PNAS INAUGURAL ARTICLE | POLITICAL SCIENCES OPEN ACCESS

Income inequality and the erosion of democracy in the twenty-first century

Eli G. Rau[a,1] and Susan Stokes[b,1,2]

This contribution is part of the special series of Inaugural Articles by members of the National Academy of Sciences elected in 2022.
Contributed by Susan Stokes; received October 31, 2024; accepted November 19, 2024; reviewed by Nancy Bermeo and Kenneth Roberts

Among the most pressing problems societies face today are economic inequality and the erosion of democratic norms and institutions. In fact the two problems—inequality and democratic erosion—are linked. In a large cross-national statistical study of risk factors for democratic erosion, we establish that economic inequality is one of the strongest predictors of where and when democracy erodes. Even wealthy and longstanding democracies are vulnerable if they are highly unequal (though national wealth might provide some resiliency). The association between inequality and risk of democratic backsliding is robust, and holds under different measures and structures of both income inequality and wealth inequality. The association is unlikely to be a case of reverse causation. For concerned citizens seeking to understand why so many democracies are eroding and how to stop this process, our study indicates that policies for ameliorating inequality are a promising path forward.

democratic backsliding | democratic erosion | economic inequality | democracy

Significance

In the 21st century, democracy is more often threatened by elected presidents and prime ministers than by military coup-makers. What are the causes of this rise in democratic erosion? Cross-national statistical analysis points toward one robust finding: The more unequal income distribution is in a democracy, the more at risk it is of electing a power-aggrandizing and norm-shredding head of government. Even wealthy and longstanding democracies, like the United States, are vulnerable if they are highly unequal (though national wealth might provide some resiliency). Therefore, policies that improve income equality may have the political effect of strengthening democratic systems.

In the late-twentieth century, the main threat to democracies was the military coup. Today, a greater threat is posed by power-aggrandizing elected heads of government. Presidents and prime ministers from Mexico to South Africa and from Hungary to the United States have flouted the norms and institutions that sustain democracy. They harass the press, reduce the independence of the courts, defy legislative oversight, and undercut the public's confidence in elections.

Researchers refer to this phenomenon as democratic erosion or democratic backsliding. It has happened in about two dozen countries since the turn of the 20th to 21st centuries. In light of this trend, Pérez-Liñán warns that "the main threat to democracy in the twenty-first century" comes from "hegemonic presidents who undermine the separation of powers" (1, p. 2).

Democratic erosion has sparked an outpouring of important academic studies. Bermeo was among the first political scientists to call attention to the rise of backsliding and the decline of coups (2), a shift also documented by Svolik (3). Major studies of backsliding have been carried out by Levitsky and Ziblatt (4), Waldner and Lust (5), Przeworski (6), and Haggard and Kaufman (7), among many others.

Despite this research, key questions about democratic erosion remain unanswered. What are the factors behind the surge in cases of erosion? Are there systematic differences between democracies that erode and those that do not? Our study deploys a large cross-national dataset and statistical analysis to answer these questions.

In the effort to understand what is happening to democracy around the world, one case that has received immense attention is the United States. Democratic erosion in the United States came as a surprise to many observers. Studies of democratic stability during the era of coups told us that wealthy and old democracies were the most resilient ones (8, 9). And yet, the United States—the world's oldest democracy, and one of its wealthiest—showed new cracks. In 2016, the country elected a president who routinely attacked the free press, threatened to jail his political opponents, and expressed a consistent disdain for democratic norms in both his words and actions. He undermined confidence in elections by continually insisting that his 2020 election loss was engineered through massive fraud.

A suspicion among scholars and observers was that high levels of inequality in the United States played some role in the weakening of democracy. The 1970s marked the beginning of a sharp divergence between economic productivity and real wages in the United States and over the past 50 y, inequality has risen dramatically.

There are good reasons to believe that inequality might play a role in democratic erosion. Inequality contributes to polarization (10–12), and many studies have highlighted polarization as a key factor in erosion (11, 13, 14). Moreover, public perceptions

Author affiliations: [a]Tecnologico de Monterrey, Monterrey 64700, N.L., Mexico; and [b]Department of Political Science, University of Chicago, Chicago, IL 60637

Author contributions: E.G.R. and S.S. designed research; E.G.R. and S.S. performed research; E.G.R. analyzed data; and E.G.R. and S.S. wrote the paper.

Reviewers: N.B., Princeton University; and K.R., Cornell University.

The authors declare no competing interest.

[1]E.G.R. and S.S. contributed equally to this work.

[2]To whom correspondence may be addressed. Email: sstokes@uchicago.edu.

This article contains supporting information online at https://www.pnas.org/lookup/suppl/doi:10.1073/pnas.2422543121/-/DCSupplemental.

Published December 30, 2024.

of unfairness in economic distributions and opportunities contribute to cynicism about the broader system, weakening people's commitment to political norms and institutions. Scholars of American public opinion observe a 50-y decline in confidence in political institutions, which "may be traceable to political polarization stemming from increasing income inequality and segregation in America" (15).

Indeed, scholars have long viewed inequality as a threat to democracy (16–18). Yet in prior eras of democratic instability via military coups, empirical studies produced mixed evidence about whether inequality was a key factor (17, 19, 20). Does inequality play a central role in this new wave of democratic erosion? Or is there a danger of extrapolating from one notable case—the United States—of a wealthy, old, unequal democracy eroding?

The suspicion that rising inequality is playing a role in the wave of cases of democratic erosion has thus far gone untested with systematic data. Scholars face a major hurdle in conducting the kind of cross-national analyses that would probe any economic factors in democratic backsliding: the difficulty of precisely and systematically identifying cases of erosion. The challenge is to distinguish instances of erosion from more conventional executive overreach, a task made more difficult by the stealthiness of backsliders and the typically slow, gradual pace of erosion (21). Without a systematically identified dependent variable, it is difficult to specify statistical models that explain it.

We overcome this obstacle by building on recent developments in the measurement of democratic erosion. Doing so allows us to conduct a large, cross-national quantitative study of democratic erosion and economic distribution. Our key conclusion is that income inequality is a strong and highly robust predictor of democratic erosion. This basic result is stunningly robust. In all, we find a consistent, positive association between income or wealth gaps and democratic erosion across more than 100 distinct statistical models.

In addition to probing links between inequality and erosion, we study other factors as well. National wealth appears to provide some insulation from the threat of erosion, though this statistical relationship is less robust than that of inequality and erosion. And the dangers of democratic erosion are not limited to young democracies. As mentioned, in the era of military coups democracies were most vulnerable in their early years; a long history of uninterrupted democracy provided strong protection against future coups. But in the 21st century, when aggrandizing chief executives are a greater threat than military leaders to most democracies, even the oldest democracies are vulnerable if they are unequal.

Empirical Analysis

To identify cases of erosion, we turn to recent work by Laebens (22). Laebens draws on expert surveys to identify democracies that have experienced substantial declines in both vertical and horizontal accountability, key concepts in democratic theory (23–25). Vertical accountability is when governments face constraints imposed by voters and civil society; horizontal accountability is when they face constraints from coequal branches—the courts and the legislature, among others. As explained in *Materials and Methods*, Laebens uses multiple measures related to both kinds of accountability, measures gathered by the organization Varieties of Democracy (V-Dem).

Laebens conceptualizes erosion as a decline in both horizontal and vertical accountability. To track declines in horizontal and vertical accountability, Laebens uses information gathered by V-Dem. Our study uses data from the period 1995 to 2020, during which 23 spells of backsliding occurred in 22 countries (Fig. 1).

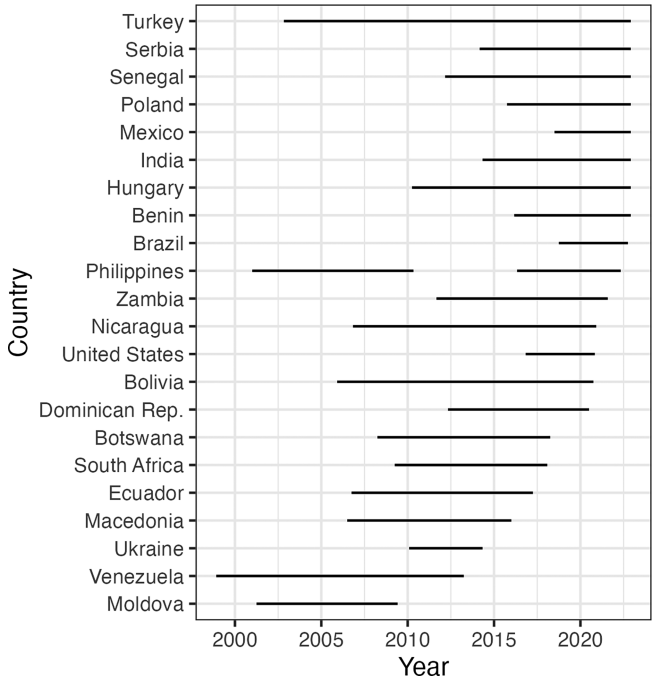

Fig. 1. Cases of democratic erosion, 1995–2022. Line segments indicate the years each country was experiencing erosion, following the coding rules established in Laebens's work.

In Laebens's procedure, to qualify as eroding a country has to be a democracy in the first place, which means that it must have experienced at least one peaceful alternation in power since its last period of autocracy. Our universe of cases includes countries that are democracies throughout our period of study, according to the dataset constructed by Miller, Boix, and Rosato (26). (The exception is Venezuela, which began this period as a democracy, eroded, and by the end of the period was considered an autocracy.) Given interest in the current wave of erosion, we focus on the past quarter century, while acknowledging that erosion events occurred in earlier eras.

The 23 unique periods of erosion that this method identifies lasted an average of nine years. In the regressions reported later in this article, the unit of analysis is the country-year. An alternative approach is to treat country-election-years as the unit of analysis, and, in effect, to study the factors associated with elections that bring backsliding leaders to power. A total of 68 national elections took place in the context of erosion. In the appendix, we replicate our main analyses with country-election-year units; the results are substantively unchanged (*SI Appendix*, Table A1).

Predicting Erosion: Economic Risk Factors. We begin by estimating a simple model, using a country's post-tax and post-transfer Gini coefficient to predict whether it is eroding in a particular year. (The Gini coefficient measures how much the distribution of individual incomes in an economy deviates from full equality; the larger a country's Gini coefficient, the more unequal it is.)

Our analysis reveals a strong association between economic inequality and backsliding. Fig. 2 reports the probability of a country's experiencing erosion in any given year, conditional on its level of income inequality. Across the range of Gini coefficients among countries in our dataset, these probabilities rise from single digits in the most equal countries to more than 30% in the most unequal ones.

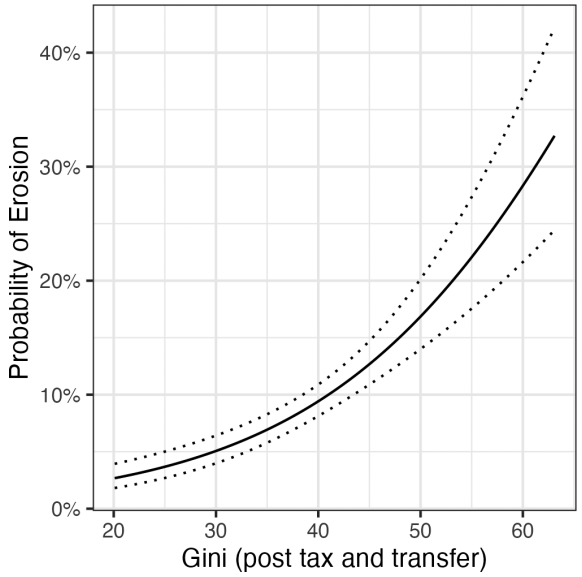

Fig. 2. Inequality and probability of erosion. Probability of erosion is estimated with 95% CIs from a bivariate logit model, regressing erosion on post-fisc Gini. This figure estimates conventional SEs; see Table 1, column 1, for the same model with cluster-robust SEs (clustered by country).

Table 1. Logit regression explaining erosion

	Dependent variable: Erosion		
	(1)	(2)	(3)
Gini	0.067***	0.066**	0.071**
	(0.017)	(0.021)	(0.026)
Logged GDP per capita		−0.012	−0.530†
		(0.226)	(0.274)
Year			0.180***
			(0.039)
Constant	−4.934	−4.796	−362.382
	(0.795)	(2.678)	(77.155)
Observations	1,922	1,901	1,901

†$P < 0.1$; *$P < 0.05$; **$P < 0.01$; and ***$P < 0.001$.

Note: All models use robust SEs, clustered at the country level. Countries either remained continuously democratic from 1995 to 2020, or eroded during the period (democracies falling to coups are excluded).

For a sense of the magnitude of the association, consider the difference between Sweden, a country in which incomes are more compressed than all but 13% of democracies (Gini = 26.4 in 2017), and the United States, with a Gini larger than that of 60% of democracies (38.4 in 2017). For a country as equal as Sweden, the predicted risk of erosion is four percent. For a country as unequal as the United States, the predicted risk more than doubles, to 8.4%. Sweden has not been immune from the rise of a far-right, anti-immigrant party in recent years; yet political leaders do not attack the press or coequal institutions, and public confidence in state institutions remains high (27). Other, more unequal countries are even more at risk than the United States. South Africa, the most unequal democracy in our dataset, had a probability of erosion of 31%. In fact, Swedish democracy has survived intact whereas both the U.S. and South African democracies frayed.

The association of inequality with erosion is displayed in Table 1, which reports three logit models. Model 1 shows the bivariate relationship between erosion and inequality (as illustrated in Fig. 2). Model 2 considers whether poor countries are at heightened risk of democratic erosion, controlling for both inequality and gross domestic product (GDP) per capita. Inequality remains a strong predictor of erosion; but GDP per capita—a reliable predictor of coups—has no apparent effect on a country's vulnerability to erosion.

Are there contagion dynamics among backsliding leaders? These dynamics were uncovered by scholars who studied democratization in Southern Europe, Latin America, and in the post-Communist countries—the third wave of democratization (28). They found that, other things being equal, the larger the number of countries that had already undergone a transition away from dictatorship in a country's region, the more likely that any additional country would follow them on the path toward democratization (29, 30).

Recent experiences suggest that backsliders, too, may draw inspiration from role models in other countries. President Hugo Chávez in 1999 orchestrated a rewriting of the Venezuelan constitution that gave the president enormous powers; Presidents Rafael Correa of Ecuador and Evo Morales of Bolivia followed suit in 2007 and 2009, respectively. In 2020–2021, U.S. President Trump challenged the validity of an election he lost, leading to a violent effort to interrupt the transition of power. A remarkably similar series of events took place in 2023 in Brazil after the election loss of President Jair Bolsonaro.

We test for contagion dynamics in Model 3 of Table 1. There we add a control for year of observation. If backsliding leaders learn from one another, we would expect erosion to become increasingly common over time. The results in Model 3 indeed offer evidence of contagion effects. As the years advance, incidence of erosion becomes more likely, net of other factors like Gini and per capita income. (Note that year-of-observation is not highly correlated with the age of democracy, a factor we consider below.) Still inequality remains a strong predictor of a country's experiencing erosion, both in statistical precision and in the size of the estimated effects (see Model 3 in Table 1). In turn, GDP per capita attains borderline significance, with poorer countries being more likely to erode.

The inequality effect is robust across a number of statistical approaches. In the appendix (*SI Appendix*, Table A11) we report results from an alternative model that controls for the cumulative prior years of erosion (i.e., the sum of all years of erosion in each country around the world prior to the year of observation), as well as a model that incorporates year fixed effects. The only substantive difference in these models is that GDP per capita does not reach borderline significance.

Income inequality is a more robust risk factor than is national wealth; it is also a stronger one. Even where GDP per capita does reach borderline significance (Model 3), the magnitude of the estimated effect of inequality is much larger than that of wealth. Consider a country with median Gini (34) and median GDP per capita ($16,000). Generating predictions from Model 3, an increase in inequality from the 50th to the 75th percentile is associated with an increase in risk of erosion that is more than twice as large as the increase in this risk associated with reducing GDP from the 50th to the 25th percentile.

How powerful is our model in predicting erosion? Using just three pieces of data—Gini and GDP per capita, plus the year of observation—allows us to correctly predict erosion and nonerosion 80% of the time. To produce this estimate, we calculate the AUC (area under the ROC curve). The AUC indicates the improvement the model offers in predicting cases of erosion or nonerosion, compared to guessing. This number implies that, if we randomly select two country-years from the dataset, in

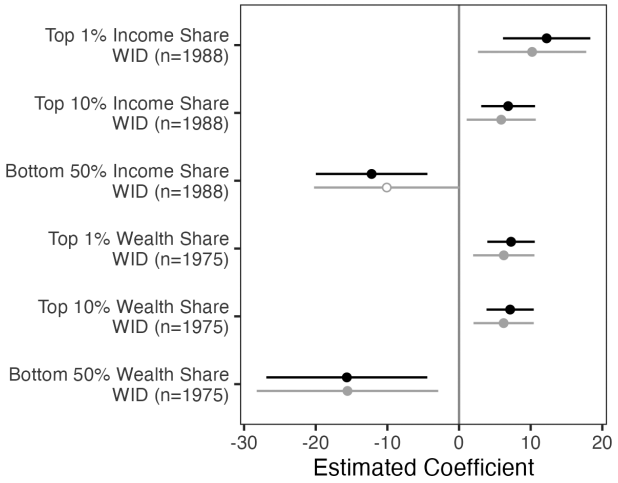

Fig. 3. Coefficients relating distinct measures of inequality to the risk of erosion. Each coefficient plotted comes from a separate logit model. Coefficients are presented with 95% CIs. Black points indicate coefficients from a bivariate model (Model 1 in Table 1). Gray points indicate coefficients from a model controlling for economic development and year (Model 3 in Table 1). Solid points indicate statistical significance ($P < 0.05$). See *SI Appendix*, Tables A5–A7 for details.

four out of five draws the model will correctly assign a higher probability of erosion to the country that is actually eroding. Considering the model's spareness and structural quality, its explanatory power is impressive. See *SI Appendix*, Fig. A7 and the accompanying discussion for further details.

Patterns of Inequality. The Gini coefficient summarizes entire distributions with a single number. It is useful for turning a rich concept like inequality into a tractable cross-national measure. But it also sets aside a great deal of information. A high Gini coefficient indicates a large deviation from full equality; but several distributional patterns could lie behind this deviation. It might signal income concentration among a very small elite, or the presence of a large upper class. Is there a particular pattern of unequal income distribution that drives the risk of erosion?

To explore this question, we make use of additional data from the World Inequality Database (WID). We consider the chances of erosion conditional on income shares of the top one percent, the top 10%, and the bottom 50% of the population. When considering people at the top of the economy, income alone can understate their economic dominance, which may be held in diverse kinds of assets. We therefore also consider the share of wealth controlled by the top one percent, top 10%, and bottom 50%.

Fig. 3 shows that societies in which income is concentrated at the top are more prone to erosion, whereas those in which income is relatively equally dispersed among lower echelons are less prone to it. The figure summarizes the main results for 12 logit models: six bivariate models relating distributions of income and wealth to erosion (black points) and six models that add year and GDP covariates (gray points) (*SI Appendix*, Tables A5–A7). What emerges is that the larger the share of national income and wealth going to the top one percent and top 10% of the population, the more likely the democracy is to erode. And the larger the share going to the bottom half of the population, the less likely its democracy is to erode. In all but one model, the measure of income or wealth shares is significant at $P < 0.05$ (the exception comes in a model with both year and logged GDP per capita, where the bottom 50% income share has a P-value of 0.051).

The role of GDP per capita revealed in Fig. 3 is not substantially different from that revealed in our earlier models. Without controls for year-of-observation, we rarely see evidence of GDP having a significant impact on erosion. With year-of-observation controls, GDP attains significance or comes very close to it (*SI Appendix*, Tables A5–A7).

Which patterns of income inequality are the strongest predictors of erosion? Distinct measures of inequality do little to change the overall predictiveness of the models. Wealth inequality is slightly more predictive than income inequality, and wealth concentrations among the top one percent are the most predictive. (*SI Appendix*, Table A8 and accompanying discussion for more details.) But these improvements in predictiveness are only marginal; inequality matters quite generally, regardless of the specific structure of the unequal distribution.

Beyond Economics: What Else Matters for Erosion? A simple economic model goes a considerable way toward explaining when and where democratic backsliding occurs. Yet, this is a complex political phenomenon. Do other factors matter? Below, we consider a series of additional factors that scholars have suspected of influencing democratic instability and breakdowns:

- **Polarization**. Scholars of democratic backsliding reason that aspiring autocrats seize on partisan polarization to present voters with a choice between safeguarding democracy and avoiding the presumably dire outcome of a despised opposing party coming to power (11, 13, 31).
- **Age of democracy**. Democratic consolidation takes time. A common expectation is that older democracies are less likely to fail than newly established ones (8, 32, 33).
- **State capacity**. State capacity is "the institutional capability of the state to carry out various policies," (34, 6) including the ability to "tax, enforce contracts, and organize public spending" (34, 1). Scholars have suggested that state capacity is related to erosion, though the direction of the potential effect is uncertain (35).

Fig. 4 adds controls for each of these constructs—political polarization, state capacity, and age of democracy—to a single model that also features regional fixed effects. We measure polarization with V-dem's political polarization variable, a measure of affective polarization—how strongly partisan members of a polity disdain partisans of other parties (36). (In additional analyses reported in the appendix, we also use V-dem's societal polarization variable, which gauges how far apart partisans are on policy terms) The measure of the age of democracy comes from the Miller–Boix–Rosato regimes dataset (26). The measure of state

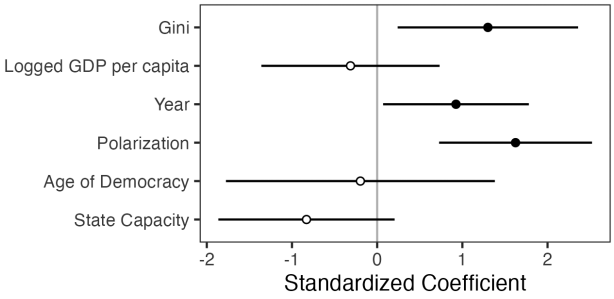

Fig. 4. Logit regression predicting erosion. Solid points indicate statistically significant estimates. Coefficients are presented with 95% CIs, with cluster-robust SEs (clustered by country). Coefficients are standardized for ease of comparison. See *SI Appendix*, Table A10 for details.

capacity is bureaucratic quality, compiled by Political Risk Services.

In line with the models presented earlier, economic inequality and year-of-observation remain strong predictors of a country's propensity to erode. In addition:

Polarization emerges as a significant factor in democratic backsliding—a finding that confirms the intuition of many scholars in this field. The polarization effect is robust to alternative specifications and to an alternative measure of polarization.

Polarization is likely a critical mechanism linking inequality to erosion: Inequality fuels polarization and polarization facilitates erosion (10, 11, 37). In highly unequal settings, leaders can cultivate a sense of grievance among citizens who feel they are left behind, a grievance that is sometimes aimed at economic and social elites and sometimes at migrants and ethnic, racial, or religious minorities (38–40). Scholars have documented instances of political leaders taking advantage of long-term income inequality to exacerbate "pernicious polarization" among the "left-behinds" in countries like Poland and Turkey (11).

Still, polarization is not the only path from inequality to erosion. Even without political leaders stoking polarization, inequality boosts the risks of erosion. In statistical terms, including a control for polarization in our cross-national models does not eliminate the inequality effect. Both polarization and inequality add predictiveness to the model that is not achieved using the other variable alone. Knowing the level of polarization and the year yields a model predictiveness (AUC) of 83%. Adding Gini to the model increases the predictiveness to 88%.

The age of democracy shows no evidence of reducing the likelihood of a country eroding. The finding is striking: It is a stark departure from an empirical regularity in the study of other forms of democratic weakness. In the era of instability via coups, a democracy's age—how long it had persisted as a democracy without interruption—was a reliable predictor of the risk of breakdowns. In contrast, in our statistical tests, the risk of backsliding shows no sign of declining in older democracies. This is true in models, reported in the appendix, with fewer controls, and in sensitivity analyses in individual cases of erosion are removed (*SI Appendix*, Table A12 and Fig. A2). Even models that exclude the United States—the world's oldest democracy—offer no evidence that older democracies are protected against the threat of backsliding.

State capacity does not appear to influence the risk of a democracy eroding. Neither of the possible effects that earlier researchers posit is in evidence: State capacity neither boosts nor depresses a democracy's propensity to backslide (*SI Appendix*, Table A10). (A caveat is that state capacity is notoriously difficult to measure. See *Materials and Methods* for further discussion of our state capacity variable and results with alternative measures and models.)

Robustness. Our finding that democracies with high income inequality are more likely to erode holds up to extensive robustness testing. It holds up when we slightly alter the set of countries identified as backsliders, in line with the coding of other researchers. In a recent book, Stephan Haggard and Robert Kaufman identify a set of backsliders that differs slightly from our list (7). The differences largely reflect countries for which data were not yet available when Haggard and Kaufman concluded their study.* Altering the coding of the dependent variable so that they match this slightly different set of cases does not change the inequality result (*SI Appendix*, Table A4).

A frequently used measure of inequality is the Gini coefficient; our results hold when we use measures of Gini from four different sources (*SI Appendix*, Fig. A1). They also hold when we estimate not income inequality but wealth inequality, and when we use measures of representing distinct patterns of inequality (*SI Appendix*, Tables A5–A7).

Even with the inclusion of a range of statistical controls, inequality remains the key predictor of democratic erosion. These additional controls include, as mentioned, national income (GDP per capita), the age of democracy, year of observation, cumulative prior years of erosion worldwide, levels of polarization, and state capacity (*SI Appendix*, Tables A10–A14 and Fig. A2).

Inequality and polarization are positively correlated (*SI Appendix*, Figs. A3 and A4). Hence a key mechanism linking inequality to erosion is likely to be the rise in partisan polarization—polarization that scholars have shown to be, in part, a side-effect of income inequality. Thus our study sheds additional light on the most widely observed aspect of democratic backsliding, its association with polarized politics. Yet inequality as a factor in the risk of erosion does not disappear in the presence of controls for polarization, suggesting direct as well as polarization-mediated effects of income differentials.

The result also holds under different statistical models. Our main model is a logit regression with cluster-robust SEs, clustered at the country level. The inequality result holds when the unit of analysis is the country-election-year and when we estimate a rare-events model (*SI Appendix*, Tables A1 and A2).

One might wonder whether the apparent impact of inequality on erosion is simply a function of countries' varying fixed characteristics, fixed characteristics that covary with inequality. Hence, an important test is whether changing inequality levels over time in any given country play an important role in whether it will experience erosion, and at what point in time? Indeed, in the appendix, we add country fixed effects to our main model (*SI Appendix*, Table A16) and find that income inequality and the year of observation continue to be significant predictors of erosion. In the fixed-effects model, GDP per capita also attains significance at the $P < 0.05$ level.

Discussion

The fraying of two-dozen democracies around the world in the opening decades of the 21st century has been a startling development. That it has taken place in wealthy and long-established democracies, like the United States, has just added to the sense of wonder and—for those who value democracy—alarm. Why is this happening?

Ours is a large-scale statistical study of structural determinants of democratic erosion. It reveals that democracies erode more frequently in countries with unequal distributions of income. That is the core takeaway from our study. The level of national economic development, measured as GDP per capita, has a weaker and less robust relationship with erosion. And the age of democracy—a key predictor of coups—has no apparent effect on the risk of democratic erosion. This pair of findings holds even when we exclude the United States from the analysis; see *SI Appendix*, Fig. A2. Hence, democratic erosion in the United States, a surprising development to nearly all observers, was not a random event but indeed had structural roots.

*The exceptions, which we code as eroding but Haggard and Kaufman do not, are India under Narendra Modi, the Philippines under Gloria Arroyo and Rodrigo Duterte, and Senegal under Macky Sall.

Since backsliding leaders ride to power on waves of resentment against inequality, a natural question is whether, once in power, they impose policies to reduce inequality. The answer is that sometimes they do. Backsliding leaders fall into two types: right-wing ethnonationalists and left-wing populists (27). The left-populists sometimes undertake to equalize income distribution. Evo Morales in Bolivia and Rafael Correa both eroded democracy from the left; and income distribution became more equal during their terms. Even right-wing eroders—the Viktor Orbáns and Narendra Modis—have favored more generous spending than the competing right-wing parties and pro-business groups (41). (On trends in inequality during erosion; see *SI Appendix*, Figs. A5 and A6 and the accompanying discussion.)

Readers who have followed debates about the economic underpinnings of democracy and dictatorships, and causes of transitions between these regime types, might not be surprised to learn that income inequality plays a role in democratic backsliding, as well. Unequal societies induce segments of the population to feel left behind by economic development and aggrieved by elite institutions. Voters who feel left behind by economic growth are also more responsive to populist leaders (42). And they can also lose confidence in elite institutions, including legislatures, courts, state agencies, and even elections (15). The decline in confidence plays into the hands of backsliding leaders, who can claim that little is lost when they attack the core institutions of democracy, since, as they claim, these institutions are already deeply corrupted.

Unequal societies also spawn polities that are polarized along partisan lines, a situation widely identified as an augur for democratic decay. When citizens view the other party as representing policies that are anathema, and when they view the other party as full of despicable antagonists, they are more willing to tolerate undemocratic behavior by their political leaders (3, 7, 11, 13, 43).

If prodemocracy forces are to adequately respond to democratic backsliding, they must possess a clear understanding of the forces driving it. Our study is an effort to contribute to this understanding. Of course, some questions remain open. More research is needed about the exact mechanisms linking inequality to erosion, as well as about the strategies and interventions that can prevent or reverse it. Still by uncovering some structural roots of erosion, our study takes a substantial step toward identifying factors that can make democracies more resilient.

Materials and Methods

Measuring Erosion. We follow Laebens's classification of erosion cases (22). She uses five indicators of horizontal accountability from V-Dem: high court compliance (v2juhccomp), high court independence (v2juhcind), judicial purges (v2jupurge), legislature investigates in practice (v2lginvstp) and executive oversight (v2lgotovst). She uses seven indicators of vertical accountability from V-Dem: harassment of journalists (v2meharjrn), government censorship effort - media (v2mecenefm), CSO repression (v2csreprss), election management body (EMB) capacity (v2elembcap), election management body (EMB) autonomy (v2elembaut), election voter registry (v2elrgstry), and government election intimidation (v2elintim).

Following the Laebens method, a case must meet the following criteria to qualify as erosion:

- "At least one of the indicators in each dimension (horizontal accountability and vertical accountability) registered a decline that is significant at the 68% credibility level in the last 5 years" (page 6).
- The country was not autocratic in the year the incumbent was first elected.

Laebens analyzes each potential case and excludes any where declines in accountability measures were not the result of incumbent power-grabs. These are primarily cases of political instability related to corruption scandals. She also describes Argentina under Menem, Colombia under Uribe, and the Dominican Republic under Mejía as cases of erosion; we do not classify them as erosion cases because they do not meet the declining accountability criteria according to the V-Dem measures.

Recently, Little and Meng have questioned the value of expert-coded indicators for capturing trends in democracy and autocracy (44). But see ref. 45 on the value of expert-coded indicators. Among expert-coded datasets, Little and Meng acknowledge V-Dem as offering the highest quality data.

The set of backsliding cases we use overlaps heavily with those of other researchers. It overlaps substantially with Haggard and Kaufman's set, especially when taking into account the countries for which data were not yet available when they concluded their study (7). The only differences are the cases of India, the Philippines, and Senegal, which we include but Haggard and Kaufman do not. Our results do not change when we recode all three of these countries as having never eroded (*SI Appendix*, Table A4).

Measuring Inequality. Our main analyses use the Standardized World Income Inequality Database (SWIID) Gini estimates (post-tax and transfer) (46). We use post-fisc Gini estimates because they more closely reflect experiences of inequality. The appendix reports similar results using other sources of Gini data, including the World Income Inequality Database (WIID), the World Bank World Development Indicators (WDI), and the WID (*SI Appendix*, Fig. A1 and Tables A5–A7). Our data on income and wealth shares (Fig. 3) come from WID. The WID income shares are pre-tax, as post-tax income shares were not available.

Additional Variable Specification. For GDP per capita estimates, we use the 2022 World Bank indicator NY.GDP.PCAP.PP.CD ("GDP per capita, PPP (current international $)"). Age of democracy data comes from the Miller–Boix–Rosato Dichotomous Coding of Democracy, 1800–2020 dataset ("democracy_duration").

Noting the skewed distribution of age of democracy, we also test for sensitivity to any particular case of erosion: For each case of erosion, we re-estimate our main analyses on an alternative dataset that excludes that particular case. We have stable findings across these estimates (Gini is always significant and age of democracy is never significant). See *SI Appendix*, Fig. A2 for full details.

Acknowledging the role of demonstration effects, we include a control for year of observation in most models. Our results hold when we employ an alternative model using the cumulative preceding years of erosion in place of year (counting total country-years of erosion prior to the year of observation), and when we include year fixed effects. See *SI Appendix*, Table A11.

Our main measure of polarization is the V-Dem (v12) "political polarization" variable (v2cacamps). We also re-estimate our analyses with similar results using V-Dem's "societal polarization" variable (v2smpolsoc). See *SI Appendix*, Table A14. See also *SI Appendix*, Figs. A3 and A4 for visualizations of polarization's relationship with inequality (A3) and erosion (A4).

SI Appendix, Table A13 adds a control for state capacity. Scholars have offered many different definitions for state capacity (47, 48). We focus on measures of bureaucratic or administrative capacity as these are the most relevant for erosion. Other recent work on erosion also highlights the bureaucratic dimension as the most relevant metric (35).

We use the Political Risk Services (PRS) measure, named bureaucratic quality ("The institutional strength and quality of the bureaucracy"). Most competing measures lack sufficiently recent data for our analyses. In another recent study of democratic erosion, Treisman (35) uses the Hanson and Sigman data on state capacity (49). But the most recent version of this dataset ends in 2015, eliminating 36% of our erosion observations. Given the recent wave of erosion, cutting the dataset short would eliminate much of the variation in outcomes.

The PRS measure has its own weaknesses–in particular, it is a very coarsely coded variable. Weighed against the importance of using recent data to explain the very contemporary phenomenon at hand, the PRS data are the best available option for incorporating state capacity into our models. However, it should not be seen as the final word on whether state capacity matters for erosion.

We report additional analyses of state capacity in *SI Appendix*, Table A13. In more parsimonious models (excluding polarization and age of democracy), state capacity sometimes achieves statistical significance. (In these models, inequality remains significant but GDP per capita–which is highly correlated with state capacity–loses significance.) Like GDP per capita, there is some suggestion in

the data that democracies with greater state capacity might be less likely to erode; but the effect is not robust.

Unit of Analysis. The unit of analysis for our models is country-year. In *SI Appendix*, Table A1, we re-estimate our main models with an alternative unit of analysis: country-election-year. This analysis includes only years in which national elections were held–years in which voters had a direct opportunity to elect or oust aspiring autocrats. Our results do not exhibit substantive changes when we limit the sample to election years.

Universe of Cases. Our dataset covers the period 1995–2020. To qualify for inclusion in our dataset, a country must have been an uninterrupted democracy from 1995 to 2020 according to the Miller–Boix–Rosato Dichotomous Coding of Democracy, 1800–2020 dataset. The only exception is if a country began the period as democracy and underwent a period of erosion (as defined above) that ended in autocratization (this describes Venezuela). Our main analyses (Table 1) include 92 countries.

Model. In both the country-year and election-year analyses, we estimate logit models. To account for within-country correlation of observations, we use cluster-robust SEs, clustered at the country level (across all models unless specifically stated otherwise). We also re-estimate our main models with region and country fixed effects, with similar results (*SI Appendix*, Tables A9 and A16). An alternative model is a rare-events logit (50). *SI Appendix*, Tables A2 and A3 show that inequality remains a significant predictor of erosion in the rare-events logit models (applying Firth's correction with conventional SEs). The percentage of erosion observations in our dataset ranges from 9% in the country-years models to 11% in the election-years models. The estimation problems for conventional logit models are not especially severe for an event of this frequency, in a dataset of this size (51). Thus, the rare events correction is minimal.

Data, Materials, and Software Availability. All data and replication code are available on Harvard Dataverse (52).

ACKNOWLEDGMENTS. This research is supported by the Andrew Carnegie Foundation. We are grateful to S. Erdem Aytaç, John Carey, Katie Clayton, Matthew Graham, Gary King, Kevin Kromash, Melis Laebens, Zhaotian Luo, Monika Nalepa, Adam Przeworski, and Matthew Shugart for their advice and feedback. We also thank participants at the David Rockefeller Center for Latin American Studies workshop at Harvard University and at the Kellogg Institute at Notre Dame for their responses. Cissy Choy provided excellent research assistance.

1. A. Pérez-Liñán, Impeachment or Backsliding? Threats to democracy in the twenty-first century *Revista Brasileira de Ciências Sociais* **33**, 98 (2018).
2. N. Bermeo, On democratic backsliding. *J. Democr.* **27**, 5–19 (2016).
3. M. W. Svolik, When polarization trumps civic virtue: Partisan conflict and the subversion of democracy by incumbents. *Q. J. Polit. Sci.* **15**, 3–31 (2020).
4. S. Levitsky, D. Ziblatt, *How Democracies Die* (Crown Books, 2018).
5. D. Waldner, E. Lust, Unwelcome change: Coming to terms with democratic backsliding. *Annu. Rev. Polit. Sci.* **21**, 93–113 (2018).
6. A. Przeworski, *Crises of Democracy* (Cambridge University Press, 2019).
7. S. Haggard, R. Kaufman, *Backsliding: Democratic Regress in the Contemporary World* (Cambridge University Press, 2021).
8. J. B. Londregan, K. T. Poole, Poverty, the coup trap, and the seizure of executive power. *World Polit.* **42**, 151–183 (1990).
9. A. Przeworski, F. Limongi, Modernization: Theories and facts. *World Polit.* **49**, 155–183 (1997).
10. N. Gidron, J. Adams, W. Horne, *American Affective Polarization in Comparative Perspective, Cambridge Elements. Elements in American politics* (Cambridge University Press, New York, 2020).
11. J. McCoy, T. Rahman, M. Somer, Polarization and the Global crisis of democracy: Common patterns, dynamics, and pernicious consequences for democratic polities. *Am. Behav. Sci.* **62**, 16–42 (2018).
12. Y. Gu, Z. Wang, Income inequality and Global political polarization: The economic origin of political polarization in the World. *J. Chin. Polit. Sci.* **27**, 375–398 (2022).
13. M. W. Svolik, Polarization versus democracy. *J. Democr.* **30**, 20–32 (2019).
14. S. Iyengar, Y. Lelkes, M. Levendusky, N. Malhotra, S. J. Westwood, The origins and consequences of affective polarization in the United States. *Annu. Rev. Polit. Sci.* **22**, 129–146 (2019).
15. D. W. Brady, J. A. Ferejohn, B. Parker, Cognitive political economy: A growing partisan divide in economic perceptions. *Am. Polit. Res.* **50**, 3–16 (2022).
16. S. M. Lipset, Some social requisites of democracy: Economic development and political legitimacy. *Am. Polit. Sci. Rev.* **53**, 69–105 (1959).
17. C. Boix, *Democracy and Redistribution* (Cambridge University Press, 2003).
18. D. Acemoglu, J. A. Robinson, *Economic Origins of Dictatorship and Democracy* (Cambridge University Press, New York, 2006).
19. S. Haggard, R. R. Kaufman, Inequality and regime change: Democratic transitions and the stability of democratic rule. *Am. Polit. Sci. Rev.* **106**, 495–516 (2012).
20. S. Haggard, R. R. Kaufman, *Dictators and Democrats: Masses, Elites, and Regime Change* (Princeton University Press, 2016).
21. O. O. Varol, Stealth authoritarianism. *Iowa Law Rev.* **100**, 1673–1742 (2015).
22. M. G. Laebens, *Beyond Democratic Backsliding: Incumbent Takeover Attempts, 1989–2019*. (Working Paper, Central European University, 2022).
23. R. A. Dahl, *Polyarchy: Participation and Opposition* (Yale University Press, 1971).
24. G. A. O'Donnell, Horizontal accountability in new democracies. *J. Democr.* **9**, 112–126 (1998).
25. C. Smulovitz, E. Peruzzotti, Societal accountability in Latin America. *J. Democr.* **11**, 147–158 (2000).
26. M. Miller, C. Boix, S. Rosato, Boix-Miller-Rosato Dichotomous Coding of Democracy, 1800-2020. Harvard Dataverse, V1. https://doi.org/10.7910/DVN/FENWWR. Accessed 15 April 2022.
27. S. Stokes, *The Backsliders: Why Leaders Undermine Their Own Democracies* (Princeton University Press, 2025), Forthcoming.
28. S. P. Huntington, Democracy's third wave. *J. Democr.* **2**, 12–34 (1991).
29. S. Mainwaring, A. Pérez-Liñán, *Democracies and Dictatorships in Latin America: Emergence, Survival, and Fall* (Cambridge University Press, 2013).
30. S. Mainwaring, A. Pérez-Liñán, Lessons from Latin America: Democratic breakdown and survival. *J. Democr.* **24**, 123–137 (2013).
31. M. H. Graham, M. W. Svolik, Democracy in America? Partisanship, polarization, and the robustness of support for democracy in the United States *Am. Polit. Sci. Rev.* **114**, 392–409 (2020).
32. E. B. Kapstein, N. Converse, Why democracies fail. *J. Democr.* **19**, 57–68 (2008).
33. A. Brender, A. Drazen, Consolidation of new democracy, mass attitudes, and clientelism. *Am. Econ. Rev.* **99**, 304–309 (2009).
34. T. Besley, T. Persson, *Pillars of Prosperity: The Political Economics of Development Clusters* (Princeton University Press, 2011).
35. D. Treisman, How great is the current danger to democracy? Assessing the risk with historical data. *Comp. Polit. Stud.* **56**, 1924–1952 (2023).
36. J. N. Druckman, J. Levy, "Affective polarization in the American public" in *Handbook on Politics and Public Opinion*, T. Rudolph, Ed. (Edward Elgar Publishing, 2022), pp. 257–270.
37. J. Voorheis, N. McCarty, B. Shor, Unequal incomes, ideology and gridlock: How rising inequality increases political polarization. *SSRN Electron. J.*, 10.2139/ssrn.2649215 (2015).
38. A. Alesina, E. La Ferrara, Ethnic diversity and economic performance. *J. Econ. Lit.* **43**, 762–800 (2005).
39. A. Alesina, E. L. Glaeser, *Fighting Poverty in the US and Europe: A World of Difference* (OUP Oxford, 2004).
40. J. E. Roemer, Why the poor do not expropriate the rich: An old argument in new garb. *J. Public Econ.* **70**, 399–424 (1998).
41. R. J. Dalton, C. C. Berning, "Ideological polarization and far-right parties in Europe" in *Rechtspopulismus in Deutschland*, H. U. Brinkmann, K. H. Reuband, Eds. (Springer Fachmedien Wiesbaden, Wiesbaden, 2022), pp. 13–35.
42. D. Rodrik, Why does globalization fuel populism? Economics, culture, and the rise of right-wing populism *Annu. Rev. Econ.* **13**, 133–170 (2021).
43. N. McCarty, K. T. Poole, H. Rosenthal, *Polarized America: The Dance of Ideology and Unequal Riches* (MIT Press, 2006).
44. A. T. Little, A. Meng, Subjective and objective measures of democratic backsliding. *Polit. Sci. Polit.* **57**, 149–161 (2024).
45. O. Bergeron-Boutin, J. M. Carey, G. Helmke, E. Rau, Expert bias and democratic erosion: Assessing expert perceptions of contemporary American democracy. *Polit. Sci. Polit.* **57**, 184–193 (2024).
46. F. Solt, Measuring income inequality across countries and over time: The standardized world income inequality database. *Soc. Sci. Q.* **101**, 1183–1199 (2020).
47. C. S. Hendrix, Measuring state capacity: Theoretical and empirical implications for the study of civil conflict. *J. Peace Res.* **47**, 273–285 (2010).
48. A. Savoia, K. Sen, Measurement, evolution, determinants, and consequences of state capacity: A review of recent research. *J. Econ. Surv.* **29**, 441–458 (2015).
49. J. K. Hanson, R. Sigman, Leviathan's latent dimensions: Measuring state capacity for comparative political research. *J. Polit.* **83**, 1495–1510 (2021).
50. G. King, L. Zeng, Logistic regression in rare events data. *Polit. Anal.* **9**, 137–163 (2001).
51. H. S. Woo, J. P. Berns, P. Solanelles, How rare is rare? How common is common? Empirical issues associated with binary dependent variables with rare or common event rates *Organ. Res. Methods* **26**, 655–677 (2022).
52. E. Rau, S. Stokes, Replication Data for: "Income inequality and the erosion of democracy in the twenty-first century." Harvard Dataverse, V1. https://doi.org/10.7910/DVN/KTXHGV. Deposited 8 December 2024.