almost identical (also in terms of t-value) to the model controlling for natural resources. Hence, our benchmark results are quite robust to choice of controls.

4.3 Disaggregating regime change from within

So far we have employed an aggregated measure that coded different kinds of regime changes driven by incumbent regime elites as "transitions from within". Yet, as our discussions in the theory and data sections imply, this broad category aggregates across several distinct processes of regime change. It is far from given that economic crisis should display a similar *empirical relationship* to these different processes of regime change. Even though our theoretical argument suggests that crises should enhance all the types of transitions from within, this is, ultimately, an empirical question. Indeed, the lack of robustness for the aggregate relationship discussed above could signal that we are aggregating and estimating

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Table 5: Disaggregating the dependent variable: Guided transitions without liberalization and self-coups in leftmost columns and guided transitions with liberalization in rightmost columns

	6.1 Non-liberal..	6.2 Non-liberal.	6.3 Non-liberal.	6.4 Liberalizing	6.5 Liberalizing	6.6 Liberalizing
GDP p.c. growth	-0.021***	-0.010		0.010	0.015*	
	(-3.51)	(-1.48)		(1.91)	(2.08)	
Dummy: Growth under –3%			1.080***			0.025
			(6.56)			(0.08)
Ln GDP p.c.	-1.738*	-4.180**	-4.100**	-0.004	-0.358	0.107
	(-2.25)	(-2.65)	(-2.74)	(-0.00)	(-0.22)	(0.07)
Ln population size	-0.758	-3.077	-3.291	0.313	-0.608	0.396
	(-1.93)	(-1.63)	(-1.88)	(0.54)	(-0.48)	(0.29)
Polyarchy	4.819***	4.788**	3.875**	13.399***	14.874***	13.975***
	(3.66)	(2.63)	(2.60)	(7.05)	(5.57)	(5.63)
Polyarchy^2	-6.826***	-6.772**	-5.768**	-17.968***	-22.235***	-21.004***
	(-4.09)	(-3.02)	(-2.99)	(-7.69)	(-6.68)	(-6.81)
Cubic duration terms	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Region-FE	✓			✓		
Country FE		✓	✓		✓	✓
N	10690	8706	9919	9585	6516	7681
ll	-1126.652	-1081.386	-1202.341	-715.235	-629.857	-724.989

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. All independent variables are lagged by 1 year. Duration terms, constant and fixed effects omitted from table.

across heterogeneous relationships. We therefore turn to specifications run on two more fine-grained dependent variables, coding regime change due to guided liberalization, on the one hand, and other guided transitions and self-coups, on the other, as separate transition events.

Table 5 reports these tests, with self-coups and guided transitions not leading to political liberalization as outcomes in the three leftmost columns, and guided transitions leading to liberalization—the kind of regime change envisaged after crisis by, e.g., Acemoglu and Robinson (2006)—in the three rightmost columns. While not entirely robust (see the benchmark with country-FEs in Model 6.2), various regressions—including the benchmark with region-fixed effects (6.1) and when using the growth below -3 percent dummy in addition to country-FEs (6.3)—show a strong relationship between crisis and those transitions from within that do not lead to liberalizing outcomes. This observation is consistent, for example, with our theoretical mechanism highlighting that opportunistic incumbent elites may use crises as windows of opportunity to conduct self-coups or engage in other types of regime transitions (e.g., from a military regime to a personalist regime) that they view as beneficial.

In contrast, there is no evidence of the expected relationship for guided transitions leading

to liberalizing outcomes. These can be elite-guided transitions related to expansions of the franchise or the introduction of free and fair multi-party elections by regime elites in initially closed systems. If anything, higher growth seems positively correlated with such guided, liberalizing transitions when using the continuous measure. But, the overall pattern is that of a non-robust relationship. While regime elites may be forced during a crisis to change the regime to another autocracy that they do not prefer (for instance by imposing additional constraints on the leadership in a previously personalistic regime by a dominant regime party; see, e.g., Geddes, Wright and Frantz, 2018), the guided liberalizing regime transition (highlighted also by Acemoglu and Robinson, 2006) was the archetypical example in our theoretical discussion of a "forced" regime transition from within. Hence, we surmise that these disaggregated results fail to provide empirical support for the second, "lesser evil" pathway from crisis to guided transition.

One *possible* reason for the lack of evidence for this pathway might be that incumbents can respond effectively to pressures from crises by using other strategies. If liberalization of the regime is a very undesirable outcome for incumbents, they may be willing to pursue rather expensive policies to co-opt or appease opposition both within their ruling coalition and the general public. Examples of such policies could include investments in various local or national public goods, but targeted pension programs (Knutsen and Rasmussen, 2018) is one type of redistributive policy that is often introduced or expanded in order to co-opt specific groups in non-democratic regimes. Thus, one potential explanation for the lack of an observed correlation between economic crises and incumbent-guided liberalizing transitions is that incumbent elites might fend off threats spurred by a crisis by pursuing particular, redistributive policies, without overseeing a liberalization of the regime.

5   Conclusion

We have developed a theoretical argument suggesting that economic crises can provide impetuses for incumbent elites to change the existing regime, and that crises may do so through two different mechanisms. First, economic crises sometimes create conditions that give elites a "window of opportunity" to alter the regime towards one that they inherently

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prefer over the status quo. Second, crises sometimes spur mobilization among dangerous opposition actors, leading strategic incumbent elites to preemptively transform the regime to diffuse opposition threats and avoid even worse outcomes such as a revolution or coup. We test implications from this argument by using new data on more than 700 regime transitions from within, covering about 200 countries and the years 1789–2018. While results are not entirely robust, we mainly find the expected relationship between (various measures of) economic crises and regime transitions from within. When subsequently disaggregating these transitions, we find that economic crises induce elite-guided regime transitions that do not result in political liberalization, but also, more surprisingly, that crises do not enhance liberalizing, guided regime transitions.

Our study and findings point to different avenues for future research. First, the unexpected lack of a clear relationship between crises and incumbent-guided liberalization episodes means that a well-known and widely held hypothesis from the theoretical democratization literature (notably, Acemoglu and Robinson, 2006) lacks empirical support. Granted, Acemoglu and Robinson (2006) predict that the effect of an economic crises on elite-guided democratization may depend on other factors such as income inequality. Future work could thus investigate potential interaction effects between crises and more structural economic factors in inducing such regime change. Alternatively, we noted above how targeted, redistributive policies can sometimes be a sufficient response to an economic crises to diffuse various pressures against the regime (and thus allow elites to avoid guided liberalization). Choices, and potential trade-offs, between co-optation through redistributive policies (and preferably policies that credibly guarantee redistribution also in the future; see Knutsen and Rasmussen, 2018) versus institutional change are intriguing topics for future study. More generally, we lack empirical studies into the potential determinants of elite-guided liberalization episodes, and future studies can employ the data and set-up used here to investigate such determinants.

While guided democratic transitions have attracted more attention by scholars historically (e.g., O'Donnell, Schmitter and Whitehead, 1986), democracy researchers have recently started focusing more on "self-coups". As highlighted by Svolik (2015), self-coups are an increasingly common mode of democratic breakdown, and has recently outpaced mili-

tary coups as a threat to democratic regime survival. Recent analysis describe how elected leaders, often in an incremental manner, concentrate power in their own hands and dismantle institutional checks on their power until, one day, the regime is no longer democratic (Lührmann and Lindberg, 2019; Levitsky and Ziblatt, 2018; Przeworski, 2019). Despite the recent focus on describing the various steps of self-coups and some analysis into how strong parliaments can guard against such regime change (e.g., Fish, 2006), the determinants of successful self-coups remain poorly understood. Going beyond the role of economic crisis and elaborating on why some democracies experience self-coups and others do not, is therefore an important topic for future research.

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Online Appendices to "Economic Crisis and Regime Transitions from Within"

In these appendices we provide additional information on the regime data used in our empirical analysis as well as different additional robustness tests and extensions not reported in the paper. More specifically, in Appendix A we first list the questions and accompanying information from the V-Dem indicators incorporated in the Historical Regimes Data (Djuve, Knutsen and Wig, 2019), which we use to measure transitions from within in the paper. Appendix A also contains a full list of the country-year observations included in HRD. Appendix B contains the various tables with robustness tests that are mentioned, but not displayed in tables, in the paper, plus descriptive statistics on the observed frequency of transitions from within across different countries.

A Questions and observations included in HRD

Regime interregnum (*v3regint*)

    Question: Does there exist an identifiable political regime?

    Clarification: This question is used to identify so-called interregnum periods, where no political regime is in control over the entity. Different types of political situations can lead to periods of time under which there is no identifiable political regime, one example being a civil war in which none of the parties have clear control over political bodies and processes in the country. However, the interregnum coding is employed conservatively, meaning that partial control over political bodies and processes in fairly large parts of the country (which is often the case also during civil wars) is sufficient for a 0 score.

    0. Yes

    1. No

    Regime name (*v3regname*)

    Question: What is the name of this regime?

    Clarification: If the regime is commonly referred to with a particular name in the international literature, such as "The Second French Republic", then this name should be used. The exception to this rule is if the regime is only referred to by the name of the nation (e.g. "North Korean regime"). If multiple names are used interchangeably in the literature, select one of them. If there is no common name, try to provide a name that would be informative to scholars that have knowledge of the political history of the relevant country. If the time period in question is characterized by a so-called interregnum period, where no political regime is coded, please provide the name "Interregnum X-Y", where X denotes the country and Y denotes the order (in time) of this interregnum period among all such periods (within the coded time series) for this particular country. E.g., the first coded interregnum period of Spain should be coded "Interregnum Spain-1".

    Answer type: Text

Regime start date (*v3regstartdate*)

Question: When did the political regime obtain power?

Answer type: Day/Month/Year

Regime end date (*v3regenddate*)

Question: When did the political regime lose power?

Answer type: Day/Month/Year

Regime end type (*v3regendtype*)

Question: Could you specify the types of processes (one or more) that led to the end of the regime?

0. A military coup d'etat.

1. A coup d'état conducted by other groups than the military.

2. A self-coup (*autogolpe*) conducted by the sitting leader.

3. Assassination of the sitting leader (but not related to a coup d'état)

4. Natural death of the sitting leader

5. Loss in civil war.

6. Loss in inter-state war.

7. Foreign intervention (other than loss in inter-state war)

8. Popular uprising.

9. Substantial political liberalization/democratization with some form of guidance by sitting regime leaders

10. Other type of directed and intentional transformational process of the regime under the guidance of sitting regime leaders (excluding political liberalization)

11. Substantial political liberalization/democratization without guidance by sitting regime leaders, occurring from some other process (such as an unexpected election loss for the sitting regime) than those specified by categories 1 to 10

12. Other process than those specified by categories 0 to 11.

13. Regime still exists

Answer type: Single selection

Regime end type, multiple selection (*v3regendtypems*)

Question: Could you specify the type of process that you consider the most important in leading to the end of the regime?

0. A military coup d'etat.

1. A coup d'état conducted by other groups than the military.

2. A self-coup (*autogolpe*) conducted by the sitting leader.

3. Assassination of the sitting leader (but not related to a coup d'état)

4. Natural death of the sitting leader

5. Loss in civil war.

6. Loss in inter-state war.

7. Foreign intervention (other than loss in inter-state war)

8. Popular uprising.

9. Substantial political liberalization/democratization with some form of guidance by sitting regime leaders

10. Other type of directed and intentional transformational process of the regime under the guidance of sitting regime leaders (excluding political liberalization)

11. Substantial political liberalization/democratization without guidance by sitting regime leaders, occurring from some other process (such as an unexpected election loss for the sitting regime) than those specified by categories 1 to 10

12. Other process than those specified by categories 0 to 11.

13. Regime still exists

Answer type: Multiple selection

Country	Start year	End year	Country	Start year	End year
Afghanistan	1747	2016	Lithuania	1918	2016
Albania	1912	2016	Luxembourg	1714	2016
Algeria	1830	2016	Macedonia	1991	2016
Angola	1885	2016	Madagascar	1797	2016
Argentina	1776	2016	Malawi	1891	2016
Armenia	1922	2016	Malaysia	1867	2016
Australia	1788	2016	Maldives	1887	2016
Austria	1713	2016	Mali	1890	2016
Azerbaijan	1922	2016	Mauritania	1904	2016
Baden	1112	1871	Mauritius	1818	2016
Bangladesh	1971	2016	Mecklenburg-Schwerin	1755	1871
Barbados	1663	2016	Mexico	1784	2016
Bavaria	1623	1871	Modena	1780	1861
Belarus	1991	2016	Moldova	1991	2016
Belgium	1785	2016	Mongolia	1911	2016
Benin	1895	2016	Montenegro	1785	2016
Bhutan	1865	2016	Morocco	1757	2016
Bolivia	1784	2016	Mozambique	1836	2016
Bosnia and Herzegovina	1992	2016	Namibia	1884	2016
Botswana	1885	2016	Nassau	1806	1866
Brazil	1763	2016	Nepal	1768	2016
Brunswick	1495	1918	Netherlands	1747	2016
Bulgaria	1877	2016	New Zealand	1823	2016
Burkina Faso	1919	2016	Nicaragua	1823	2016
Burma/Myanmar	1782	2016	Niger	1922	2016
Burundi	1897	2016	Nigeria	1914	2016
Cambodia	1863	2016	Norway	1784	2016
Cameroon	1960	2016	Oldenburg	1774	1871
Canada	1838	2016	Oman	1749	2016
Cape Verde	1879	2016	Pakistan	1947	2016
Central African Republic	1920	2016	Panama	1903	2016
Chad	1914	2016	Papal States	1775	1870
Chile	1787	2016	Papua New Guinea	1888	2016
China	1722	2016	Paraguay	1776	2016
Colombia	1717	2016	Parma	1748	1861
Comoros	1841	2016	Peru	1543	2016
Congo, Democratic Republic of	1885	2016	Philippines	1898	2016
Congo, Republic of the	1882	2016	Poland	1764	2016
Costa Rica	1823	2016	Portugal	1777	2016
Croatia	1941	2016	Prussia	1701	1871
Cuba	1763	2016	Qatar	1916	2016
Cyprus	1878	2016	Romania	1789	2016
Czech Republic	1918	2016	Russia	1762	2016
Denmark	1784	2016	Rwanda	1897	2016
Djibouti	1896	2016	Sao Tomé and PrÃncipe	1753	2016
Dominican Republic	1700	2016	Sardinia	1720	1861
East Germany	1949	1990	Saudi-Arabia/Nejd	1744	2016
East Timor	1896	2016	Saxe-Weimar-Eisenach	1741	1871
Ecuador	1819	2016	Saxony	1356	1871
Egypt	1787	2016	Senegal	1904	2016
El Salvador	1823	2016	Serbia	1730	2016
Eritrea	1896	2016	Seychelles	1903	2016
Estonia	1918	2016	Sierra Leone	1896	2016
Ethiopia/Abyssinia	1769	2016	Singapore	1867	2016
Fiji	1874	2016	Slovakia	1939	2016
Finland	1789	2016	Slovenia	1991	2016
France	1768	2016	Solomon Islands	1893	2017
Gabon	1920	2016	Somalia	1889	2016
Gambia	1888	2017	Somaliland	1888	2016
Georgia	1922	2016	South Africa	1884	2016
Germany	1867	2016	South Sudan	2011	2016
Ghana	1901	2016	South Yemen	1839	1990
Greece	1821	2016	Spain	1700	2016
Guatemala	1697	2016	Sri Lanka	1815	2016
Guinea	1895	2016	Sudan	1899	2016
Guinea-Bissau	1879	2016	Suriname	1816	2016
Guyana	1831	2016	Swaziland	1890	2016
Haiti	1697	2016	Sweden	1789	2016
Hamburg	1712	1871	Switzerland	1712	2016
Hanover	1803	1866	Syria	1918	2016
Hesse-Darmstadt	1567	1871	Taiwan	1895	2016
Hesse-Kassel	1567	1866	Tajikistan	1991	2016
Honduras	1823	2016	Tanzania	1916	2016
Hungary	1722	2016	Thailand	1782	2016
Iceland	1814	2016	Togo	1916	2016
India	1784	2016	Trinidad and Tobago	1889	2016
Indonesia	1800	2016	Tunisia	1782	2016
Iran/Persia	1751	2016	Turkey/Ottoman Empire	1730	2017
Iraq	1920	2016	Turkmenistan	1991	2016
Ireland	1801	2016	Tuscany	1737	1861
Italy	1861	2016	Two Sicilies	1759	1861
Ivory Coast	1895	2016	Uganda	1894	2016
Jamaica	1670	2016	Ukraine	1991	2016
Japan	1615	2016	United Arab Emirates	1971	2016
Jordan	1921	2016	United Kingdom	1701	2016
Kazakhstan	1991	2016	United States	1788	2016
Kenya	1895	2016	Uruguay	1825	2016
Korea, North	1945	2016	Uzbekistan	1785	2016
Korea, South	1637	2016	Vanuatu	1906	2016
Kosovo	1999	2016	Venezuela	1777	2016
Kuwait	1756	2016	Vietnam	1771	1945
Kyrgyzstan	1991	2016	Vietnam, North	1945	2016
Laos	1893	2016	Vietnam, South	1945	1975
Latvia	1918	2016	Württemberg	1089	1871
Lebanon	1918	2016	Yemen	1716	2016
Lesotho	1884	2016	Zambia	1911	2016
Liberia	1821	2016	Zanzibar	1698	2016
Libya/Tripolitania	1711	2016	Zimbabwe	1890	2016
Liechtenstein	1866	2016			

Table A.1: Observations included in the Historical Regime Data. For more detailed discussion on the sample, see Djuve et al. (2019). While HRD follows the time series from V-Dem for each country (1789 as first year), regimes that controlled power at the first day of the V-Dem time series are coded all the way back to their inception.

B   Descriptive statistics and tables with robustness tests

Table B.1: Frequency table: Number of polities by freq. of transitions from within

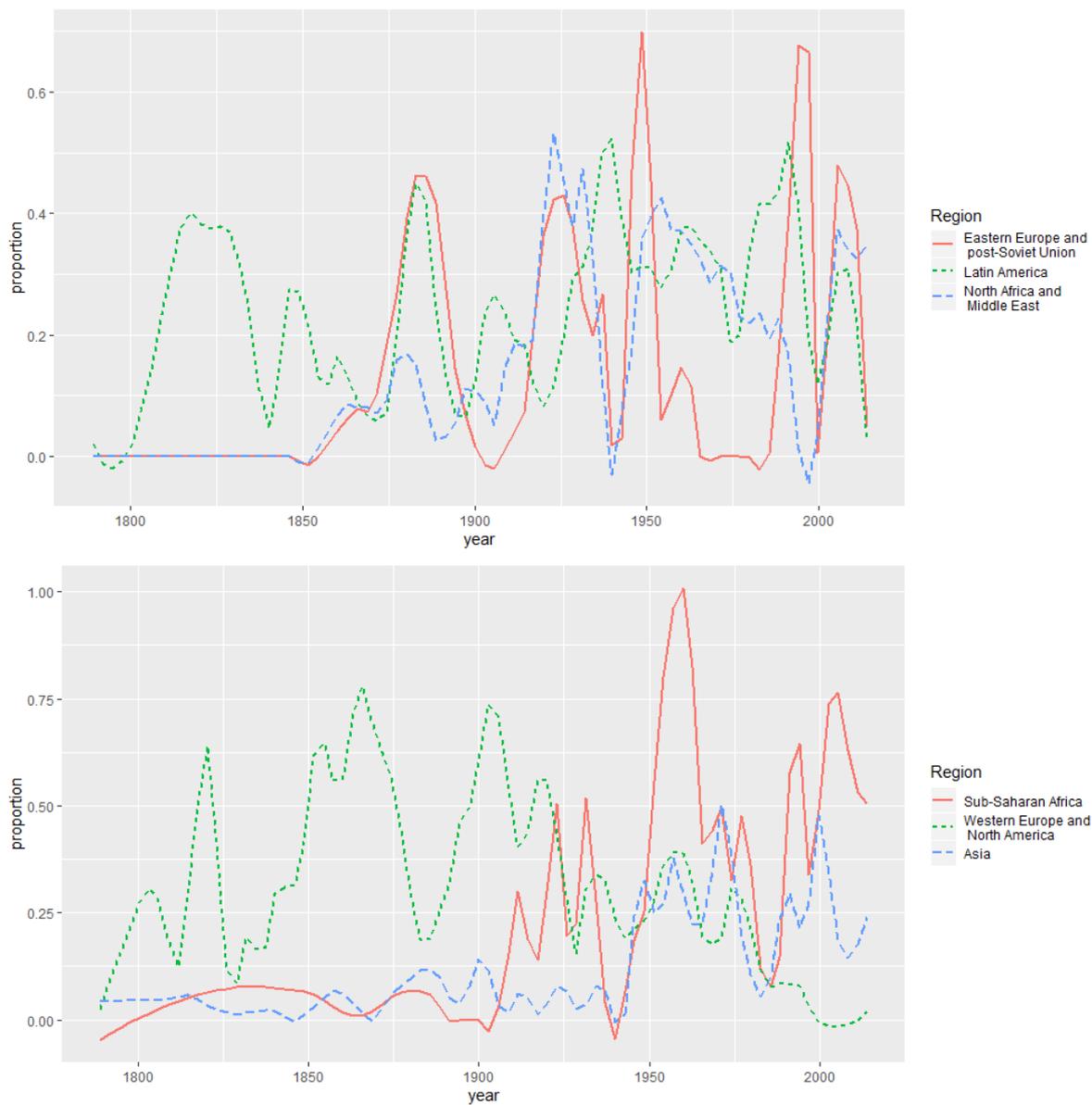| Directed transitions	Polities	Percentage
0	18	9.1
1	32	16.3
2	32	16.3
3	30	15.3
4	27	13.8
5	13	6.6
6	13	6.6
7	10	5.1
8	7	3.5
9	4	2.0
10	5	2.6
11	2	1.0
12	2	1.0
16	1	0.5
Total	196	100

Figure B.1: Regime changes from within as proportion of all regime changes, per geographic region. The time series are generated with a Loess smoother, with a span of 0.1, on annualized data.

Figure B.2: Predicted probabilities of transition for values -9 to +9 of GDP p.c. growth, from Model 1, Table 1. All other covariates at their means.
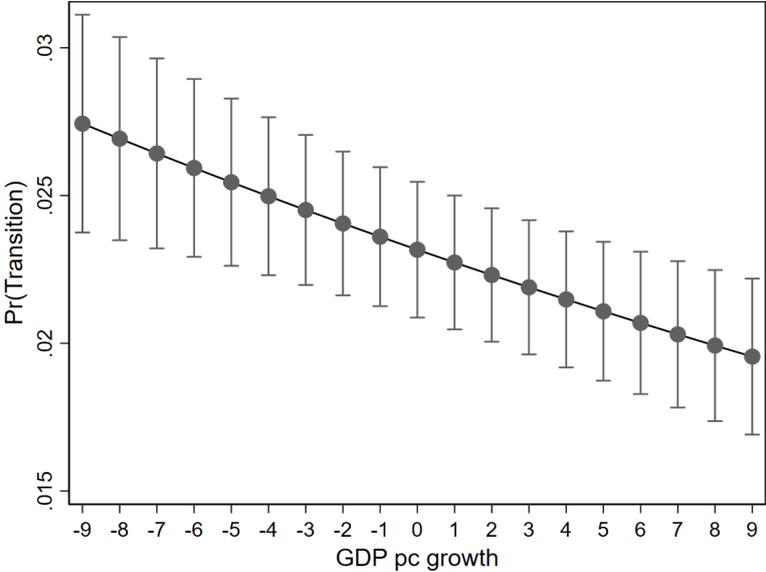
Table B.2: Growth dummy variations on aggregate transitions from within: Regional FE

	4.1	4.2	4.3	4.4
Dummy: Negative growth	-0.035			
	(-0.31)			
Dummy: Growth under –3%		0.603***		
		(4.36)		
Dummy: 2 yrs of neg. growth			-0.231	
			(-1.78)	
Dummy: 3 yrs of neg. growth				0.810**
				(2.61)
Log GDP pc	-1.680**	-1.566**	-1.698**	-1.636**
	(-2.93)	(-2.82)	(-2.97)	(-2.87)
Log pop size	-0.516	-0.475	-0.546	-0.517
	(-1.80)	(-1.65)	(-1.91)	(-1.79)
Polyarchy	7.302***	7.242***	7.302***	7.280***
	(7.52)	(7.51)	(7.53)	(7.52)
Polyarchy^2	-9.964***	-9.838***	-9.980***	-9.908***
	(-8.05)	(-8.02)	(-8.05)	(-8.01)
Duration terms	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Region-FE	✓	✓	✓	✓
N	14843	14843	14843	14843
ll	-1955.657	-1948.079	-1954.202	-1952.604

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. All independent variables are lagged by 1 year. Duration terms, constant and fixed effects omitted from table.

Table B.3: Several specifications of inflation on transitions from within

	1	2	3	4	5	6	7	8
Inflation	0.379***	0.436*						
	(3.53)	(2.42)						
Inflation > 50%			0.016	0.275				
			(0.14)	(1.91)				
Inflation > 100%					0.013	0.332*		
					(0.10)	(2.07)		
Inflation > 150%							-0.009	0.315
							(-0.07)	(1.86)
Log GDP pc	-1.319	-2.818	-1.661**	-2.842**	-1.663**	-2.860**	-1.670**	-2.864**
	(-1.54)	(-1.38)	(-2.87)	(-2.58)	(-2.87)	(-2.61)	(-2.88)	(-2.61)
Log pop size	-0.965*	-3.935	-0.497	-2.121	-0.500	-2.094	-0.517	-2.107
	(-2.39)	(-1.83)	(-1.67)	(-1.45)	(-1.65)	(-1.44)	(-1.69)	(-1.45)
Polyarchy	7.173***	7.527***	7.330***	7.413***	7.325***	7.451***	7.297***	7.443***
	(5.09)	(4.25)	(7.38)	(6.09)	(7.44)	(6.16)	(7.40)	(6.16)
Polyarchy²	-10.520***	-11.973***	-9.989***	-10.867***	-9.985***	-10.901***	-9.960***	-10.892***
	(-6.13)	(-5.65)	(-7.99)	(-7.35)	(-8.02)	(-7.41)	(-7.99)	(-7.40)
Duration terms	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Country-FE		✓		✓		✓		✓
N	8703	7460	14843	14079	14843	14079	14843	14079
ll	-1185.035	-1132.498	-1955.703	-1904.704	-1955.707	-1904.160	-1955.710	-1904.520

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. All independent variables are lagged by 1 year. Duration terms, constant and fixed effects omitted from table.

x

Table B.4: LPM: Growth dummy variations on aggregate transitions from within

	1	2	3	4	5
Dummy: Negative growth	0.001				
	(0.19)				
Dummy: Growth under –3%		0.028***			
		(4.09)			
Dummy: Growth under –5%			0.064***		
			(5.28)		
Dummy: 2 yrs of neg. growth				-0.005	
				(-1.49)	
Dummy: 3 yrs of neg. growth					0.034*
					(1.99)
Log GDP pc	-0.063*	-0.057*	-0.052	-0.063*	-0.060*
	(-2.20)	(-2.06)	(-1.89)	(-2.18)	(-2.08)
Log pop size	-0.058	-0.053	-0.056	-0.059	-0.058
	(-1.47)	(-1.37)	(-1.44)	(-1.50)	(-1.48)
Polyarchy	0.123***	0.121***	0.122***	0.123***	0.122***
	(4.37)	(4.36)	(4.37)	(4.38)	(4.38)
Polyarchy^2	-0.179***	-0.176***	-0.177***	-0.180***	-0.179***
	(-6.57)	(-6.48)	(-6.50)	(-6.60)	(-6.58)
Duration terms	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Country-FE	✓	✓	✓	✓	✓
N	17676	17676	17676	17676	17676
R^2	0.043	0.045	0.047	0.044	0.044

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. All independent variables are lagged by 1 year. Duration terms, constant and fixed effects omitted from table.

Table B.5: Baseline model (Region FE) with different lags on the explanatory variables

	lag=1	lag=0	lag=2	lag=3
GDP pc growth	-0.014*	0.011*	-0.018**	-0.019**
	(-2.54)	(2.47)	(-2.84)	(-2.72)
Log GDP pc	-1.201*	-1.921*	-0.988	-0.879
	(-2.11)	(-2.35)	(-1.61)	(-1.31)
Log pop size	-0.378	-0.425	-0.471	-0.590
	(-1.25)	(-1.22)	(-1.42)	(-1.82)
Polyarchy	7.666***	10.412***	6.708***	5.878***
	(7.42)	(7.36)	(5.90)	(4.78)
Polyarchy^2	-10.548***	-10.840***	-9.601***	-8.861***
	(-8.01)	(-6.51)	(-6.85)	(-5.92)
Duration terms	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
N	13854	11920	12375	11022
ll	-1747.586	-1149.215	-1459.041	-1259.999

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. Duration terms, constant and fixed effects omitted from table.

Table B.6: Baseline model (Country FE) with different lags on the explanatory variables

	lag=1	lag=0	lag=2	lag=3
GDP pc growth	-0.008	0.009	-0.021**	-0.034*
	(-1.14)	(1.95)	(-3.11)	(-2.31)
Log GDP pc	-2.487*	-3.746**	-2.547*	-2.064
	(-2.33)	(-2.72)	(-1.97)	(-1.37)
Log pop size	-2.127	-2.657	-1.616	-1.053
	(-1.46)	(-1.83)	(-1.14)	(-0.68)
Polyarchy	7.994***	12.449***	6.256***	5.199**
	(5.81)	(6.72)	(3.84)	(2.81)
Polyarchy^2	-11.571***	-12.999***	-9.776***	-9.042***
	(-7.02)	(-6.12)	(-5.30)	(-4.37)
Duration terms	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Country FE	✓	✓	✓	✓
N	12986	10086	11255	9670
ll	-1707.491	-1092.489	-1406.663	-1206.282

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. Duration terms, constant and fixed effects omitted from table.

Table B.7: Models with additional control variables - New specification

	1	2	3	4	5
GDP pc growth	-0.014*	-0.014*	-0.014*	-0.015*	-0.013
	(-2.54)	(-2.42)	(-2.53)	(-2.53)	(-1.12)
Log GDP pc	-1.201*	-1.494*	-1.233*	-1.224	-0.737
	(-2.11)	(-2.41)	(-2.14)	(-1.92)	(-0.79)
Log pop size	-0.378	-0.167	-0.351	-0.064	-0.004
	(-1.25)	(-0.52)	(-1.15)	(-0.19)	(-0.01)
Polyarchy	7.666***	7.448***	7.527***	7.737***	7.956***
	(7.42)	(7.29)	(7.14)	(6.46)	(5.50)
Polyarchy^2	-10.548***	-10.832***	-10.499***	-10.959***	-10.571***
	(-8.01)	(-8.22)	(-8.01)	(-6.81)	(-5.89)
Political corruption index		-1.020***			
		(-4.41)			
Rigorous and impartial public administration			0.032		
			(0.56)		
Urbanization				-0.052	
				(-0.21)	
Petroleum, coal, natural gas, and metals production per capita					0.000
					(0.59)
Duration terms	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓
N	13854	13505	13844	10240	8659
ll	-1747.586	-1693.889	-1747.127	-1410.831	-976.751

Notes: *p<0.05; **p<0.01; ***p<0.001. T-values in parentheses. Dependent variable in all models is the binary transitions from within indicator. Duration terms, constant and fixed effects omitted from table.