Episodes of liberalization in autocracies: a new approach to quantitatively studying democratization

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Abstract
This paper introduces a new approach to the quantitative study of democratization. Building on the comparative case-study and large-N literature, it outlines an episode approach that identifies the discrete beginning of a period of political liberalization, traces its progression, and classifies episodes as successful versus different types of failing outcomes, thus avoiding potentially fallacious assumptions of unit homogeneity. We provide a description and analysis of all 383 liberalization episodes from 1900 to 2019, offering new insights on democratic "waves". We also demonstrate the value of this approach by showing that while several established covariates are valuable for predicting the ultimate outcomes, none explain the onset of a period of liberalization.

Keywords: Comparative politics; political institutions

The overarching question the study of democratization has struggled to answer for 60 years concerns why some countries successfully transition to democracy and others do not. The answer remains elusive, in large part due to a failure to account for the fact that many autocracies experience periods of political liberalization but only some of such processes lead to democracy. The field has produced many significant and increasingly sophisticated large-N studies treating democracy and autocracy as a matter of degree or as a dichotomy, but both approaches have important limitations.

The degree approach typically relies on modeling interval measures in which any change of the same magnitude, in any direction, and regardless of where on the spectrum it happens, is treated as empirically equivalent (e.g., Jackman and Bollen, 1989; Acemoglu and Robinson, 2006). But should we expect that advancements of democratic traits in, say, autocratic Saudi Arabia and democratic Taiwan, as well as fall-backs in diverse cases such as Brazil and Yemen, have the same explanations? The dichotomous approach, focusing on transitions as events (e.g., Przeworski et al., 2000; Cheibub et al., 2010; Boix et al., 2013), is forced to make strong assumptions of unit homogeneity in each class of objects. Yet, is the partial liberalization in Pakistan, which has so far failed to lead to democracy, the same as the lack of change in Saudi Arabia,

which never tried? Are both more similar to each other than Pakistan is to the liberalization process by which Portugal became a democracy in 1976?

We show that it is not necessary to continue operating with these outstanding assumptions and limitations.[1] We outline and validate a new, unified approach for large-N inquiries into what explains the onset, outcomes, and processes of episodes of political liberalization in autocracies.[2] First, we broadly discuss the existing literature, highlighting the strengths of quantitative work and the tradition of comparative case studies. The paper then conceptualizes a new, systematic approach with decision rules for identifying the discrete beginning of a liberalization period in autocracies, tracing its progression, and classifying episodes into successful outcomes versus outcomes that did not result in democracy. By doing so, we make it possible to use quantitative methods to (i) identify "true zeros" that never liberalized and to compare them to different types of liberalization processes, thereby expanding our ability to identify the onset of democratization; (ii) evaluate what explains different types of failed liberalization processes; and (iii) examine those that ended up as democracies against those that failed. The approach makes this possible while preserving information at the interval level, enabling analyses of both differences in degrees and between groups.

Our approach utilizes the newly created *Episodes of Regime Transformations* dataset (ERT; Edgell et al., 2020; Maerz et al., 2021b), which is constructed from the Varieties of Democracy (V-Dem) data (Coppedge et al., 2020). The full ERT offers data on episodes of democratization and autocratization since 1900.[3] In the present paper, we focus on the conceptualization of liberalization episodes (i.e., democratization periods originating in autocracies), describe a comprehensive sample of all liberalization episodes in autocracies from 1900 to 2019, and show analyses of the covariates of episode onset and outcome.

The results that we describe demonstrate the value of this novel approach for opening up new avenues for research. Based on episodes of liberalization in autocracies, we find that several well-established determinants of democratization outcomes do not explain the *onset* of liberalization, despite being strong predictors of democratic transitions among liberalization episodes. This encourages a more nuanced research agenda for the comparative politics of democracy and autocracy that considers why some countries liberalize and why some successfully become democracies.

The conceptual divide and its problems

Early cross-national studies that aimed to explain democracy tended to focus on social and economic "requisites"—namely, those factors more commonly observed in countries that are democratic (e.g., Lipset, 1959; Almond and Verba, 1963). These foundational works also laid the groundwork for a burgeoning literature on "transitology" in the 1980s and 1990s, following world events and calls by scholars to differentiate the causes of democracy from those features that help it endure (Rustow, 1970). The 1974 Carnation Revolution in Portugal initiated reversals from authoritarian rule in Southern Europe, and Latin America followed suit, beginning with the Dominican Republic in 1978 (Rueschemeyer et al., 1992; Linz and Stepan, 1996; Collier, 1999). After the tumultuous events of 1989, changes swept over nearly 100 other countries that included the former Eastern Block, with its "Color Revolutions"; Africa, where many dictators turned into democrats; and Asia, where several of the former "tigers" became democracies (Diamond et al.,

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[1]Recent work addressing transitions from electoral authoritarianism distinguishes between onset and outcome (Brownlee, 2009), but this only partly addresses issues that this paper seeks to improve upon.

[2]We refer to "liberalization" as political and institutional reforms that enhance the guarantees that make up Dahl's (1971) definition of polyarchy and occur under conditions of non-democracy.

[3]The conceptual foundations of these episodes are extensive and differ for episodes of democratization and autocratization. To do justice to these different conceptual underpinnings, we discuss autocratization episodes elsewhere (Boese et al., 2021). Maerz et al. (2021b) introduces the full ERT dataset. For replication, the ERT is provided as part of an R package (Maerz et al., 2021). The package allows users to define their own inclusion and thresholds parameters for generating the ERT.

1988; Neher and Marlay, 1995; van de Walle and Bratton, 1997; Bunce and Wolchik, 2006; Mitchell, 2012).

One key insight of the classic "transitology" literature was that such processes are highly indeterminate, distinguished by an *opening* followed by a period of *liberalization*—loosening restrictions under autocracy—and then a *transition* to democracy initiated by a founding election (e.g., O'Donnell et al., 1986; Diamond et al., 1988). The comparative case-study literature demonstrated that the factors leading up to the initial opening up of an authoritarian regime (the *onset* of an episode in our terminology) are often very different from the factors that explain the subsequent unfolding and eventual outcome of the liberalization period. They also demonstrated that liberalization periods are not homogeneous, and that some are never intended to lead to democracy.

Yet, several such key insights were lost in the increasingly methodologically sophisticated large-N studies that offered new findings on the structural, institutional, and behavioral correlates of democratization (e.g., Mainwaring and Scully, 1995; Geddes, 1999; Przeworski et al., 2000; Bernhard et al., 2001; Pevehouse, 2002; Mainwaring and Pérez-Liñán, 2003; Boix and Stokes, 2003; Acemoglu and Robinson, 2006; Svolik, 2008; Teorell, 2010; Ansell and Samuels, 2010; Ross, 2012; Reenock et al., 2013; Miller, 2015; Haggard and Kaufmann, 2016). Scholars now commonly seek to isolate the average effects of a small number of factors on either a dichotomous or continuous measure of democracy. Whether offering a difference-in-kind (e.g., Alvarez et al., 1996; Cheibub et al., 2010) or difference-of-degree (e.g., Jackman and Bollen, 1989) account of democratization (Collier and Adcock, 1999), the onset as well as the unfolding of liberalization remain either outside of the analyses or conflated with outcomes with potentially consequential effects.

The tributary of quantitative research relying on *transitions as events* with dichotomous measures as the dependent variable (e.g., Boix and Stokes, 2003; Brownlee, 2009; Cheibub et al., 2010; Miller, 2015; Boix et al., 2013) sets minimal criteria to qualify as a democracy (e.g., Huntington, 1991; Alvarez et al., 1996) and considers transitions to, breakdowns of, or endurance of democracy based on discrete changes. They offer insights into the conditions that enhance the prospect of shifts from autocracy to democracy and on what makes democracies endure (e.g., Higley and Burton, 1989; Przeworski et al., 2000; Boix, 2003; Haggard and Kaufmann, 2016). Yet, binary representations of democratization require an assumption of within-category homogeneity. All negative cases are lumped together, ignoring differences between those that never had an opening ("true zeros"), those that (un-)intentionally reached an electoral authoritarian "equilibrium", and those that had substantial liberalization but relapsed by way of a coup or other radical changes. For example, some regimes open up as a tactic for authoritarian survival (*a.k.a.*, "autocratic liberalization"; see Gandhi, 2008; Svolik, 2012; Schedler, 2013), while stalled liberalization can result when other forces intervene to preclude the potential of a democratic transition. If cases that liberalize but "fail" to lead to democracy are meaningfully different from true zeros, empirical results could disappear or reverse as a result in what is known as Simpson's paradox (Blyth, 1972; Wagner, 1982). This issue refers to the inconsistency between marginal and conditional interpretations–when data as a whole show a trend that is reversed by controlling for their categorical differences. We thus risk failing to identify the factors that encourage liberalization by comparing cases of successful democratization to all other cases.

Meanwhile, the difference-in-degree strand of literature conceptualizes democratization as "any move toward more democraticness" on a scale and typically employs various time-series cross-sectional estimators and treats any change toward or away from democracy as conceptually and empirically equivalent regardless of where on the spectrum it happens (e.g., Jackman and Bollen, 1989; Coppedge and Reinicke, 1990; Diamond, 1996; Lindberg, 2009, 53; for an exception, see Teorell, 2010).[4] Typically, no distinction is made between improvements or reversals at either ends of the scale, thus introducing another simplification that potentially masks important

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[4]For reviews of democracy indices, see Munck and Verkuilen (2002), Högström (2013), and Boese (2019).

empirical relationships. Seeking to establish the *average* effect of a factor such as economic growth, the recent increase of i units of democracy in a highly authoritarian regime such as Myanmar is taken to be conceptually and empirically equivalent to an increase of i units in an already democratic regime such as South Korea. But why would we expect an opening—an increase on a democracy-autocracy scale—in a country like Myanmar to have the same explanation (*a.k.a.*, assuming unit homogeneity and linear, constant, symmetric effects) as a further improvement or *deepening* of democracy such as in South Korea?[5]

Disregarding for now concern with causal identification in observational studies, these assumptions are at odds with what we know from the comparative case-study literature and undermine our ability to devise appropriate tests of theories. For example, research on competitive autocracies and electoral authoritarianism notes the potentially stabilizing effects of liberalization on autocratic rule (Brumberg, 2002; Gandhi and Przeworski, 2006; Magaloni, 2008; Bunce and Wolchik, 2010; Levitsky and Way, 2010; Schedler, 2013) and some argue that the liberalization witnessed in autocratic regimes is never intended to lead to democratic transition but is, instead, a deliberate tactic to ensure authoritarian survival (Frantz and Kendall-Taylor, 2014; Miller, 2017). Liberalization periods that result in a democratic transition are often interpreted as successful attempts of regime change (e.g., O'Donnell et al., 1986; Bunce and Wolchik, 2010), but these transitions may also occur by mistake (Treisman, 2020). Some evidence suggests that holding regular multiparty elections under authoritarianism increases the prospects of regime breakdown and transition to democracy, whether intended or not (Brownlee, 2009). At the early stages of liberalization, actors' intents are typically unobservable and the outcome is highly uncertain (Schedler, 2001, 2013).

On the one hand, difference-of-degree studies of democratization typically eschew the use of a specific—often arbitrary—cut-off point that is an inherent weakness of the transitions-as-events literature. On the other hand, it pays the price of making it nearly impossible to distinguish onset from liberalization, liberalization from transition, and from further deepening of democracy. It therefore risks being unable to distinguish factors making countries open to begin with (onset), become more democratic (liberalization), and those that are associated with a country ultimately transitioning to a democracy. Notwithstanding the value of using the richness of incremental data, certain research questions simply require categorizing information to delineate the sample of outcomes of interest (Collier and Adcock, 1999). To do so while preserving the richness of information in interval measures would be the preferred option, which is what we pursue here. This does not mean that the works cited above and others are extraneous, only that the approaches dominating much of the conversation are limited in how much they are able to reveal.

In short, we argue that quantitative studies of democratization have overlooked some fundamental insights from the comparative case-study literature, which we aim to resolve. We need an approach that preserves important conceptual and empirical distinctions in a large-N framework and enables us to distinguish liberalization from successful democratization to test existing theories and answer questions such as: What factors explain the opening up of an autocratic regime? Why do some liberalization periods in autocracies lead to democracy while others stall or revert back?

Conceptualizing liberalization episodes

We suggest drawing on the strengths of the approaches outlined above to characterize democratization as a process that starts with *liberalization* in a non-democratic regime. We build on O'Donnell et al. (1986), Schedler (2002), and others to recognize that a liberalization episode involves a political opening (onset) that must be identified, followed by a period of liberalizing

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[5]Most analyses also assume symmetric effects, in which downturns and breakdowns are conceptualized to be driven by the same factors as upturns and transitions to democracy. Since our focus is on liberalization and transitions to democracy, we do not discuss that further here.
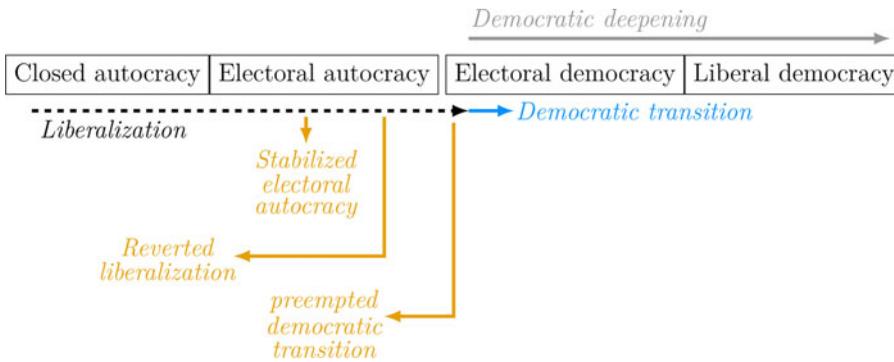
Figure 1. Stylized path diagram for episodes of liberalization in autocracies.

reforms. The outcome of that process is then inherently fraught with uncertainty and neither necessarily involves, nor is it always intended to lead to, a transition to democracy (Schedler, 2001, 2013; Treisman, 2020). What we call "failure," for the sake of simplicity, constitutes a period of liberalization followed by, alternatively: stagnation and stabilization of an authoritarian equilibrium (A: *stabilized electoral authoritarianism*); a reversal and return to closed autocracy (B: *reverted liberalization*); or a situation where the regime may be characterized as minimally democratic for a very brief period but where founding elections are preempted (C: *preempted democratic transition*).[6] Finally, a liberalization episode may result in a *successful* transition to democracy (D). These varying processes and outcomes are illustrated in Figure 1.[7]

Operationalizing episodes of liberalization

The set of rules that we use to operationalize our conceptual framework of liberalization in autocracies involves three steps: (1) identifying country-years under autocracy; (2) setting criteria to identify the onset of a liberalization episode; and (3) determining when an episode ends and identifying whether it led to a transition to democracy or to one of the three types of failure.[8]

First step: identifying autocratic country-years

Following from the conceptualization of liberalization as a period of political reform that may or may not lead to a transition to democracy, such episodes must start in a non-democracy. Identifying the sample this way helps fulfill a basic notion of unit homogeneity (they fall short of the minimum criteria to be considered a democracy) and avoids the assumption that equal movements on a continuous measure are equivalent and have the same relationship to explanatory factors across autocracies and democracies.

In terms of democracy, we adhere to Dahl's notion of *polyarchy* (Dahl, 1971, 1989) and therefore use V-Dem's measure of polyarchy (V-Dem's Electoral Democracy Index, EDI) that includes each of the associated institutions, including the extent to which officials are elected, the extent of suffrage, the quality of elections, freedom of association, and freedom of expression using a multitude of specific indicators (Pemstein et al., 2017; Teorell et al., 2018; Coppedge et al., 2020).[9]

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[6]The term "failing" used here is from the perspective of a pro-democracy reader.

[7]The order and timing for these processes of democratization can vary, i.e., not all countries achieve electoral (or liberal) democracy via electoral authoritarianism. Exploring processes of democratic deepening lies beyond the scope of this paper.

[8]Our suggested rules are incorporated in the ERT dataset and associated R package, see Edgell et al. (2020); Maerz et al. (2021a), further discussed by Maerz et al. (2021b).

[9]Originally eight, Dahl narrowed polyarchy to six institutions (Dahl, 1998).

To make the necessarily coarse differentiation between democracies and autocracies, the ERT relies on the Regimes of the World (RoW) coding developed principally from V-Dem's EDI and an indicator for multiparty elections data (Tannenberg et al., 2018).[10] This approach produces a sample of 13,964 autocratic country-years out of 18,693 (74.7 percent) from 1900 to 2019.

Second step: identifying liberalization episodes

Identifying the onset of liberalization episodes in autocracies presents a challenge. A small alteration on a democracy index should not be taken as an onset, as it could mark true zeros as positive cases and potentially bias estimates. Critically, the overall change in a country over an episode, which sometimes takes years to evolve, must amount to "substantial" change to be considered a case of actual liberalization.

As with any measure, and by virtue of totaling over 25 nuanced indicators that are each aggregated to country-year estimates from a set of country-expert ratings using a custom-designed IRT model, the EDI contains a certain amount of noise from measurement error. Smaller year-to-year differences can therefore register without indicating a real change. The challenge is to distinguish real episodes of liberalization above the noise without losing true cases.

We address the challenge by initially locating country-years in autocracies with a positive change in the EDI score of at least 0.01 (or 1 percent on a scale from 0 to 1) from $year_{t-1}$ to $year_t$.[11] The script then looks for "substantial" change, operationalized as the EDI increasing by a minimum 10 percent of the possible range of the variable, or an upward movement totaling at least 0.1 during the episode.[12]

These rules are admittedly arbitrary to some extent. Taking advantage of the richness and cross-country, over-time comparability of the EDI and its over 18,000 country years nevertheless necessitates a choice. While no one would probably argue that a shift of 0.9 on the 0–1 scale should be used, one could wonder why not a 0.09 or a 0.11 threshold, for example. We have conducted multiple face validity and robustness tests to ensure that we are measuring what we really want to measure and that the result is not too sensitive to the exact thresholds (see further below, and the Appendix). In the end, the script identifies 383 episodes of liberalization in autocracies from 1900 to 2019.

Third step: identifying episode end and outcome

An episode of liberalization has an end and an outcome that similarly must be established in a world where fine-tuned data (taking measurement error into account) are rarely completely stable from year-to-year. In addition, liberalization is bound to produce unexpected consequences for both would-be democratizers and regime hardliners (O'Donnell et al., 1986; Treisman, 2020). We refrain from attributing any intent to the onset, progression, or outcome of episodes and focus instead on operational criteria that can be measured empirically.

We begin by demarcating the termination or end date for all episodes in our sample. We base this end date on a set of criteria, regardless of the initial conditions for onset or the outcome of the episode (as discussed below). Episodes end the final year of a positive 0.01 change on the EDI prior to encountering any of the following conditions: (a) an annual decline on the EDI of at least −0.03; (b) a gradual decline on the EDI of at least −0.10 over any five-year period; (c) a five-year

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[10]RoW distinguishes between closed and electoral autocracies, and electoral and liberal democracies. The ERT data also apply the additional rules below regarding classification of outcomes to identify the cut-off points; see below and Maerz et al. (2021b).

[11]While 0.01 may seem like a small change, annual increases of 0.01 or more on the EDI occur in less than 17 percent (3108 out of 18,476 country-years) of the post-1900 V-Dem sample and about 14 percent (1896 out of 13,742) of the autocratic country-years register such a change.

[12]Additionally, we require that the country does not stay a closed autocracy during the entire episode (based on the RoW classification) to ensure that the cases we include are instances of real, substantive change.
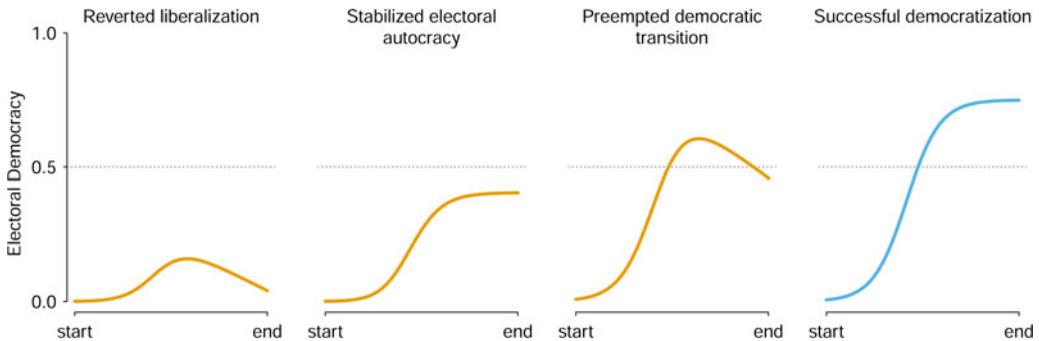
Figure 2. Possible outcomes of liberalization events.

period of no annual increases of at least 0.01 on the EDI; or (d) a re-classification of the regime to "closed autocracy" on the RoW measure. We base these decisions on an examination of the data and a concern for minimizing any potential overlap between episodes of liberalization and episodes of autocratization in the larger ERT dataset.

Figure 2 illustrates the four possible outcomes of liberalization. To be classified as *successful*, an episode must (i) liberalize institutions enough to transition to at least an electoral democracy by the RoW measure, and (ii) under those conditions of (minimally) electoral democracy hold "founding" elections, after which the winner is allowed to assume office. These decisions build on insights from the comparative case-study literature since O'Donnell et al. (1986) and Linz and Stepan (1996) that a transition is not complete until elections have been held under democratic conditions, while at the same time elections on their own are not enough (Karl, 1986; Schmitter and Karl, 1991). The end dates for successful episodes are coded as the year of the transition to democracy on the RoW measure, provided that a founding election occurs, even if this happens during a subsequent year.[13] Regime change in Spain following the death of Francisco Franco in 1975, for example, represents a clear case of "successful" democratic transition.

Distinguishing the different ways a liberalization episode in an autocracy can fail to reach democracy is somewhat more tricky. A *preempted democratic transition* is characterized by briefly meeting the threshold for electoral democracy but reverting to an authoritarian regime without holding a founding democratic election that installs a legislature or executive in office. We treat these "near misses" as separate types of failure, given that we could expect these cases to be more closely related to success than to the other types of failures in terms of explanatory factors. We assert that these are indeed "failures" in the sense that, despite achieving some minimal threshold of democracy, the people were never allowed access to representation by leaders who were duly elected through (substantively) free and fair elections under democratic conditions. Thailand provides an example of a preempted democratic transition. Following the removal of Prime Minister Thaksin Shinawatra by a coup in 2006, large-scale demonstrations by his "Red Shirt" supporters occurred against the government that replaced him, becoming their strongest in 2010 and prompting new elections. A showdown between parties resulted in a political crisis that led to conflict and provoked further military intervention.

Stabilized electoral authoritarianism is principally different from preempted democratic transitions, in that they never cross the threshold for electoral democracy on RoW. In this case, an authoritarian regime liberalizes to a substantial degree but then stabilizes at that level, as described in the literature on electoral authoritarianism (e.g., Gandhi, 2008; Magaloni, 2008;

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[13]One could argue that a transition is not fully successful until there has been two or more elections held and one or two turnovers have taken place, like the "two-turnover-test" of Huntington (1991). However, that would take us into the area of democratic deepening and consolidation where also a different set of determinants are expected to come into play.

Levitsky and Way, 2010; Schedler, 2013; Frantz and Kendall-Taylor, 2014). Stabilization is operationalized as liberalization followed by a period of five years without any positive changes to the EDI of ≥ 0.01 and without any large drops to the EDI of ≥ 0.1 while the regime remains classified as an electoral autocracy.[14] In Guinea, stabilized electoral authoritarianism came about when Colonel Lansana Conté staged a coup against the president and oversaw the approval of a new constitution. In subsequent elections, Conté was elected president and his party—*Parti de l'Unité et du Progrès*, PUP—secured roughly half of the seats in the National Assembly. Conté retained the presidency and the PUP maintained a majority in Congress over several additional elections that opposition parties claimed were fraudulent.

Finally, there is a need to recognize *reverted liberalization* as its own outcome when a country first liberalizes to an extent but then falls prey to a coup, civil war, or other circumstance that causes a substantial fallback. In 1952, for example, a peasant-led revolution initiated regime transformation in Boliva. The *Movimiento Nacional Revolucionario* remained fragmented, failed to institutionalize, and fell to a military coup in 1964. We consider any reversion back to closed autocracy as well as a rapid one-year decrease of ≥ 0.03 on the EDI to constitute a reverted liberalization. A more gradual decline in the EDI of ≥ 0.1 that accumulates over up to 5 years also counts as the reverted liberalization-type.[15] Because of the five-year criteria for stabilized authoritarianism and the election-related requirements for successful episodes, some ongoing episodes are indeterminate at the time of analysis. These appear as *censored* among the episodes.[16]

Descriptive analysis and validation

The complete sample of 383 episodes of liberalization in autocracies occurred in 164 countries between 1900 and 2019 (see online Appendix A for a full list of episodes). Failure is more common than success, constituting 226 (59 percent) of the 383 episodes compared to only 145 successful, with reverted liberalization being most common (N=123, 54 percent of failed episodes). The primary threat to liberalization thus seems to come from actors taking drastic measures (such as military action) to prevent democracy from emerging. Table D1 in the Appendix, which compares manually coded incidences of coups to data from Przeworski et al. (2013) and Powell and Thyne (2011), confirms that episodes of reverted liberalization are more likely to both begin and end with coups relative to other types. Still, the incidence of coups is rare, and only about one-quarter of episodes of reverted liberalization correspond to a coup at the end of the episode.

The next but much less common type of failure is stabilized electoral autocracy ($N = 87$, 38 percent of the failed). The near misses, or preempted democratic transitions, are even more rare, with just 16 instances (7 percent of those that failed) in 16 countries. Twelve episodes were ongoing in 2019, i.e., right censored, and therefore cannot be conclusively classified at this time. Figure 3 is a visualization of all 383 episodes on V-Dem's EDI from 1900 to 2019.[17] The top panel illustrates the trajectories of country-episodes, in which liberalizations that led to democratic transitions are colored blue. All three types of failures are given the same orange color to enhance readability, while censored (yet indeterminate) cases are colored green. Country-periods without an episode are depicted with light gray lines. The middle panel

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[14]We chose five years since most countries hold legislative elections every four or five years, with an average term of 4.7 years (Inter-Parliamentary Union, 2020).

[15]Gradual declines also occur in democracies, e.g., in Poland and Croatia in recent years, but we do not focus on such instances of democratic backsliding.

[16]Liberalization episodes that began prior to 1900 could be affected in two ways. First, the data may overlook liberalization episodes that began prior to 1900 if the portion of the episode observed after 1900 does not present sufficient liberalization to meet our criteria. Second, if a case begins liberalizing before 1900 and continues to do so sufficiently after 1900 to meet our coding criteria, we will register the episode but may underestimate its duration and extent.

[17]The top panel in Figure 3 is in the original scale of the EDI (between 0 and 1), which has a mean of 0.311, minimum of 0.007, and maximum of 0.948.
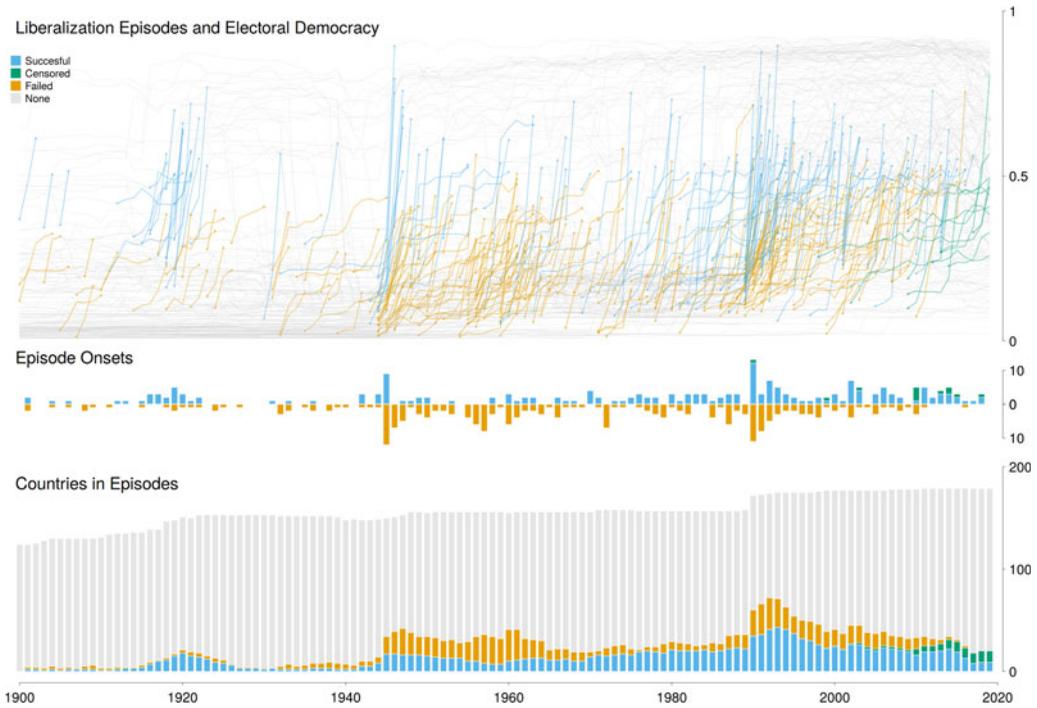
Figure 3. Liberalizing autocracy episodes in the context of V-Dem electoral democracy data, 1900–2019.

shows how many episodes *started* in each year, while the bottom panel provides the number of countries that were in an episode in each year.

The trends shown in Figure 3 convey several novel and important findings. The well-established three waves of democratization are clearly perceptible, but the first wave that culminated in the early 1920s consisted mostly of successful episodes while the second wave that took off after World War II was dominated by failures. The first part of the third wave, which originated in the mid-1970s, typically led to successful transitions, but from around the end of the Cold War it came to produce roughly an equal number of successful and failed liberalization episodes.

The top panel shows that the vast majority of the *non-episode* country-years (gray lines) were in highly authoritarian countries (the low end of the scale) during the first half of the 20th century. From about 40 years ago, many of them are found in the top-half of the spectrum, indicating relatively stable democracies and just a small number of stable closed autocracies. This underscores that contemporary episodes occur in a very different context from before, where most countries have at least experimented with liberalization and those that fail maintain some level of freedoms rather than falling back to the very bottom.

The top panel also demonstrates that the duration of liberalization varies considerably but does not seem to matter for the outcome. The average duration is very similar for successful (4.80 years) and failed episodes (5.03 years). The longest episode occurred over 28 years: 1933–1960 in Trinidad and Tobago, resulting in a democratic transition; 45 episodes lasted just a single year, of which 24 were successful and 21 failed.

Comparison to existing data on democratic transitions

As a way to further describe but also validate the episode approach and its purported advantages, we compare it to the two most widely used dichotomous measures of regime transitions: Boix et al. (2013, BMR) for 1800–2010 and Cheibub et al. (2010, CGV) for 1946–2008. From 1900

to 2019 there are 134 transitions to democracy in the BMR data, of which 94 (70 percent) occur during a liberalization episode and 58 (43 percent) happen during successful episodes. That many of the "transitions to democracy" in the BMR data come out as failed in our episodes is in part because of their less demanding definition of democracy, but it also reflects the more nuanced data that the episode approach draws on. The 40 transitions registered in BMR falling outside of any episode mostly correspond to transitions that BMR register after we coded liberalization episodes as having ended. See, for example, the cases of Ghana's third episode and Myanmar/Burma's second in Figure 4 below. In such cases, the much more detailed and fine-tuned V-Dem data make it possible to identify an outcome earlier than BMR did.

At the same time, the democratic transitions that BMR identify pertain to less than half of the successful liberalization episodes. Often, this is because BMR code a "transition" in what is really a failed episode (e.g., one that leads to a stabilized autocracy) and continue to code them as a democracy throughout, registering no change when a new episode starts that actually leads to a transition. See El Salvador's first and second episodes in Figure 4 for an example.

Out of 101 democratic transitions in the CGV data from 1946 to 2008, only 79 (78 percent) took place during a liberalization episode, of which 44 (44 percent) were within a successful episode. Less than half of the 92 successful liberalization episodes in the data that overlap with CGV are coded as a transition. The reasons for the discrepancies are similar to those attributed to BMR.

Figure 4 presents four examples that include demarcations of years with "transitions to democracy" as coded by Boix et al. (2013) and Cheibub et al. (2010). The brief post-Nkrumah interlude in Ghana from October 1969 to January 1972, ending with a military coup by General Acheampong, registers as democratic transitions in both Cheibub et al. (2010) and Boix et al. (2013) but was in many ways incomplete and eventually reversed.[18] The extent of liberalization was notably greater after Flt. Lt. Rawlings' first coup, but the June 1979 elections were not held under democratic conditions and Rawlings' second coup on December 31, 1981 ended the experiment as a preempted democratic transition before elections could be held under democratic conditions. Yet, both Cheibub et al. (2010) and Boix et al. (2013) register 1979 as a year of transition to democracy. While democratic "experiments," neither of these liberalization episodes resulted in democracy.

The fourth attempt in the early 1990s was successful, though there is some disagreement on the exact year. Still, that may matter for estimations of predictors. Our data suggest that Ghana's successful democratic transition in 2000 actually began in 1991, with the liberalization process unfolding over nearly a decade. During this time, GDP per capita grew by nearly 20 percent, with an average annual change of 2 percent. By contrast, the coding by Boix et al. (2013) and Cheibub et al. (2010) only tells us that Ghana transitioned in a particular year (1997 and 1993, respectively), during which the annual growth rates were 3 and 1 percent, respectively. As a result, an analysis using the Boix et al. (2013) data may overestimate the importance of annual economic growth rates, while using the Cheibub et al. (2010) data may underestimate it for this particular case.[19] Likewise, both data sets would underestimate the overall effects of economic growth during the democratization process because they do not identify the point in time when democratization began.

El Salvador's first episode from 1982 to 1985 stalled as a stabilized autocracy that lasted until 1991, when the process was rejuvenated and led to a successful transition by 1999. The extreme right-wing National Republican Alliance (Arena) won the 1982 parliamentary elections that were marked by violence; President José Napoleon Duarte (from 1984) ran a government orchestrating

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[18]The newly elected government implemented reforms yielding steady increases on the EDI from 0.144 in 1968 to 0.404 by 1971. This was a substantial increase but by any reasonable standard based on Dahl's understanding of democracy as polyarchy, Ghana was not an electoral democracy in 1971.

[19]GDP per capita figures from the Maddison project (using real GDP per capita with the 2011 USD benchmark, see Bolt and Van Zanden, 2014).
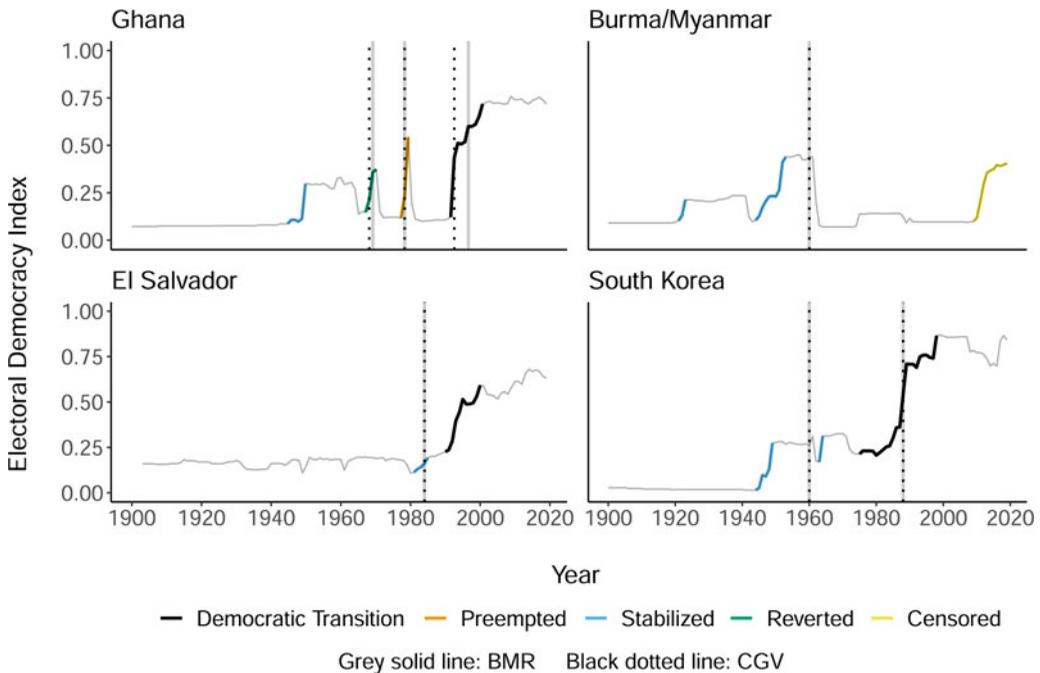
Figure 4. Typical patterns in liberalizing autocracy episodes compared to transitions coded by BMR (2012) and CGV (2010).

death squads in the context of continued civil war until the widely acknowledged rigged 1989 elections put Arena-candidate Alfredo Cristiani in power. It is not until the peace process succeeded in the mid-1990s that truly democratic elections and freedoms were in place. Yet, both Cheibub et al. (2010) and Boix et al. (2013) judge a transition to have occurred in 1984, long before conditions were even minimally democratic, as indicated by the very low score on the EDI. Using either alternative, an analysis would miss the real period of democratization and date of transition.

There have been three episodes in Myanmar/Burma; the last one is right-censored because the outcome remains uncertain.[20] Yet, both Cheibub et al. (2010) and Boix et al. (2013) code a transition in 1960 at the very tail-end of a period of stabilized autocracy that was followed by a coup in early 1962. This coding neither reflects the liberalization that preceded it nor correctly classifies the regime as a democracy. The story is similar for South Korea. We capture the process of liberalization leading up to independence but identify the outcome as a stabilized autocracy. Both Cheibub et al. (2010) and Boix et al. (2013) register a transition to democracy in 1960 with the inauguration of the second republic. Yet, political and civil liberties remained highly restricted and the interlude quickly ended with a military coup in 1961. A very gradual process of liberalization eventually led to a transition to democracy in 1988. In this case, the end of the liberalization episode and the dichotomous measures match up well.

The available interval-level measures also have issues but we restrict it here to one illustration. Polity IV suggests that countries with scores on the Polity2 variable from 6 and above indicate democracies (Marshall et al., 2017). A prominent critique is that the choice of cut-offs is entirely arbitrary and that the requirements for reaching a "perfect democracy" are too lax (e.g., Bogaards, 2012; Lueders and Lust, 2018). This seems evident for the United States, which has been a

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[20]It is right-censored in the version 2.2 of the ERT dataset used for this article. We now know that the episode ended in failure after the military coup on February 1st 2022.
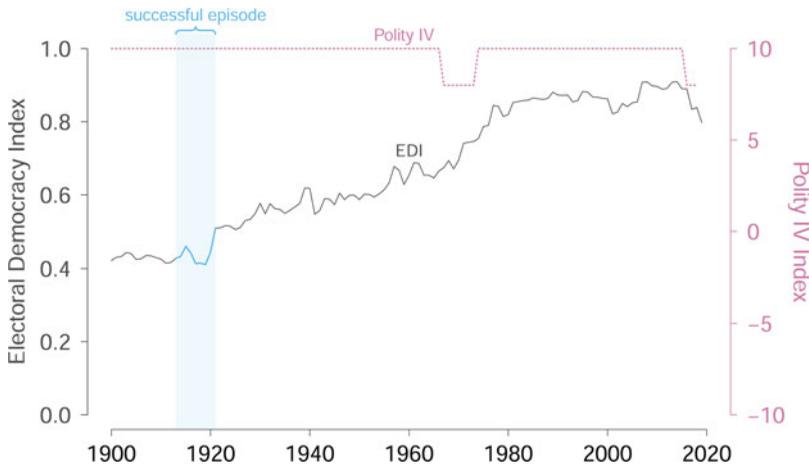
Figure 5. Successful democratization in the US compared to Polity IV.

democracy since 1809 according to Polity IV, despite the practice of slavery until 1865 and no female suffrage until 1920. Figure 5 contrasts the Polity IV (Marshall et al., 2017) measure with the V-Dem EDI, which better reflects the slow liberalization of the US. The extension of women's suffrage in 1919 yields substantial increases on the EDI, and with the elections of 1922, the US meets the criteria for a successful liberalization episode. This example demonstrates how studies using Polity IV to measure democratization risk biasing results, since the ceiling for becoming democracy is so incredibly low.

The comparisons above highlight three important advantages with the episodes' approach. First, the liberalization episodes delimit and provide scholars with a more complete sample of cases based on systematic and rigorous rules. This makes it possible to study democratization using interval measures like V-Dem's EDI but appropriately restricts the sample to relevant periods and differentiates between episodes that followed different trajectories. Second, it makes it possible to study quantitatively the onset, duration, and outcomes of liberalization. Understanding the conditions at the onset of a liberalization episode, the changes that occurred during an episode, and those that determined its success are distinct advances afforded by this approach. Third, and based on insights from the case-study literature, the characterization of episodes makes use of yearly observations to identify different paths that are critical to understanding outcomes.

Covariates of episode onset and outcome

As a demonstration of how this approach can improve upon substantive knowledge, we consider the relationship of liberalization onset and democratization success to several well-known factors from the literature on democratization.[21] First, scholars have long debated whether the positive relationship between economic development and democratization is causal (Wucherpfennig and Deutsch, 2009). For this reason, we examine GDP per capita in constant USD and annual GDP per capita growth (Bolt and Van Zanden, 2014). Scholars have also debated whether presidential regimes are less stable than parliamentary regimes (Cheibub and Limongi, 2002), for which we include an index of presidentialism (*e_v2xnp_pres*) from the V-Dem dataset.[22] Challenges to liberalization include population size; larger populations may be more difficult to control and make greater demands for regional autonomy and decentralization, for which

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[21]For a more in-depth review of suspected determinants of democratization, see Teorell (2010).
[22]Variable names correspond to those in the V-Dem dataset (v10).

we add logged values of the population (Bolt and Van Zanden, 2014). To represent the potential for popular mobilization to initiate and sustain democratization, we also include measures of the dispersion of power across social groups (*v2pepwrsoc*), equality in the distribution of resources (*v2xeg_eqdr*), and the overall environment for participation in civil society organizations (CSOs) (*v2csprtcpt*) that are provided by the V-Dem dataset.

We add a measure of the average level of electoral democracy for other countries in the same region, based on the six-category political region classification used by Teorell et al. (2018), to account for the possibility of democratic diffusion among neighboring countries (Brinks and Coppedge, 2006). The literature on conflict and democracy recognizes the potential for war to both bring about regime change and to prevent further liberalization from occurring, for which "mid-range" regimes are associated with more conflict (Hegre, 2014). Thus, we include binary variables denoting domestic and international armed conflicts in which 32 or more deaths occurred (*e_miinterc* and *e_miinteco*) (Brecke, 2001). We also include values of electoral democracy to account for the relationship between institutional quality and the onset and outcome of liberalization.[23] Furthermore, democratization and autocratization episodes cluster in time globally and regionally, due to diffusion and pressures shared by regimes. In the case of democratization, these factors lead regimes to engage in some reforms toward democracy, but do not govern their outcomes. For this reason, following Boese et al. (2021), when modeling episode onsets but not outcomes we include two additional covariates of episode onset: The shares of countries experiencing democratizing and autocratizing episodes. Whether a country-year falls into a period during which several countries undergo episodes of regime transformation might affect its likelihood of experiencing an episode onset. Yet, there is no immediate clear relationship between the share of countries in episodes of democratization/autocratization and episode outcome. In all the findings reported here, we measure the covariates at the last year before the episode starts.

We first inspect how the covariates relate to onsets and outcomes with separate logistic-binomial regressions for each. To allow for possible nonlinear associations, we chose generalized additive models. Next, we estimate binomial-logistic models of onset and outcome that include all of the covariates. To mitigate the well-known bias of maximum likelihood estimation in some binomial logistic settings, we fit some of the models using Firth's penalized likelihood (FPL) (Firth, 1993; Heinze et al., 2020) instead.[24] Furthermore, since only observations that experience liberalization onset manifest episode outcomes, and unobserved confounders of onset may affect episode success as well, we also fit a sample selection model. The model is a binomial-logistic instance of the generalized joint response model (GJRM) (Radice et al., 2016; Wojtyś et al., 2018) that flexibly generalizes Heckman (1979) popular selection model. Following Boese et al. (2021), we use the global shares of countries in democratization and autocratization episodes as the excluded variables in selection models.

We evaluate the covariates as *predictors* of democratization onset and success—their informativeness about yet unobserved episodes—by computing the models' out-of-sample fits. Specifically, we estimate the areas under the receiver-operator curves (AUC) with leave-pair-out cross-validation (Airola et al., 2009), and the classification rate with leave-one-out cross-validation.[25]

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[23]We do not account for specific events that may serve as catalysts for democratization, such as protests or revolutions. Many of the same factors that explain democratization also explain the occurrence of such events. By omitting them, we are intentionally focusing on more distal explanations for democratization. Notwithstanding, our primary goal is to compare the difference in the strength of relationships between covariates that we *did* select and episode onset versus outcome.

[24]Tables C3 and C5 in the Appendix report additional results using OLS and logistic regressions under MLE, which resemble the findings presented here.

[25]AUC has an intuitive interpretation as the fraction of randomly chosen pairs of observations $\{y_l = 0, y_{l'} = 1\}$ in which the model assigns a higher fitted (predicted) value to the $y = 1$ observation. The classification rate is the share of observations for which the rounded fitted/predicted value is equal to the observed one.
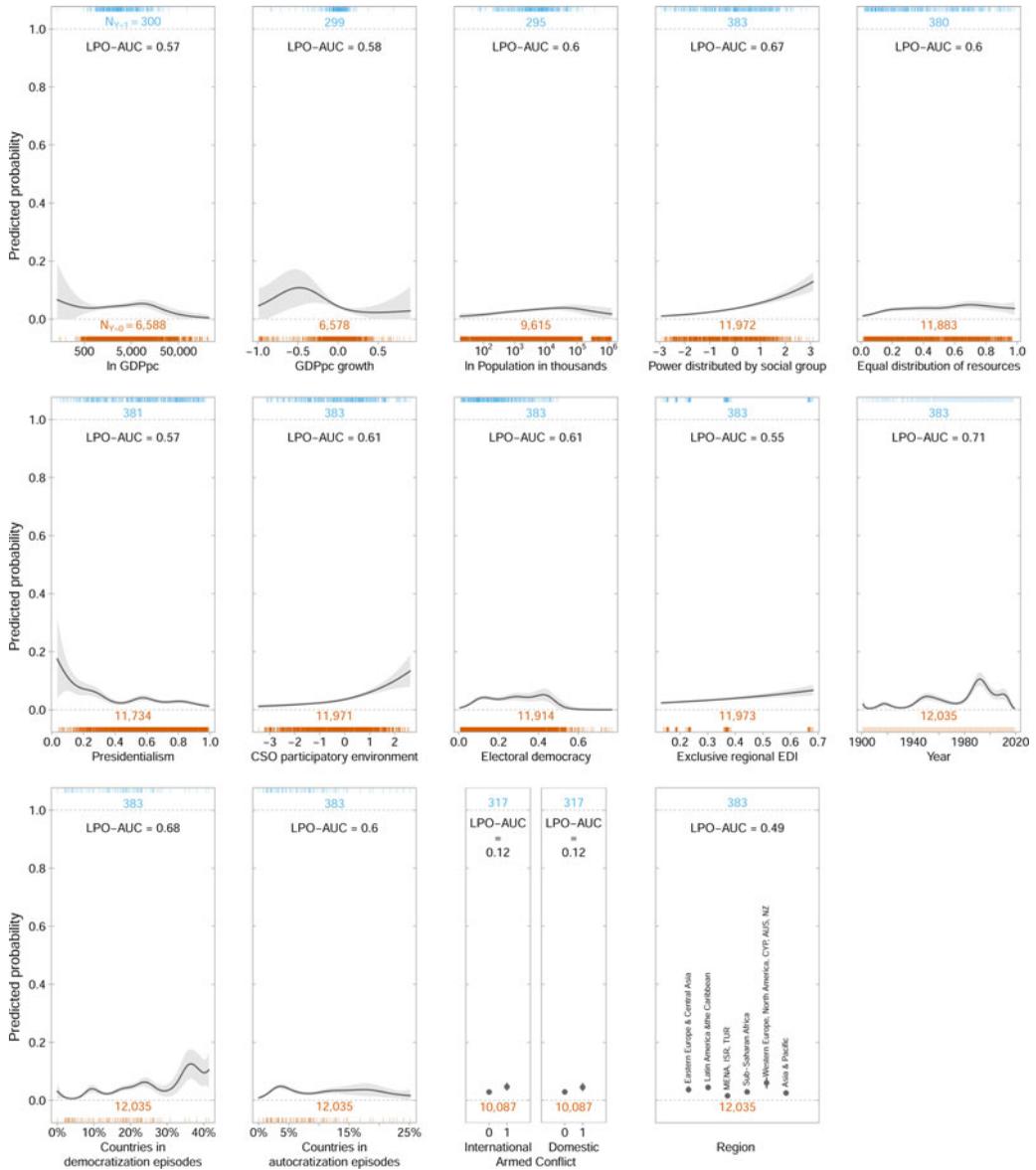
Figure 6. Predicted probabilities of episode onset under 15 bivariate models. Ridge-penalized random-effect smoothing for exclusive regional EDI, Gaussian process models for all other non-binary covariates. 95 percent confidence intervals and regions. All covariates are at their pre-episode values. Observations with GDPpc growth outside of [− 100%,100%] are excluded from the model.

Figure 6 reports the bivariate estimates for onsets, with the covariate on the x-axis and the predicted probabilities of onsets or outcomes on the y-axis. Across the board, the relationships are weak at best. Three are visibly positive: these are power distribution by social group, CSO participatory environment, and the global share of countries in democratization episodes. Regional electoral democracy level shows a similar but weaker relationship. In contrast, presidentialism is negatively associated with episode onset.
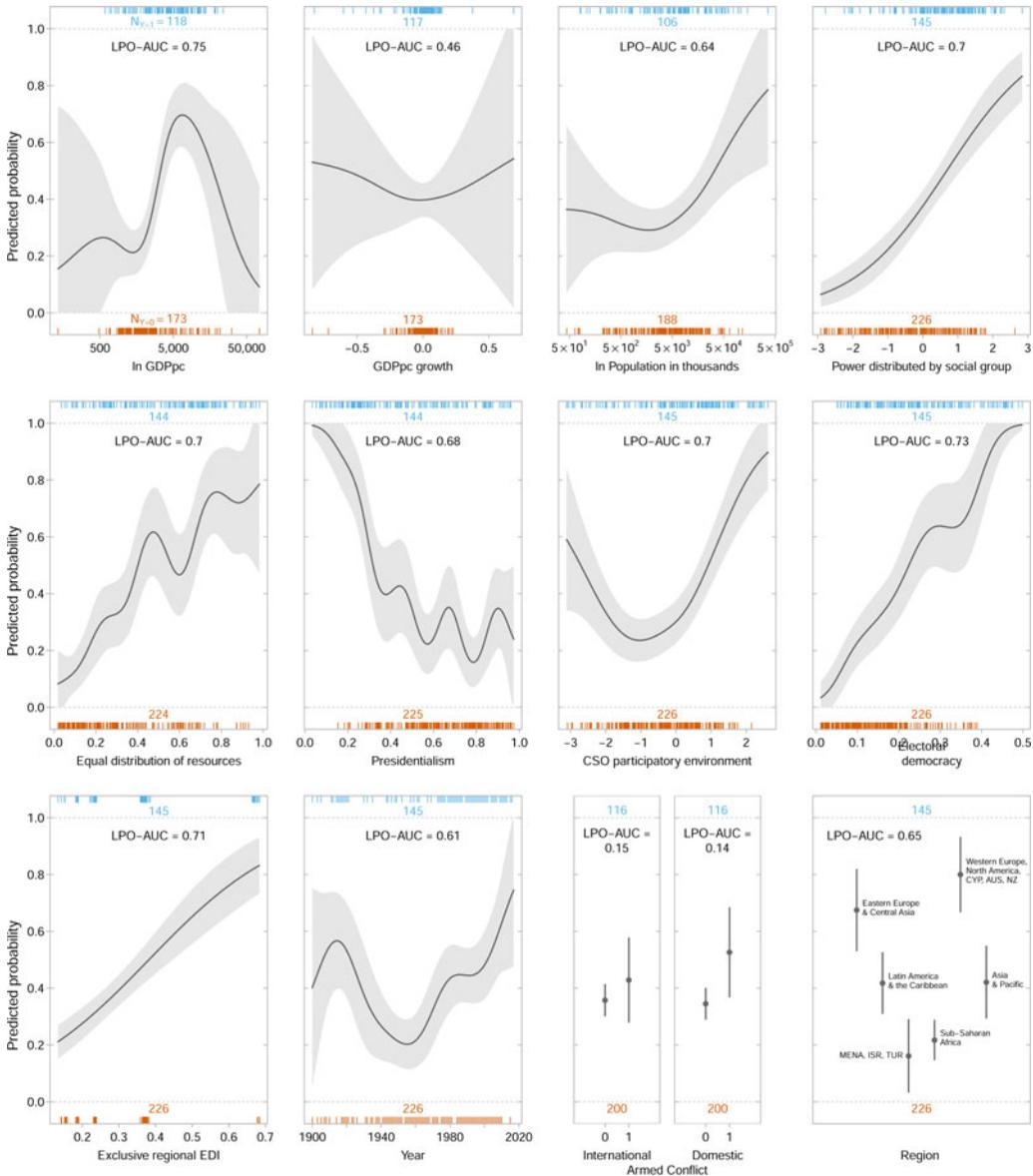
Figure 7. Predicted probabilities of episode success under 13 bivariate models. Ridge-penalized random-effect smoothing for exclusive regional EDI, Gaussian process models for all other non-binary covariates. 95 percent confidence intervals and regions. All covariates are at their pre-episode values. One episode (Croatia, starting in 1992) is excluded from the GDPpc growth model due to an extremely outlying value.

Figure 7 shows the bivariate relationships for episode success. Four covariates are visibly positively related to success: power distributed by social group, equal distribution of resources, the EDI, end exclusive regional EDI. Two of them relate positively to onset as well, but more strongly so to success. Similarly, presidentialism relates negatively to both onset and success, but more strongly so to the latter. GDP per capita, population, and CSO participatory environment all relate to success in more complex ways. For GDP per capita, the relationship is visibly positive

Table 1. Multiple regression models of episode onset and outcome

	FPL Onset	GJRM Onset	GJRM Outcome	FPL Outcome
ln GDPpc	0.12	0.1	0.06	0.08
	(−0.11, 0.34)	(−0.12, 0.33)	(−0.67, 0.79)	(−0.62, 0.75)
GDPpc growth	−0.77	−0.75	0.13	0.23
	(−1.69, 0.24)	(−1.66, 0.16)	(−4.03, 4.3)	(−3.83, 3.82)
ln population in thousands	−0.07	−0.07	0.33	0.28
	(−0.17, 0.04)	(−0.17, 0.04)	(−0.02, 0.68)	(−0.03, 0.61)
Power distributed by social group	0.23	0.23	0.01	0.03
	(0.08, 0.38)	(0.08, 0.39)	(−0.49, 0.52)	(−0.43, 0.5)
Equal distribution of resources	−0.98	−1.03	1.76	1.47
	(−1.81, −0.17)	(−1.86, −0.21)	(−1.25, 4.77)	(−1.27, 4.33)
Presidentialism	−2.16	−2.19	−2.52	−2.27
	(−3.04, −1.28)	(−3.08, −1.3)	(−5.25, 0.2)	(−4.86, 0.22)
CSO participatory environment	0.31	0.32	−0.4	−0.35
	(0.17, 0.46)	(0.17, 0.46)	(−0.84, 0.04)	(−0.77, 0.05)
Electoral democracy index	−8.41	−8.54	3.55	2.94
	(−10.21, −6.68)	(−10.32, −6.76)	(−2.74, 9.84)	(−2.81, 8.98)
Exclusive regional EDI	−119.79	−123.08	−333.99	−272.31
	(−163.57, −76.59)	(−167.02, −79.13)	(−506.6, −161.38)	(−441.03, −132.51)
International armed conflict	0.22	0.22	0.16	0.14
	(−0.22, 0.63)	(−0.21, 0.64)	(−0.98, 1.29)	(−0.92, 1.19)
Domestic armed conflict	0.03	0.03	−0.16	−0.08
	(−0.49, 0.52)	(−0.48, 0.53)	(−1.75, 1.44)	(−1.55, 1.36)
Share of democratizing countries	4.44	4.5		
	(2.16, 6.7)	(2.21, 6.79)		
Share of autocratizing countries	−7.9	−8.09		
	(−12.86, −3.14)	(−12.97, −3.2)		
Region intercepts	Yes	Yes		Yes
Year cubic polynomial	Yes	Yes		Yes
θ		−0.39		
Leave-pair-out AUC	0.78	0.79	0.88	0.87
Leave-one-out classification rate	0.96	0.96	0.79	0.8

5449 country-years, 235 onsets, 88 successes. 95 percent confidence intervals in parentheses. All covariates lagged by one year. Baseline region: Eastern Europe and Central Asia. Leave-pair-out cross-validation with 10,000 randomly drawn pairs for onset models, exhaustive for outcome models. Interval estimates for θ are not numerically stable under the software. Additional quantities reported in Tables C3, C1, and C5 in the Appendix.

only from about \$1,500 to about \$5,500. The other two positively associate to success only in the upper halves of their observed ranges.

Table 1 shows the estimated conditional relationships to liberalization onset and successful democratization under multiple regression models. Given that onsets are rather rare, the fairly good out-of-sample predictions are not surprising. Just the same, the models predict success remarkably well, with out-of-sample AUCs above 0.87. In short, the relatively small set of covariates is substantially informative of episode outcomes *already when the episode has just begun* even under models that are not tuned for prediction.

A nuanced causal interpretation of the estimates in Table 1 would require bold assumptions because of the complex relationships between the variables and non-negligible amount of missing data.[26] In this context, we can make the following observations: First, presidentialism negatively relates to onset, and comparably, but less clearly so to success. In contrast, CSO participatory environment clearly positively relates to onset, and less clearly so, but negatively so, to success, with the two intervals far from overlapping. Electoral democracy is in the reverse situation, being negatively associated with onset and less clearly so to success. Regional electoral democracy

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[26]We report results under multiple imputation of covariate data in Tables C4, C2, and C6 in the Appendix, which corroborate the findings presented here.

relates negatively to both onset and success; it is challenging to substantively interpret, however, given that it does not vary much within regions and the models already include regional intercepts. Finally, the shares of countries experiencing democratization and autocratization episodes have clear positive and negative conditional associations to episode onset.

In summary, we find that some of the factors that are thought to drive democratization relate differently to the onset and success of episodes. The relationships can even be opposite for some. In this way, they may impede the onset of liberalization but aid it toward democracy once it commences, or vice versa. This is important because previous large-N investigations of democratization—particularly those that rely on binary transition measures—imply that the factors that explain a transition to democracy also explain the broader process of liberalization that brought it about. The question of what causes the onset of liberalization, and how it differs from the causes of successful democratization, is a fruitful area for further research that will generate new causal knowledge through a more detailed focus on individual factors and their impacts on the different outcomes.

Conclusion

The study of democratization has made incredible advances in the past 60 years, with increasing sophistication and rigor in both the tradition of comparative case-studies and in the large quantitative literature that aims to make causal inferences about the independent effects of single factors. It is, however, time to take another step forward that can bring these somewhat separate research traditions closer together, while at the same time improving on our ability to evaluate more complex theories that are typical for our field. Advancing knowledge through large-N analyses depends on a more nuanced understanding of the relationship between the start of a liberalization process, its continuation and progress, and the possible outcomes, only one of which is a democratic transition. To that end, this paper proposes an episodic approach building on the insights of comparative case-studies. It makes the data on liberalization episodes available for quantitative analysis to enable more appropriate tests of conventional theories of democratization. Based on a specified set of systematic coding rules, the cases constitute a sample of 383 episodes over the period 1900–2019, of which 145 are classified as "successful" cases of democratization.

The results suggest a new agenda in our collective endeavor to understand and explain democratization. While the findings corroborate the importance of primary factors from the literature as determinants for outcomes in terms of failure or success in transitioning to democracy, the same features seem to have little bearing on whether a country starts to liberalize (i.e., the onset of episodes). This issue thus remains to be explored. With the episodic approach, we capture the full trajectory of a county's liberalization period (from onset to outcome). This provides a foundation for quantitative analyses of questions that only the comparative case-study literature has been able to address so far, opening up another agenda in the study of liberalization.

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