

# The Weaponization of Information Technologies and Democratic Resilience

Austin Beacham, Emilie M. Hafner-Burton, and Christina J. Schneider

## Abstract

The rapid spread of information and communication technologies across and within borders has been an important feature of the contemporary era, with the Internet at its core. Until recently, the widespread belief was that the Internet would be beneficial for the spread and resilience of democracy. This common wisdom has become increasingly contested, as political actors in democracies and autocracies alike have learned to use the Internet to maneuver information to enhance government popularity and suppress or delegitimize the opposition. We argue that open information access can be weaponized to reduce democratic resilience when duly elected leaders with anti-pluralist aspirations harness them to increase political polarization. We test the empirical implications of our theory with a mixed-methods approach that combines a large-N quantitative comparative analysis of democratic backsliding in 97 democracies after the Cold War with a typical case study of democratic resilience in India to trace the underlying causal mechanisms of the theory. Together, the findings indicate that with growing access to the Internet has come the increased likelihood of democratic backsliding, especially when anti-pluralist parties use it to increase polarization and executive power.

**Keywords:** Internet, democracy, information, social media, backsliding, polarization

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The last three decades have witnessed the rapid globalization of information and communication technologies (ICTs). The advent and proliferation of the Internet, alongside the now-pervasive use of mobile phones, digital technologies, and social media, was widely thought to be a boost for the spread and consolidation of democracy, and an inevitable threat to illiberal governments that sought control over information to suppress dissent against the regime. The Internet offered the promise of access to free flows of information, stimulating political participation and greater awareness of global issues like human rights, and increased norms of transparency. For many pro-democracy activists, the spread of the Internet provides a means to raise awareness, recruit followers, mobilize voters, and even organize protests (Steinert-Threlkeld and Steinert-Threlkeld 2021; Steinert-Threlkeld 2017), ultimately making governments more accountable to their citizens. As a consequence, many scholars have highlighted the potential benefits of Internet access for democracy (Castells 2015; Diamond 2010; Howard 2010; Kiggins 2015; Sanovich, Stukal, and Tucker 2018; Shirky 2008).

Defying these expectations, illiberal regimes that once feared that the rise of access to the Internet would undermine their control soon learned that the Internet could be used as a tool to consolidate their regimes and even interfere with democratic regimes abroad (Bush and Prather 2022; Cooley 2015; Diamond, Plattner, and Walker 2016; Farrell and Newman 2019; Hoffman 2021). Even though the Internet has had positive effects on the ability of individuals to mobilize and promote democratic norms and values (Diamond 2010; Howard 2010), it has also helped consolidate authoritarian regimes and facilitate repression in autocracies (Deibert et al. 2010; Feldstein 2021; Gunitsky 2015; Guriev and Treisman 2019; Jerit and Zhao 2020; Keremoğlu and Weidmann 2020; King, Pan, and Roberts 2017; Kurlantzick 2023; Lazer et al. 2018; Munger et al. 2019; Roberts 2018, 2020; Rød and Weidmann 2015; Spaiser et al. 2017; Tucker et al. 2017).

Political actors in democracies, too, have harnessed the use of information technologies to spread disinformation, especially during elections (Adler and Drieschova 2021; Benkler, Faris, and Roberts 2018; Farrell and Newman 2019; Groshek and Koc-Michalska 2017; Hansen and Lim 2019; Jerit and Zhao 2020). Critics point out that social media and the Internet writ large may create political divides and exacerbate polarization (Haidt 2022).<sup>1</sup>

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<sup>1</sup> Supporting this more cautionary tale, research shows that Internet expansion has been harnessed to further marginalize excluded groups (Weidmann et al. 2016), and has facilitated the diffusion of ethnic violence (Bailard 2015; Weidmann 2015). Other work shows that the divisive (and violent) effect of one-to-many communications is different from centralized mass communication like radio, further highlighting the novelty of this technology (Warren 2015).

These dynamics can also interact, where illiberal states use the “liberal international information order” against itself and democratic regimes (Farrell and Newman 2021). Yet, whether—and the extent to which—the spread of the Internet has had negative consequences *for democratic regimes* remains debated and underexplored. This is our focus in this analysis.

We argue that the spread of information communication technologies reduces democratic resilience and leads to democratic backsliding when relevant political actors in government are not fully loyal to democratic norms, values, and institutions. Once in office, these anti-pluralist political actors can weaponize aspects of open information technology to increase their ability to remain in political power and enact democracy-eroding reforms.<sup>2</sup> In particular, anti-pluralist leaders use their access to the Internet and social media to increase political polarization, a known driver of democratic backsliding. The Internet serves as a powerful platform to legitimize themselves while delegitimizing the opposition.<sup>3</sup> To the extent that citizens no longer see other parties as a viable option (or even as dangerous adversaries or threats to democracy) and are increasingly captured in their own echo chambers of (dis)information, they become more willing to support their preferred political parties’ anti-democratic measures either to get into power or to remain in power. To “defend” democracy, they are more likely to support unfair elections, the use of violence, derogatory rhetoric against their opponents, and policies that restrict civil liberties against opponents of their political party. Creating a polarized and weaponized information environment is one of the primary ways that anti-plural political actors can enact democracy-eroding reforms. A demoralized opposition combined with dedicated supporters makes it easier for leaders to pass or enact antidemocratic measures, which exacerbate the incremental erosion of democracy.

Our large-N observational analysis of democratic backsliding in 97 liberal and electoral democracies from 1992-2021 finds evidence that the spread and use of Internet communication technologies and content are associated with democratic backsliding. Mediation analysis demonstrates that this relationship works in part through the Internet’s effect on polarization, especially in contexts where anti-pluralist political parties hold executive power.

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<sup>2</sup> While pluralistic political parties in democratic governments also have access to—and use—open access platforms for political purposes such as running campaigns and winning elections, they do not have the same aims or goals as anti-pluralist actors to weaponize these tools to roll back democracy and consolidate their power through ultimately undemocratic means.

<sup>3</sup> In doing so, political actors can borrow directly from the autocrats’ toolbox (Keremoglu and Weidman 2020).

The spread of Internet access can affect democracy both institutionally and behaviorally, providing leaders with opportunities to enable executive aggrandizement and provide publics with a path to support the rollback or simply turn a blind eye. Our findings are robust to alternative operationalizations of democratic backsliding and access to Internet communication technologies, placebo tests, and alternative model specifications. We complement the large-N study with a case study that traces the effects of the Internet on democratic resilience in India to explore the underlying mechanisms of our argument. This case illustrates the processes leading to democratic backsliding in the world's largest democracy with growing levels of access to information coupled with substantial political polarization. This combination was exacerbated by elected politicians, who then took actions that undermined key aspects of democracy.

The findings contribute to the burgeoning comparative literature on democratic resilience and backsliding (Bermeo 2016; Haggard and Kaufman 2021a; Levitsky and Ziblatt 2018; Meyerrose 2020, 2024; Rovny 2023; Waldner and Lust 2018) We highlight the importance of the Internet in propagating the problem, even among well-established democracies. Our research contributes to these broader theoretical debates by articulating and testing an argument about when and how the spread of ICTs contributes to the worsening of democracy. In developing this argument, we build on research about the behavioral effects of the Internet in democracies (Bail et al. 2018; Boutyline and Willer 2017; Cho et al. 2020; Conover et al. 2011; ForumID 2020; Leeper 2014; Ribeiro et al. 2020; Santos, Lelkes, and Levin 2021) as well as the existing work that relates political polarization to democratic backsliding (Graham and Svolic 2020; Haggard and Kaufman 2021b; Orhan 2022; Somer and McCoy 2018; Somer, McCoy, and Luke 2021; Svolic 2019; Svolic 2020, 2020). We find that political parties can utilize open access to pursue or support incremental strategies of executive aggrandizement with debilitating effects for democracy. Finally, there is an ongoing debate in the political communications and behavioral literature about the relationship between Internet use and polarization (Boxell, Gentzkow, and Shapiro 2017; Ceron 2015; Gentzkow and Shapiro 2011; Hargittai, Gallo, and Kane 2008; Allcott et al. 2020; Bail et al. 2018; Conover et al. 2011; Guriev, Melnikov, and Zhuravskaya 2021; Melnikov 2021; Ribeiro et al. 2020; Santos, Lelkes, and Levin 2021). Our finding that the influence of the Internet on political polarization is likely to be especially pernicious in democracies where anti-pluralist political actors are in executive power helps synthesize these various findings.

## The Spread of the Internet, Polarization, and Democratic Resilience

In this section, we develop an argument about when and how the spread of information and communication technologies can lead to democratic backsliding, therefore diminishing democratic resilience. In a nutshell, we argue that when anti-pluralist political parties are in power, the spread of the Internet helps create a polarized political environment in which anti-pluralist leaders are enabled to pursue institutional erosion and democratic backsliding without getting ousted from power.<sup>4</sup>

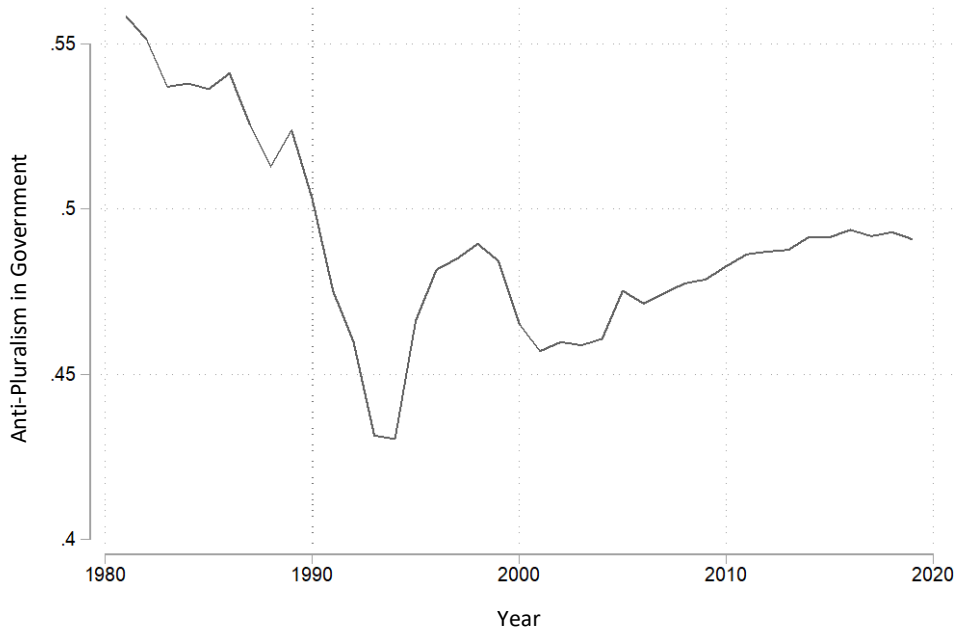
Our argument emphasizes anti-pluralist political actors as central to understanding the negative effects of access to information and communication technologies on democracy. Anti-pluralist parties espouse four characteristics that undermine the very foundations of classical pluralist democracy (Dahl 1971; Levitsky and Ziblatt 2018; Linz 1978). First is the refusal to respect the democratic process as the legitimate and legal channel for securing political power. A second characteristic is the refusal to acknowledge the legitimacy of justifiable rival parties and opponents, including the use of dehumanizing rhetoric. Anti-pluralist actors also use or tolerate political violence and are willing to violate the physical integrity of rivals and opponents. Finally, anti-pluralist parties seek to curb the civil and political liberties of minority populations (Lührmann, Medzihorsky, and Lindberg 2021). As we will argue below, these characteristics are particularly amenable to manipulation and justification through modern-day communication technologies. The technology does not produce the anti-pluralists' political agenda—it is not a sufficient condition—but it does provide powerful means to pursue their goals.

Figure 1 illustrates the average level of anti-pluralism in political parties that are part of the government in democratic regimes from 1980-2020. We use the Anti-Pluralism Index (API) of the V-Party data set (Lindberg et al. 2022) to generate a measure of the average API score of government parties in democratic and hybrid regimes for each year. API is measured as the extent to which a political party shows a lack of commitment to democratic norms prior to elections. Although the end of the Cold War saw an initial drop in anti-pluralism in government parties in democracies, anti-pluralism has been on the rise especially since the mid-1990s. The rise in anti-pluralism amongst political parties in executive power is a global phenomenon, affecting regions across the world, and has happened in both electoral and liberal democracies.

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<sup>4</sup> Political polarization is defined as “a process whereby the normal multiplicity of differences in a society increasingly align along a single dimension, cross-cutting differences become instead reinforcing, and people increasingly perceive and describe politics and society in terms of ‘Us’ versus ‘Them’” (McCoy, Rahman, and Somer 2018, 18).

**Figure 1. Anti-Pluralism in Governments.** Source: Lindberg et al. (2022).



Access to open information technologies is by no means always detrimental to democracy. It can allow citizens to gain access to more news sources and engage in productive debates, and allow politicians to fundraise from novel sources and spread their messages more organically. However, these technologies can be purposefully used, especially by anti-pluralist actors, to influence public and elite opinion to support anti-democratic policies and behaviors. In theory, all actors have an equal ability to use information technologies to pursue their goals, but the nature of the technology creates potential for anti-pluralist political actors to concentrate power, in part by exacerbating polarization. By definition, these political actors are not averse to promoting political polarization and generating conditions that are anti-democratic. Anti-pluralists are more likely to rely on simple messages that arouse strong emotions like anger and fear. Since this type of message is more likely to go viral online, harnessing one-to-many communication systems is easier for them than more pluralistic opposition. This fact, combined with the “bully pulpit” effect of the anti-pluralist being in power, means that they are often more effective at harnessing the communication potential of newer technologies than the opposition.<sup>5</sup>

<sup>5</sup> Additionally, once in power, anti-pluralist political actors can exercise subtle, marginal control of the platforms and systems, while still maintaining open access overall. Democratically elected aspiring autocrats often do not have the same control over digital communications as leaders in autocracies, who have been shown to be systematically different from democracies in terms of Internet infrastructure and control (Keremog et al. 2024). Therefore, any influence they manage to assert over the Internet is likely to be less noticed by the average citizen, who is used to living in an unbiased information environment and may continue to believe they are doing so.

We argue that open information technologies can be abused in many ways, but they are particularly useful to anti-pluralist leaders to both exacerbate and take advantage of politically polarized environments. This combination makes strategies of executive aggrandizement more effective. The biases of the modern information ecosystem are especially well-suited to the goals and messages of anti-pluralist political actors, compared to genuinely democratic parties.

To understand how ICTs provide opportunities to promote polarization, it is important to understand how these technologies have changed the information environment. In particular, the spread of the Internet has coincided with a collapse in trust in traditional media and the closing of local news outlets throughout the world (Ceron 2015; Tsfaty and Ariely 2014). High-quality information is more difficult to find and to distinguish in a sea of exaggeration, misinformation, disinformation, and propaganda (ForumID 2020; Ribeiro et al. 2020; Santos, Lelkes, and Levin 2021). An average user can reject information that challenges their established point of view and seek out alternative sources of information that reinforce their preexisting beliefs. The anonymity of the Internet can also allow sources to appear equivalent even when one is a professional journalist and another is a Russian troll.

This fracturing of the media landscape is a key driver of political polarization because it allows citizens to become more entrenched with their preferred political parties; they can more easily dismiss negative news about their own political party as fake news (Boutyline and Willer 2017; Conover et al. 2011). For example, access to various information sources allows supporters of a party to brush off scandals by pointing to “alternative” sources that reduce their preferred party’s culpability. After the Brazilian Senate launched an inquiry into President Jair Bolsonaro’s handling of the COVID-19 pandemic, allies of the president flooded social media with disinformation, attacks on the inquiry, and pro-regime messaging (Soares et al. 2021). These efforts do not only help entrench existing supporters, but they can also potentially sway undecided citizens in an environment of mixed messaging.<sup>6</sup> Anti-pluralist political actors can weaponize this divisive and chaotic nature of the Internet and social media to deepen political polarization.

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<sup>6</sup> Echo chamber sorting, both voluntary and algorithmic, can lead to polarization (Cho et al. 2020), but exposure to opposing points of view can also do so (Bail et al. 2018).



The new information environment also offers opportunities for anti-pluralist political actors to dismiss and “otherize” political opponents. It is not only easier to dismiss positive news about the political opposition as fake news; the nature of the technology creates the potential for certain types of messages to break through. Simple messages that arouse strong emotions like anger and fear are more likely to go viral in online communications both via algorithms and intentional sharing (Hagey and Horwitz 2021; Ribeiro et al. 2020; Santos, Lelkes, and Levin 2021). This can entrench political differences, exacerbating political polarization. For example, during Myanmar’s recent unstable democratic period, Facebook was flooded with hate speech and sensationalized stories about the Rohingya Muslim minority. Amnesty International found that “Meta’s algorithms proactively amplified and promoted” this content, which directly increased the chances of mass violence (Amnesty International 2022, 7). Although an extreme example, this serves as an illustration of how the Internet and social media can strengthen “otherization” and polarization of all kinds.

Anti-pluralist actors can also strategically use the Internet to target audiences for messaging and create an appearance of popularity. For example, affiliates of Viktor Orbán’s Fidesz party in Hungary own around 500 newspapers and radio and television stations, allowing the regime a high degree of control over media narratives (Ozsvath 2021). However, many young Hungarians disapprove of Fidesz’s rule and do not consume traditional forms of media. Because of this, organizations with close ties to Fidesz began social media influencing campaigns specifically targeting younger voters. These “Fidesz-fluencers,” as they are sometimes called, promote far-right values while criticizing left-leaning policies. At the same time, Fidesz has spent millions on social media ads (Rutai 2022). Even more directly, governments and other groups can employ “troll armies” to amplify pro-regime messaging and discredit the opposition. In the Philippines and elsewhere, ruling parties hire workforces to flood comment sections in support of the government and to smear opposition (Bengali and Halper 2019). These campaigns can give politicians an appearance of—or sometimes actual—immense popularity, and it can deepen divisions within societies. While all political actors have incentives to take part in these activities, the inherent biases mentioned above in what is likely to go viral mean that divisive and reactionary politics are more successful in these efforts.

If the Internet is associated with increased polarization (on average), the path from the Internet to democratic erosion is clear—especially when anti-pluralist parties are in power. The relationship between polarization and democratic backsliding has been well-established in the literature. To the extent that citizens decreasingly see other parties as a viable option and are increasingly captured in their own echo chambers, they become less able and willing to hold their preferred political parties accountable for their policies even if those are not democratic. In these situations, citizens may become more willing to support their preferred political parties’ anti-democratic measures, such as unfair

elections, the use of violence and derogatory rhetoric against their opponents, and policies that restrict civil liberties against opponents of their political party (Svolik 2020). This can discourage the opposition, leading them to think that the process is fundamentally corrupted (Haggard and Kaufman 2021b). A demoralized and disengaged opposition combined with dedicated supporters makes it easier for leaders to pass or enact anti-democratic measures, which lead to the incremental erosion of democratic institutions and to anti-democratic behavior (Svolik 2019).<sup>7</sup> In general, scholars have focused on how polarization decreases the chances that incumbents will be punished by their supporters for anti-democratic actions (Graham and Svolik 2020; Orhan 2022; Svolik 2020), reduces likelihood of joint collective action across ideological lines (McCoy, Rahman, and Somer 2018), makes “mutual toleration” of opposing opinions less likely (Levitsky and Ziblatt 2018), and generally decreases trust in institutions (Haggard and Kaufman 2021b). All these mechanisms increase the likelihood of democratic erosion.

*In sum, we expect that an increase in access to information and communication technologies increases the likelihood of democratic backsliding, in particular through the exacerbation of political polarization, all else equal. Highlighting the central role of anti-pluralist actors, we further expect the influence of increased access to information and communication technologies to be especially pronounced when anti-pluralist parties are in power.*

## Research Design

To examine the empirical implications of our theoretical argument, we analyze data on democratic backsliding events using V-Dem’s Episodes of Regime Transformation (ERT) data set (Lührmann and Lindberg 2019). The data set includes information on autocratization events in a large sample of democratic and autocratic regimes. Since we are interested in exploring how the rise and penetration of information technologies has affected the quality of democracy, we limit the sample to 97 liberal and electoral democracies in the post-Cold War era.<sup>8</sup>

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<sup>7</sup> For our purposes, we use the terms democratic erosion and democratic backsliding synonymously.

<sup>8</sup> Although we follow the common practice in the literature and focus on established democracies, we show that our results are robust to including hybrid regimes, which have both democratic and autocratic features, in Appendix C (Model 4). Hybrid regimes capture many of the regimes that subscribed to the liberal international order and liberalized after the Cold War. In fact, many of the regimes that fall into the “electoral autocracy,” or hybrid category were officially regarded as full democracies by the West, and the variation in their trajectory toward liberal democracies or autocracy has been a focal point in the comparative scholarship (Levitsky and Way 2010; Merkel 2010). In addition, we show that the results are robust to only including liberal democracies (Appendix C, Model 5).

## Dependent Variable

We measure *democratic backsliding* as a period of substantial and sustained decreases on V-Dem's Electoral Democracy Index (EDI). This index includes a broad swath of measures for polyarchy, including freedom of expression, alternative sources of information, freedom of association, share of the population with suffrage, cleanness of elections, and a host of information about the quality of the elected official process. Following Lührmann and Lindberg (2019), *democratic backsliding* is coded as 1 if the country experiences an initial 0.01 decrease on the EDI and a total decrease of at least  $-0.10$  throughout the entire backsliding episode. A backsliding episode ends the final year of a negative change less than or equal to the initial decrease, prior to experiencing an annual increase, cumulative increase, or stasis period. Data are from Edgell et al. (2020).

**Figure 2.** Democratic Backsliding, 1945-2021. Source: Lührmann and Lindberg (2019).

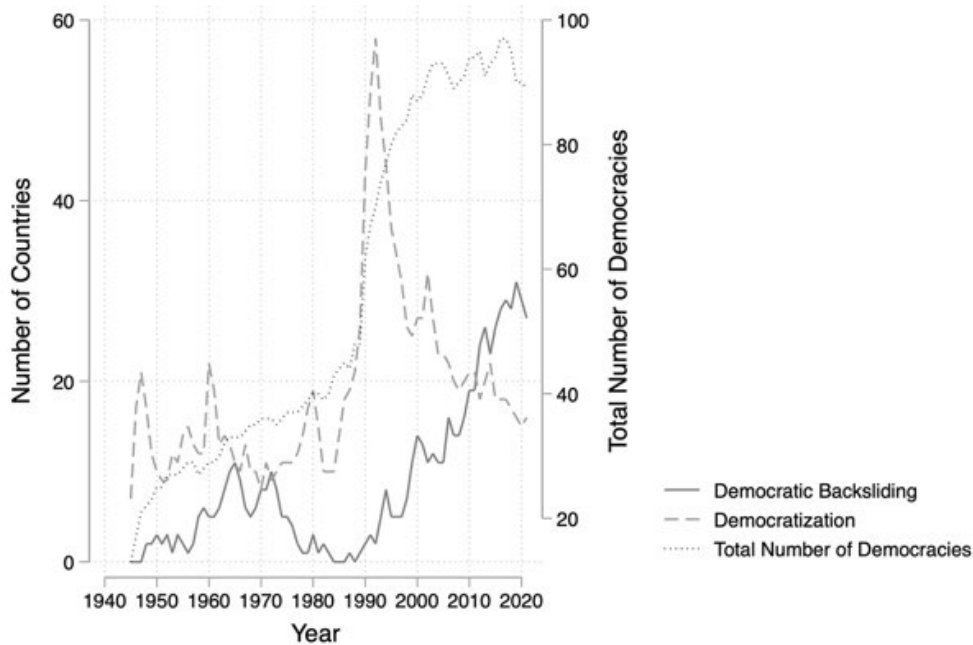


Figure 2 graphs the number of countries that experienced a substantial and sustained increase in the quality of democratic institutions (democratization, dashed line), the overall number of democracies in the world (dotted line), and the number of countries that experienced a backsliding event (democratic backsliding, solid line). The end of the Cold War witnessed a significant increase in the number of countries with improvements in democratic quality as well as the overall number of democracies. But although the number of democracies has remained relatively stable since the 2000s, democratic and hybrid regimes became more likely to experience a period of substantial and sustained decline in the quality of democratic institutions, with debilitating consequences for democratic resilience.

**Figure 3.** Experiences in Democratic Backsliding. Source: Lührmann and Lindberg (2019).

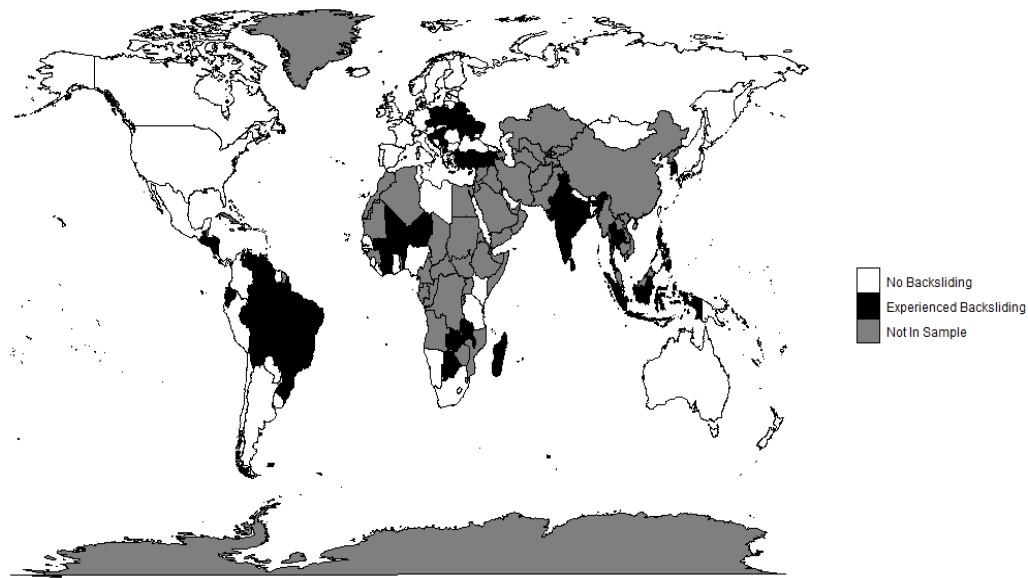


Figure 3 shows the countries that have experienced any episodes of democratic backsliding since the end of the Cold War. The construct has been validated in different ways and captures many of the well-known cases of democratic backsliding (Hungary, Poland, Mexico) as well as some less well-known cases (Nicaragua, South Korea, Ukraine).

Scholars debate how significant the reduction in democratic quality has to be in order to signify democratic backsliding (Haggard and Kaufman 2021a, 2021b; Jee, Lueders, and Myrick 2022; Rovny 2023; Waldner and Lust 2018). Whereas some consider any negative change in democratic quality as democratic backsliding, others argue that democratic backsliding requires a categorical change in regime type such as from liberal democracy to electoral democracy, or from electoral democracy to electoral autocracy. Our measure accounts for significant changes in democratic quality without requiring categorical change in regime type. This strategy is appropriate to capture the incremental decline in democratic quality that has occurred in many democratic regimes since the end of the Cold War, and that is central to contemporary concerns about democratic resilience across the globe. However, we show in Appendix C that our main results are robust to more conservative operationalizations that focus on regime change and democratic breakdown (Models 1 and 3) and to continuous measure of backsliding (measured as the continuous change in the democracy score, Model 2).<sup>9</sup>

<sup>9</sup> We also conduct a placebo check and analyze whether access to ICTs influences the likelihood of democratization. As expected, we find that *Internet (%)* is not significantly likely to support democratization. In fact, the results indicate that the spread of ICTs has significantly reduced the likelihood of democratization events within democracies. Results are presented in Model 6 of Appendix C.

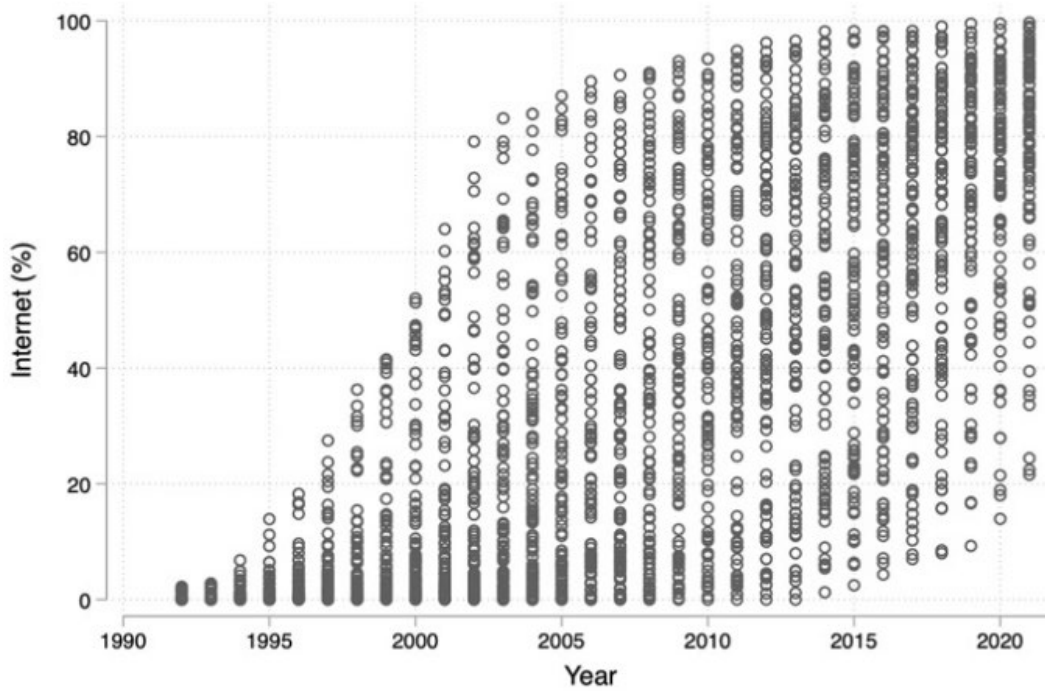
Some recent work has pointed to a potential bias induced in subjective measures of democracy that can lead to an artificial overestimation about the extent of global trends in democratic decline (Little and Meng 2023). This work has led to a robust debate, most recently published in a special issue of *Political Science & Politics* (2024), which highlights that (i) the proportion of democracies in the world is still at an (almost) all-time high, (ii) many democracies experience an incremental erosion of democratic institutions and behaviors without necessarily reverting to autocracy, and (iii) many of the objective indicators that perform well in capturing the democracy-autocracy nexus are less well suited to measure incremental democratic erosion within democracies (Gorokhovskaia 2024; Knutsen et al. 2024; Levitsky and Way 2024; Little and Meng 2024; Miller 2024; Treisman 2024).

At this point, it is important to reiterate that we do not claim that the spread of ICTs generally leads to democratic breakdown or reduces the likelihood of democratic transitions. Rather, our paper focuses on potentially problematic trends of backsliding within democracies, with a focus on how the spread of the Internet can be harmful for democratic resilience particularly when anti-pluralists are in power. Although it is not possible to use more objective measures to understand incremental deterioration in democracy, we can use more objective measures to analyze whether the processes discussed in this paper may also lead to more serious democratic decline because of sustained incremental backsliding. In our robustness analysis, we employ a more objective binary democracy-autocracy indicator (Cheibub, Gandhi, and Vreeland 2010), and show that our findings are robust (Appendix C, Model 3).

### Main Explanatory Variables

We expect that access to open information flows and technologies increase the likelihood of democratic backsliding. Following existing work on the spread of ICTs, we measure *Internet (%)* as the share of the population with access to the Internet in each year. Data are from the World Development Indicators. Figure 4 graphs our ICT variable across liberal and electoral democracies over time. There is a clear positive trend in most countries, indicating that an increasing proportion of households have access to the Internet. But we also see significant variation. Our sample includes countries that have varied widely in their access to open information, and we find variation both across countries and over time. In 2021, an average of 76 percent of the population have access to the Internet, but access was as low as 22 percent and as high as 99 percent, depending on the country.

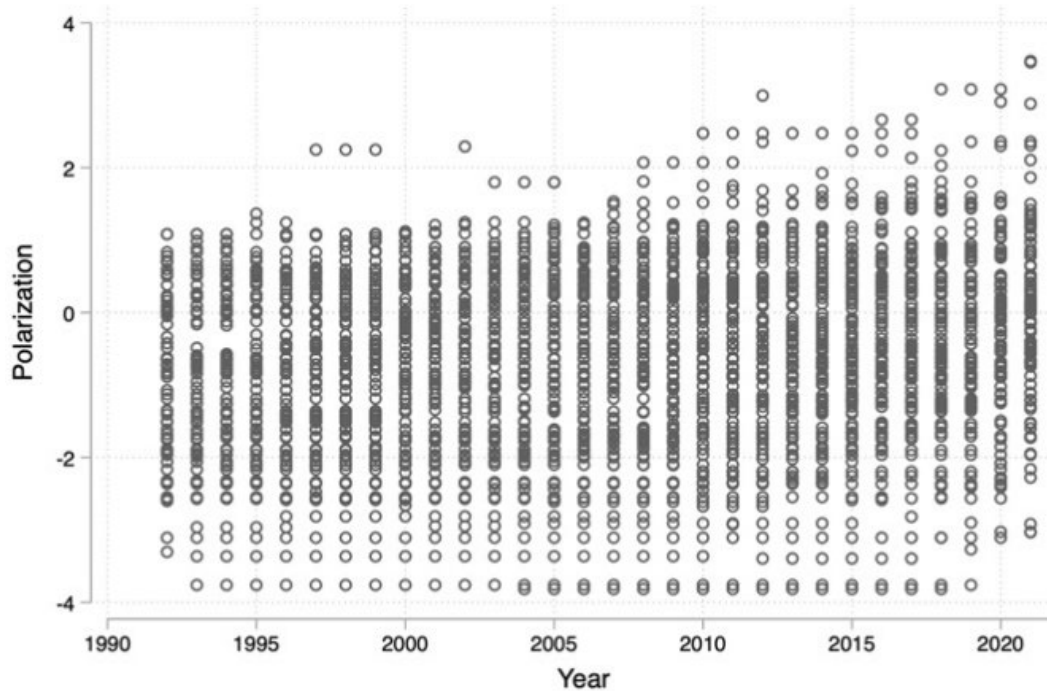
**Figure 4.** The Spread of Information and Communication Technologies, 1990-2021, Source: WDI.



In Appendix B, we show that the results are robust to using alternative operationalizations such as the proportion of households with access to the Internet from the International Telecommunications Union, a measure of the number of individuals using the Internet, a composite measure of open information flows provided by the KOF Information Globalisation Index, and the number of mobile subscriptions.

Aside from the main effect, we also explore whether there is support for the underlying causal mechanisms we discuss in the theory. We expect *Internet (%)* to be associated with reductions in democratic resilience through its effects on political polarization, especially when anti-pluralist parties are in government. We measure *government API* as the average anti-pluralism index of political parties that are in government. Data are from V-Party (Lindberg et al 2021). *Political polarization* is measured as the extent to which society is polarized into antagonistic political camps. Data are from Coppedge et al. (2022). Figure 5 illustrates the variation of polarization across countries and over time. The figure shows significant variation in polarization across countries, with a less pronounced but slight upward trend over time.

**Figure 5.** Political Polarization in Democracies, 1990-2021, Source: Coppedge et al. (2022).



We also include a battery of control variables into the model, following standard models on democratic backsliding. We describe the operationalization of the variables and present descriptive statistics in Appendix A.

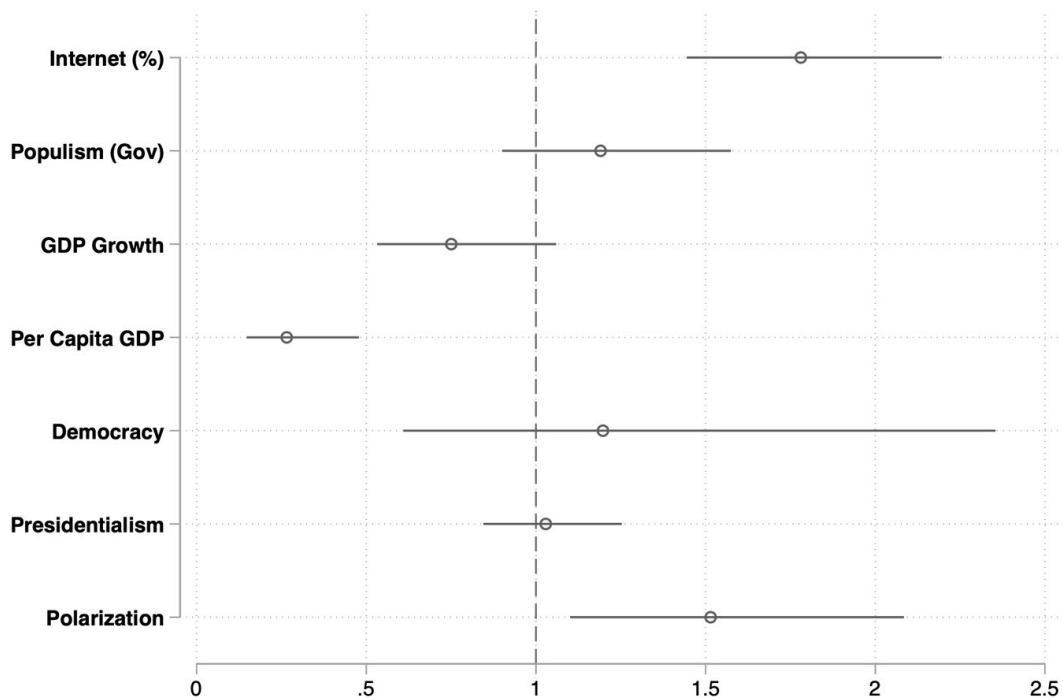
### Model Specification

*Democratic backsliding* is a binary variable, and we estimate generalized linear models with a logit link function and robust standard errors. Since the data is time series and cross sectional, we follow Beck, Katz, and Tucker (1998), and correct for serial dependence by including three cubic splines. In Appendix D, we further probe the robustness of our results to including region-fixed effects (Model 3), country-fixed effects (Model 4), and to estimating a more parsimonious ordinary least squares (OLS) model (Model 5). We also use an instrumental variable approach to deal with the potential endogenous nature of *Internet (%)* (Model 6), and a spatiotemporal autoregressive distributed lag (STADL) model (Model 7) to account for the possibility of the diffusion of democratic backsliding across countries and over time (Cook, Hays, and Franzese 2023a). We describe those alternative models in greater detail in the robustness section and the appendix. Finally, we use mediation analysis to assess whether the effect of *Internet (%)* also occurs indirectly, as well as an interaction model to test if the association of *Internet (%)* with increased polarization is stronger in countries with high levels of anti-pluralism represented in government.

## Comparative Analysis

The exponentiated coefficients from the model depicted in Figure 6 summarize the effects of a range of explanatory variables that have been examined in previous studies of democratic backsliding. For ease of interpretation, we standardized all explanatory variables to a mean of 0 and standard deviation of 1. The details of this model with numerical estimates are reported in Appendix B (Model 1).

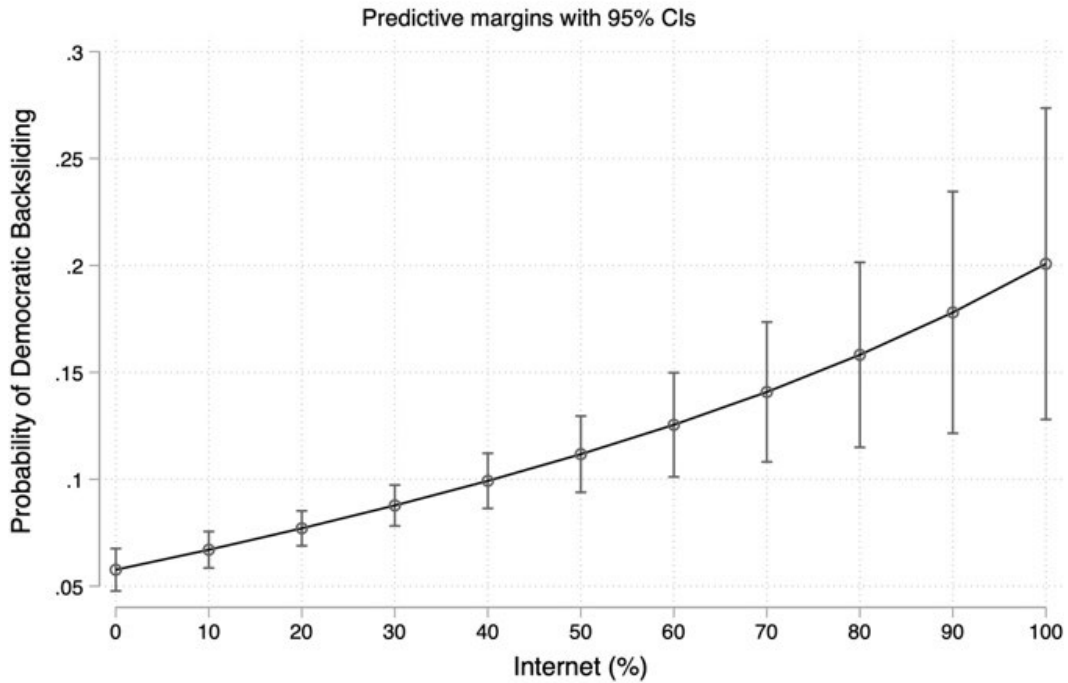
**Figure 6.** The Effect of Internet Access on Democratic Backsliding. Notes: Graph presents odds ratios with 95 percent confidence intervals. All explanatory variables are standardized. Splines omitted.



*Internet (%)* has a strong positive and significant association with the likelihood of democratic backsliding. A one standard deviation increase in *Internet (%)* almost doubles the odds of democratic backsliding. The effect size is comparable to the effect of *polarization*, which also has a positive and significant association with democratic backsliding. Figure 7 graphs marginal effects and shows that the probability of a democratic backsliding event is almost zero in countries where citizens have very limited access to the Internet, and 0.2 in countries where all households have access to the Internet.



**Figure 7.** Marginal Effects of Internet Access on Democratic Backsliding.



The results of the control variables further lend support to the previous literature on the topic. Whereas polarization and populism of government leaders are positively associated with democratic backsliding, the likelihood of backsliding declines when countries have strong economies and growth. There is no indication that stronger democracies or presidential systems are more or less likely to backslide.

According to our theory, we expect *Internet (%)* to have a positive and significant association with democratic backsliding, and this effect mainly works through an increase in political polarization in democracies.<sup>10</sup> To assess the underlying mechanisms of our argument, we use mediation analysis (Imai, Keele, and Tingley 2010). We estimate a mediation model in which we analyze whether the effects of *Internet (%)* on democratic backsliding occur directly and/or indirectly through an increase in polarization.

<sup>10</sup> Importantly, given our theoretical argument, we do not expect a conditional effect. Indeed, if we estimate an interaction model, we find no significant interaction effect but *Internet (%)* and *polarization* remain statistically significant.

**Figure 8.** Mediation Analysis

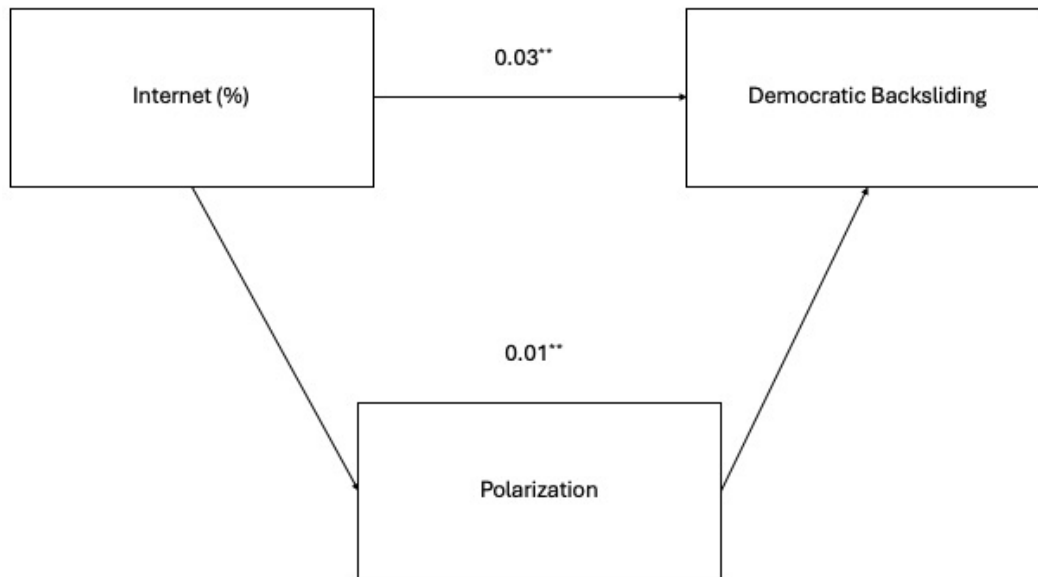
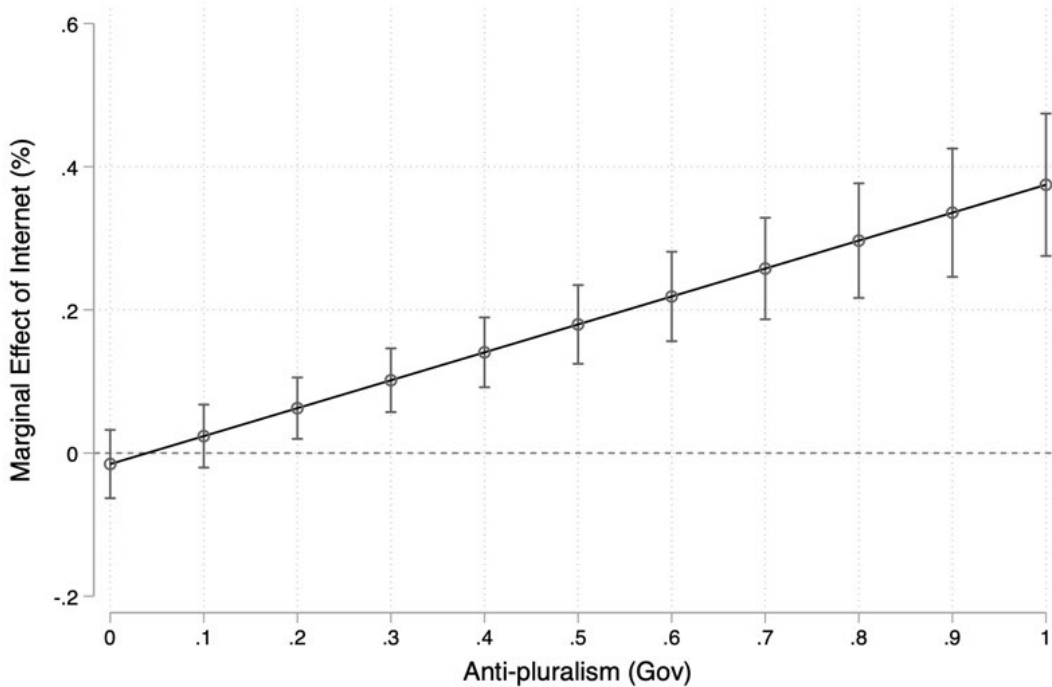


Figure 8 presents the results, which support our argument. The association between *Internet (%)* and democratic backsliding works both directly and indirectly. Indirectly, we find evidence for one of our main mechanisms, polarization. The positive and significant coefficient supports the argument that *Internet (%)* increases the likelihood of backsliding through increases in political polarization. At the same time, we also find support for a direct effect. This implies that *Internet (%)* is positively associated with democratic backsliding through other means as well. We also present results with polarization as the dependent variable to directly model the Internet’s influence on polarization conditional on the extent to which government parties espouse anti-pluralist values. Figure 9 graphs the marginal effect of *Internet (%)* for different levels of anti-pluralism in government.<sup>11</sup> The results support our argument that it is especially anti-pluralist leaders who are using access to the Internet to polarize societies as a strategy to facilitate executive aggrandizement. Whereas access to the Internet does not trend with an increase political polarization in countries with liberal political parties in government, as anti-pluralism increases, so does the apparent effect of the Internet on political polarization.

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<sup>11</sup> Full tabular results are presented in Appendix F.

**Figure 9.** Marginal Effect of Internet Access on Political Polarization.



### Robustness Checks and Empirical Extensions

We have taken substantial measures to validate the robustness of our findings, which we report in the online supplementary information. In Appendix B, we report analyses that replace *Internet (%)* with measures for (i) Internet access from the International Telecommunications Union (ITU), (ii) the percentage of Internet users from the ITU, (iii) the logged number of mobile subscriptions, and (iv) an index for open information flows from KOF. We find that using alternative operationalizations of our main explanatory variable yields similar results, though with differing samples and fewer observations.

In Appendix C, we analyze whether a more conservative threshold for *democratic backsliding* changes our results by measuring democratic backsliding as occurring only when a categorical change in regime type takes place, either from liberal democracy to electoral democracy or from electoral democracy to electoral autocracy (Model 1). In addition, we estimate models on the continuous democracy indicator (Model 2) as well as a more objective binary measure of democracy from Cheibub et al (2010) (Model 3).

We further analyze whether the results hold if we include hybrid electoral autocracies (Model 4) or only liberal democracies (Model 5), with no changes to the overall effects.<sup>12</sup> Finally, we conduct a placebo check and analyze whether access to Internet technologies influence the likelihood of democratization as opposed to backsliding (Model 6). *Internet (%)* significantly decreases the likelihood of democratization.

Appendix D reports findings from models that use a five-year moving average of *Internet (%)* (Model 1) and a one-year lag of all explanatory variables (%) (Model 2). We also present models with region (Model 3) and country-fixed effects (Model 4), a simplified OLS model (Model 5), an instrumental variable approach to deal with the potentially endogenous nature of *Internet (%)* (Model 6), and a spatiotemporal autoregressive distributed lag model in Model 7 (Cook, Hays, and Franzese 2023b).<sup>13</sup> The findings are robust to these specification changes.

A possible alternative explanation is that countries that are of greater geopolitical importance to the United States are more likely to have access to the Internet and are more likely to experience democratic backsliding. In Appendix E we include variables that capture geopolitical interests of the United States, China, and Russia. Finally, we present the results of an interaction between *Internet (%)* and *anti-pluralism* in Appendix F, which shows a positive and statistically significant coefficient.

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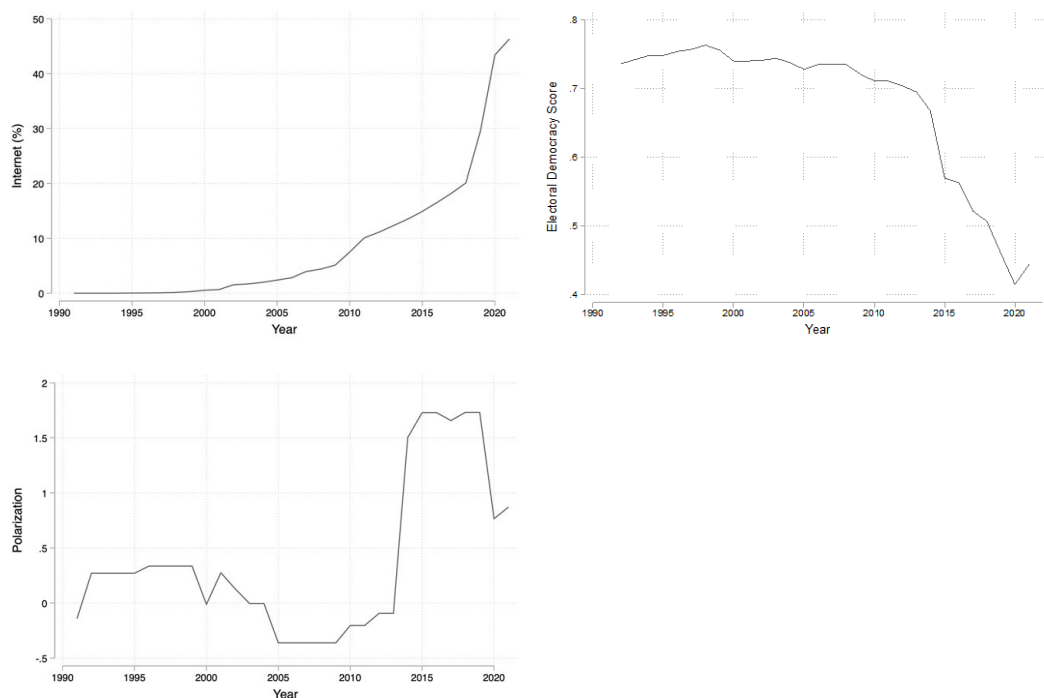
<sup>12</sup> Note, however, that we find in conditional models that the effect of *Internet (%)* becomes weaker as democratic stock increases. Results are available from the authors.

<sup>13</sup> In particular, following Lang and Tavares (2018) we instrument *Internet (%)* with a measure of the country-period-specific, inverse-distance-weighted average of the lagged *Internet (%)* scores of all other countries (see also Acemoglu et al. (2019) who use a similar instrument in a different context). The instrument is a strong predictor of *Internet (%)* (consistent with the idea that globalization diffuses across borders and across periods). It is also plausibly excludable because prior *Internet (%)* in neighboring countries only affects democratic erosion through *Internet (%)* and not through alternative causal pathways. The F-test of the reduced form regression is large and statistically significant (F=1236.71), indicating that the instrument is strong.

## The Weaponization of Internet Access in India

The findings of our comparative analysis offer support for the argument that increased Internet access exacerbates political polarization and provides opportunities for policy changes that lead to the incremental erosion of democratic institutions. In this section, we study a typical case to examine if our proposed mechanisms play out in practice. We analyze how increasing Internet access and social media use has contributed to democratic backsliding in India. India under the Bharatiya Janata Party (BJP), particularly since 2014, is a typical case according to the classification in Seawright (2016). The country has experienced both significant democratic backsliding and rapid increases in Internet access and social media use. Often touted as the world's largest democracy by population, India has mostly been classified as a consolidated democracy by indices such as Freedom House and Polity since achieving independence from Britain in 1947. The Indian National Congress party, closely associated with the independence movement and the Gandhi-Nehru family, has been in power for most years since independence, but a robust multi-party democracy flourished despite the party's dominance, with several other parties winning brief periods of leadership. Despite the relative health of Indian democracy, Figure 10 shows a clear decline in the quality of democratic institutions, starting in the late 2010s. At the same time, Figure 10 also illustrates that access to information and political polarization in India have increased, with polarization peaking near the upper bound of the distribution in Figure 5.

**Figure 9.** Internet Access, Polarization, and Democratic Backsliding in India, 1990-2021



This period coincides with the Bharatiya Janata Party's time in power. The BJP is a right-wing political party with close ties to the far-right paramilitary organization Rashtriya Swayamsevak Sangh (RSS) (Palshikar 2015). It espouses a Hindu nationalist ideology while minimizing (or even demonizing) the role of Muslims in Indian society—a clear sign of anti-pluralism (Sahoo 2020). There is also evidence that it has stood aside during violent episodes or even tacitly condoned them (Ramachandran 2020). Overall, while this pattern—increasing polarization, access to the Internet, and democratic backsliding coinciding with the rule of an anti-pluralist party—does not prove that our empirical findings are causal, it allows us to explore whether the underlying dynamics of our theory are at play. Using a combination of primary and secondary sources, we find evidence that increasing access to information technologies has contributed to the polarization of society, which in turn created a permission structure that allowed Modi and his government to enact democracy-eroding policies. The case supports our argument by showing how the mechanisms of our theory have played out in the real world.

### Information and Communication Technologies and the Polarization of India's Society

In 2007, only 4 percent of the population in India had access to the Internet. By 2022, this number had grown to almost 49 percent, representing well over 600 million people (International Telecommunication Union 2018). Social media has seen an even more rapid rise in use, going from 7 percent of the population in 2015 to almost 33 percent today. WhatsApp, Instagram, and Facebook are the most popular social media, with the former commonly used now as the primary means through which people get news and connect with friends and family (Ghaffary and Heath 2022). Almost all Indians use their mobile phones to access the Internet: mobile Internet was responsible for 97 percent of Internet traffic in 2021 (International Telecommunication Union 2018). Phones often come with social media pre-installed, increasing the chances that new users' first experience of the Internet is through social media.

With the rising Internet access of citizens, parties across the political spectrum in India quickly learned how to use social media to spread misinformation for their own benefit. A study of over 1000 Hindi-speaking Facebook users residing in India on the effectiveness of misinformation found that respondents were more likely to have heard of (and believe) inaccurate claims than of accurate ones (Chauchard, Flynn, and Gautam 2019). While all political parties have used the Internet for political purposes, oftentimes by spreading misinformation and disinformation, the BJP has been particularly prolific at harnessing the Internet for its political purposes. The party by far outspent other political parties on social media (Campbell-Smith and Bradshaw 2019). In addition, its

ability to engage millions of “social media volunteers,” oftentimes with extreme right-wing Hindu nationalist background, has given BJP a decisive advantage over the oppositional Congress party on social media (Sardesai 2020, 226–27).

Narendra Modi, BJP’s leader, has a prolific and carefully curated social media presence. Even before coming to power, he was able to develop a cult following among many young, middle-class Indians through unusually broad engagement with social media, including on Pinterest, LinkedIn, YouTube, Twitter, Facebook, and many others. Beyond Modi’s own social media presence, the BJP indirectly employs a “troll army” of supporters, generally referred to as “BJP IT cell” (Chaturvedi 2016).<sup>14</sup> Their posts paint the BJP, and especially Modi, in a very favorable political light. For example, in 2022, a story went viral on Indian social media claiming that Modi had convinced Russian president Vladimir Putin to halt the war in Ukraine to allow for a group of Indian students to exit the country safely. Even though fact-checkers quickly debunked those claims, the tweets went viral and the “facts” of the episode are still believed by many in the public sphere (Ayyub 2023).

Social media posts, whether containing real or fake information, also have allowed supporters of Modi to deflect attention away from or reshape the interpretation of critical issues raised by the political opposition including rising unemployment, falling growth rates, or rising communal tensions (Pal 2019). For example, in early 2021, India experienced a second wave of the COVID-19 pandemic that was one of the deadliest anywhere on earth. International media and remaining free news organizations in India put much of the blame on national-level policies established by the BJP, including allowing for broad domestic travel during an important Hindu festival in order to not upset its Hindu nationalist support base. Within India, blame of the national government was difficult to find. The BJP downplayed the severity of the situation through official government accounts, attempted to shift blame to state governments, and misreported infection and death counts (Rao 2021). Before the Modi government declared a national shutdown, the BJP IT cell pushed a narrative that the pandemic was a foreign conspiracy (Yadav 2020). Despite the devastating effects of the crisis on many Indians, in part due to the poor government response, Indians remained satisfied with Modi’s performance as a leader (Kumar 2023). In a public opinion survey, over 68 percent of respondents said that the government’s COVID policies were the right decision (Economic Times 2021).

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<sup>14</sup> The party is especially adept at controlling large WhatsApp groups, which are one of the most common forms of online communication in India.

India has also seen a stark rise in the use of social media to delegitimize and harass political opponents (Chaturvedi 2018), with significant effects on political polarization within the country. For example, following a suicide bombing against Indian security forces in Kashmir in 2019, a message that went viral across WhatsApp groups claimed that a leader of the Congress party had promised a large sum of money to the attacker's family and to free other "terrorists" and "stone pelters" from prison if it received support in the upcoming parliamentary election (Xiao 2019). Before his arrest under questionable charges, Modi's main rival, Rahul Gandhi from the Congress party, was infantilized by BJP supporters and turned into an object of memes, jokes, and cleverly edited videos (Pal 2019). Similarly, the right wing in India used social media paint Muslims as a threat. A prominent example is the baseless "love jihad" conspiracy theory, commonly spread via viral WhatsApp messages and videos, which holds that Muslim men are wooing Hindu women to force them convert to Islam (Frayer 2021). Coupled with (also baseless) claims that the oppositional Congress party favored Muslims, episodes like these deepened polarization by providing an enemy to demagogue, bolstering support among lower-information voters, and discouraging opposition for fear of retribution or harassment (Financial Times Editorial Board 2023).

Social media is also used by the public to discredit the opposition in more conventional ways. In 2018, a report by *The Guardian* revealed that Cambridge Analytica had been involved in harvesting personal data of millions of Facebook users without their consent (Cadwalladr and Graham-Harrison 2018). It was later revealed that the firm had also worked for the Indian National Congress during the 2014 Lok Sabha election. The BJP was quick to capitalize on this revelation to attack the Congress and its leader Rahul Gandhi, using social media and online propaganda to paint the Congress as unethical and corrupt despite no established links between the two projects (Timesofindia.com 2018). WhatsApp groups were flooded with content about the scandal. While many factors go into election outcomes, the general election after this scandal resulted in the BJP receiving 37.36 percent of the vote, the highest vote share by a single party since 1989, and analysis attributes the success at least in part to the scandal (Dale and Jeavans 2019).

The combined result of these trends is a biased information environment, despite theoretically "open" information access in terms of availability of technology and the existence of independent news organizations, leading to the finding that "the proportion of polarizing political news and information in circulation over social media in India [in the 2019 election was] worse than all of the other country case studies we have analyzed, except the U.S. presidential election in 2016" (Allsop 2019). In India, political, ethnic, and religious tensions have long been present. The rapid growth of access to information and many-to-many communication did not cause these issues. But the nature of these systems can exacerbate pre-existing tensions through the systems that undergird them. More sensational, outrageous, and polarizing content is what gets



shared by the most people, and the one-to-many potential and ease of sharing in modern communication technology like WhatsApp makes this trend more problematic—especially when an anti-pluralist party like BJP exacerbates it. When applied to places with historical communal tension, these systems amplify and deepen polarization in society in ways that are as or even more dangerous than have been seen in places like the United States.

### From Polarization to Backsliding

The discussion shows how the supporters of the BJP (and the BJP itself) have used the Internet to legitimize the political party and to delegitimize political opponents and critics. Even though these strategies have not always been successful, there is significant evidence that they have led to an increase in polarization and ethnic tensions within the country. These outcomes have paved the way for the slow deterioration of India's democracy by giving Modi and his government a *carte blanche* to pass policies and take actions that bolster the executive's power and the BJP's rule. Increasing hostility and fear of the political opposition created a permissible political environment in which the BJP could enact anti-democratic policies without much fear of political repercussions.

For example, the Indian government voted to revoke the special status of Jammu and Kashmir, a divisive move given the violent and complicated history of managing the area (Shah and Dalton 2019). The BJP and its supporters pushed the message that the move was necessary for national security and generally stirred up Indian nationalism during the immediate aftermath. This helped to distract from the human rights abuses that were taking place in the region, including, relatedly, Internet shutdowns. Dissenters against the move were harassed by the troll army, creating a biased online information environment where the only easily accessible news about the action was overwhelmingly positive (Rezwan 2019). By taking advantage of the viral nature of social media, a fractured media ecosystem, and especially heightened polarization, the BJP was able to shift public opinion and allow for an opening to enact democracy-eroding reforms. In a survey by Indian news organization ABP and polling firm C Voter, a majority of respondents said the decision had led to a more permanent solution. Over 47 percent even thought that the abrogation of Article 370 of the Indian Constitution, which granted Jammu and Kashmir its special status, was Modi's biggest achievement in this term (Economic Times 2021). When asked in 2019, a majority of respondents of a Pew survey even believed that the government should use more military force when dealing with Jammu and Kashmir (Stokes, Manevich, and Chwe 2017). Through a message focused on spreading anti-Muslim Hindu nationalist sentiments, supporters of the move successfully polarized society enough to garner support for these moves while minimizing backlash (Sahoo 2020), in line with theoretical expectations linking polarization and backsliding (Haggard and Kaufman 2021a; Svobik 2020).

We also find evidence that the BJP felt emboldened by polarization to increase its efforts to silence opposition leaders and journalists. India is now the country with the most Internet shutdowns and take-down requests to social media companies globally (Pearson 2021). The legal framework prior to the BJP's taking power in 2014 was already very permissive of government surveillance and censorship. The 2000 Information Technology Act was passed under a BJP coalition government, and it was left in place by the Congress party when it ruled from 2004-14. This act allows broad discretion by the government to remove or request removal of content it considers dangerous or harmful, and the courts are generally pliant when requests are challenged. The Central Monitoring System was established in 2013 that allows the government to intercept digital communications. This practice was established prior to the current BJP government, ostensibly for security reasons, but has been weaponized against political opponents under the current government (Yilmaz and Saleem 2022). The rise of the Internet increases polarization which then, ironically, may increase the chance that use of the Internet becomes restricted.

Once in power, the BJP under Modi has used this legal framework to require social media companies to take down content on many occasions. One of the most famous came after the British Broadcasting Corporation (BBC) published a documentary examining the Gujarat anti-Muslim violence that occurred under Modi's leadership.<sup>15</sup> It provided evidence that Modi knowingly refused to take action to quell the violence, resulting in more deaths than would have occurred with a more decisive response. The government ordered Twitter and other platforms to remove the documentary.<sup>16</sup> Under suspect justifications such as "national security" concerns, certain posts could only be viewed outside of India, anti-government posts were removed, and the Internet was suspended in Muslim-majority Kashmir (Boyes 2023). Instances of lower-profile censorship have been rampant: the government asked for almost 10,000 tweets to be removed in 2020, up from 1,200 the prior year and only 248 in 2017 (Soni 2021). Former Twitter CEO Jack Dorsey even claims that the Indian government threatened to shut down Twitter and raid its employees' homes and offices (Mateen 2023). Still, most platforms have been willing to comply with these requests and threats, likely for fear of losing access to the huge Indian market (Bond 2021).

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<sup>15</sup> "India: The Modi Question." 2023. BBC Two. <https://www.bbc.co.uk/programmes/p0Dk9z6x> (September 17, 2024).

<sup>16</sup> It is notable that in this particular case, the removal actually backfired. It led to the video being seen much more than it otherwise would have because the government highlighted it.

Polarization has also increased tolerance toward the BJP's strategies of censorship like arresting journalists and raiding the offices of news agencies, using financial crimes as a cover to discourage negative reporting. Prominent investigative journalist Rana Ayyub and the BBC itself are examples of the targets of this kind of attack (Gunasekar 2022; Wright 2023). As a consequence of this delegitimization of journalists, India fell several places in prominent press freedom rankings (Reporters Without Borders 2023), and experienced a notable uptick in the number of journalists killed (Committee to Protect Journalists 2023). Declining safety for journalists and reduction in press freedom is a clear manifestation of behavioral democratic backsliding, aided by institutional tools like the broad laws discussed above and the strategic delegitimization of traditional media through online propaganda and speech.

The examples of the Citizenship Amendment Act, the status revocation of Kashmir, and the passing of discriminatory laws at the state level demonstrate the degree to which this backsliding has been facilitated by the weaponization of ICTs. On the individual level, Modi has been able to increase his popularity despite presiding over a poor and deteriorating economy. His 2014 campaign promises centered around economic programs, which in large part failed and led to an increase in unemployment and a reduction of over 1 percent of India's gross domestic product (GDP) (Xiao 2019). Incomes in rural areas have stagnated and farm incomes reached their lowest point in 18 years. Despite these economic failures, which would be the political death of many democratic leaders, Modi was able to secure a historic political victory in the 2019 elections. In 2017, nearly 88 percent of Indians held a favorable view of Modi; 72 percent approved of the way he handled unemployment (the top concern for Indians over the past few years), and 83 percent believed that the current state of the economy was good. And despite the significant erosion of the quality of democratic institutions in India, over 79 percent of Indians were satisfied with the way democracy was working in their country (Stokes, Manevich, and Chwe 2017).

These statistics again clearly demonstrate the mechanisms linking access to ICTs, polarization, and backsliding: supporters are willing to tolerate anti-democratic moves and poor outcomes because they can still support "their side," or view the alternative as even worse. According to analysts, few people talk about bad economic numbers or the spread of fake news and misinformation on social media (Vij 2019). When discussing politics and the election, voters tend to talk about a weak opposition, a co-opted media, low inflation, or his welfare schemes. This is due in part to the social media strategies, which were geared toward making Indians believe that it is patriotic to support Modi. But at the same time, polarization and hawkish religious and nationalistic notions, fueled by the BJP via social media, led to an increase in support for Modi and greater tolerance for anti-democratic measures or disinformation campaigns. For many, Modi is the only viable leader while opposition leaders are either incompetent, corrupt, or opportunistic.

In sum, India's backsliding under the BJP has been facilitated by the spread of the Internet. We see evidence of the theoretical mechanisms we propose by which anti-pluralist political actors use information technologies to create a political environment where backsliding is more likely. Modi and his supporters have used social media and other online platforms to project popularity, obfuscate scandals, and further divide Indian society. At the same time, they have taken advantage of the profit motives of these platforms to silence dissidents and crack down on opposition speech. All of this has created a more permissive public that is willing to accommodate democratic backsliding, in no small measure by exacerbating polarization in a society already highly polarized. While the BJP did not perform as well as expected, Modi was confirmed to continue as prime minister during the 2024 national election, and most of the anti-democratic policies enacted by the BJP remain in place. Recent research even suggests that the BJP has turned to direct manipulation of votes in recent elections, which would demonstrate the depth of democratic erosion (Das 2024).

## Conclusion

This paper explores the influence of access to information and communication technologies—and specifically, Internet access—on democratic resilience. We argue that Internet access can contribute to democratic erosion. This is especially acute when anti-pluralist parties in executive government weaponize the Internet to increase political polarization. We test the empirical implications of our theory with a mixed-methods approach that combines a large-N quantitative comparative analysis of democratic backsliding in 97 democracies after the Cold War with a typical case study to trace the underlying causal mechanisms of the theory. The findings robustly indicate that access to ICTs has increased the likelihood of democratic backsliding, especially through its polarizing impact.

Our research contributes to the emerging comparative literature on democratic backsliding. These studies generally look toward domestic political explanations including the role of social and political polarization (Cinar and Nalepa 2022; Haggard and Kaufman 2021a, 2021b; Svobik 2020), political institutions (Helmke, Kroeger, and Paine 2022), ethnic fragmentation (Rovny 2023), democratic values (Grillo and Prato 2023), and the political agency of domestic actors (Grumbach 2022; Mainwaring and Pérez-Liñán 2014; Vachudova 2020). Building on those approaches, our findings highlight the centrality of information technologies. Much of the work that analyzes the negative effects of these technologies focuses on the behavior of highly repressive and autocratic regimes that use these platforms to consolidate already authoritarian countries. Scholars who have focused on the nefarious role of technologies in democracies mainly discussed foreign meddling by entrenched autocratic regimes like

China and Russia and how the Internet can be misused by political actors. We provide evidence about how the spread of information technologies can contribute to a reduction in the quality of democracy through the strategic polarization of societies.

While our argument has not analyzed the role of foreign meddling, this will be an important avenue for future research. Our findings suggest that open access to information technologies could make foreign meddling more effective because there are fewer institutional guardrails on the use of these platforms and often willing audiences. All political leaders have similar access to these tools, but as the preceding examples made clear, they are especially dangerous when politics and public discourse are characterized by polarization, and some may welcome foreign influence. The Internet can create conditions in which foreign meddling is “pushing on an open door.”

More broadly, our findings highlight that policymakers and technology leaders should pay careful attention to the influence that the Internet as it is currently structured has on political discourse and outcomes. Social media companies like Facebook have made conscious decisions to change their algorithms to reduce inflammatory content in the past (Ward-Bailey 2016)—albeit with mixed results—but deeper consideration about the nature of online interaction and the algorithms that undergird it may also be necessary. These more structural changes seem unlikely given the current ownership structures of the most prominent Internet media companies (especially the rapid rise of Chinese-owned TikTok), but future scholarship could analyze the political viability and specifics of these types of proposals.

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# Supplementary Information: The Weaponization of Information Technologies and the Resilience of Democracies

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## Appendix A. List of Variables and Descriptive Statistics

Variable Name	Description	Data Source
<b>Democratic Backsliding</b>	Democratic Backsliding is coded as 1 if the country experiences an initial 0.01 decrease on the EDI and a total decrease of at least -0.10 throughout the entire backsliding episode, and 0 otherwise.	Edgell et al. 2020
<b>Internet (%)</b>	Estimated proportion of households with Internet access	World Development Indicators
<b>Anti-Pluralism</b>	Average of Anti-Pluralism Index (API) for parties in power. From V-Party, which measures “extent does the party show a lacking commitment to democratic norms prior to elections”	Lindberg et al. 2022
<b>Polarization</b>	Extent to which society is polarized into antagonistic, political camps using V-Dem “v2cacamps” indicator.	Coppedge et al. 2022
<b>Democracy</b>	V-Dem Polyarchy Index	Coppedge et al. 2022
<b>Per Capita GDP</b>	Annual per capita GDP (in constant 2005 U.S. dollars)	World Development Indicators, World Economics and Politics Dataverse
<b>GDP Growth</b>	Annual GDP Growth (%).	World Development Indicators, World Economics and Politics Dataverse
<b>Presidentialism</b>	Binary variable that takes the value 1 if the chief executive is unitary (V-Dem v2exhoshog=1) and directly elected by the population (V-Dem v2expaths=7)	Coppedge et al. 2022
<b>Democratization</b>	Democratization is coded as 1 if the country experiences an initial 0.01 increase on the EDI and a total increase of at least -0.10 throughout the entire democratization episode, and 0 otherwise.	Edgell et al. 2020

Variable Name	Description	Data Source
<b>Internet (%)</b>	Estimated proportion of households with Internet access	International Telecommunication Union
<b>Mobile Subscriptions</b>	Number of dedicated mobile subscriptions per 100 inhabitants	International Telecommunication Union
<b>Internet Users</b>	Internet users in percent of populations	International Telecommunication Union
<b>Open Information Access</b>	KOF Information Globalization Index: annual weighted aggregation of information on <i>de facto</i> and <i>de jure</i> forms, including Internet bandwidth and access, television access, international patents, high technology exports and press freedom.	Dreher 2006

	Mean	SD	Min	Max
Democratic Backsliding	.0743363	.2623754	0	1
Internet (%)	29.5203	30.41679	0	99.01095
GDP Growth	3.38269	4.22979	-41.8	64.08129
Per Capita GDP	17345.49	20286.43	322.7779	111968.3
Democracy	.7431332	.1311533	.5	.926
Polarization	-.6825434	1.275836	-3.817	2.996
Presidentialism	.290708	.4541895	0	1
N	2260			

## Appendix B. Main Results and Alternative Measures for Internet

	(1) Main	(2) ITU Internet (%)	(3) Internet Users (%)	(4) Mobile Subscriptions	(5) KOF
Internet (%)	0.577*** (0.107)	0.031*** (0.008)	0.507*** (0.089)	0.348*** (0.065)	0.842*** (0.201)
Populism (Gov)	0.174 (0.143)	-0.033 (0.170)	0.180 (0.144)	0.200 (0.151)	0.220 (0.141)
GDP Growth	-0.287 (0.176)	-0.046 (0.271)	-0.295 (0.177)	-0.324 (0.184)	-0.331 (0.195)
Per Capita GDP	-1.326*** (0.300)	-1.658*** (0.367)	-1.341*** (0.310)	-1.234*** (0.326)	-0.868*** (0.231)
Democracy	0.180 (0.345)	0.789 (0.430)	0.213 (0.347)	0.407 (0.395)	-0.116 (0.354)
Presidentialism	0.029 (0.100)	0.072 (0.117)	0.028 (0.101)	0.030 (0.108)	0.029 (0.096)
Polarization	0.415** (0.163)	0.431** (0.181)	0.409** (0.163)	0.593*** (0.191)	0.443*** (0.167)
Spline 1	-0.344*** (0.042)	-0.356*** (0.051)	-0.338*** (0.041)	-0.359*** (0.046)	-0.345*** (0.043)
Spline 2	2.110*** (0.325)	2.171*** (0.397)	2.061*** (0.321)	2.208*** (0.353)	2.094*** (0.337)
Spline 3	-3.720*** (0.594)	-3.816*** (0.722)	-3.627*** (0.586)	-3.894*** (0.644)	-3.683*** (0.617)
Constant	0.028 (0.502)	-0.829 (0.575)	-0.119 (0.514)	-0.005 (0.581)	0.571 (0.474)
Wald Test	328.489***	280.558***	321.370***	280.447***	362.569***
N	2028	1268	2017	1918	1986

Standard errors in parentheses; \*\* p<0.05, \*\*\* p<0.01

## Appendix C. Alternative Standards for Backsliding

	(1) Regime Change	(2) Continuous	(3) Breakdown	(4) Hybrid	(5) Liberal Democracies	(6) Democratization
Internet (%)	1.062*** (0.230)	0.003*** (0.000)	0.858*** (0.307)	0.309*** (0.073)	1.620*** (0.290)	-0.489*** (0.100)
Populism (Gov)	0.811*** (0.261)	-0.000 (0.001)	0.212* (0.122)	0.247** (0.098)	0.497 (0.656)	-0.108 (0.087)
GDP Growth	-0.282 (0.340)	0.001 (0.002)	0.067 (0.105)	-0.062 (0.094)	-0.957* (0.492)	-0.094 (0.123)
Per Capita GDP	-3.414*** (0.960)	-0.000 (0.001)	1.167*** (0.241)	-1.038*** (0.184)	-3.171*** (1.166)	-0.829*** (0.150)
Democracy	2.754* (1.545)	0.004* (0.002)	0.846** (0.330)	0.561*** (0.128)	-4.224* (2.458)	-1.003*** (0.230)
Presidentialism	-0.322 (0.324)	0.001 (0.001)	0.211** (0.094)	0.042 (0.061)	-1.148*** (0.405)	0.082 (0.054)
Polarization	1.005 (0.789)	0.000 (0.001)	-0.394*** (0.134)	0.199** (0.099)	-0.339 (0.642)	0.253*** (0.091)
Spline 1	2.883** (1.243)	0.000 (0.000)	-0.056* (0.029)	-0.407*** (0.037)	-0.463** (0.201)	0.004 (0.017)
Spline 2	-13.999** (5.943)	0.000 (0.002)	0.748*** (0.216)	2.646*** (0.291)	3.037* (1.638)	-0.098 (0.135)
Spline 3	23.376** (9.900)	-0.000 (0.004)	-1.500*** (0.401)	-4.699*** (0.531)	-5.464* (3.017)	0.220 (0.251)
Constant	-68.920*** (23.795)	-0.018*** (0.006)	1.448*** (0.498)	0.079 (0.202)	7.129 (4.881)	-0.296 (0.339)
Wald Test	138.221***		300.669***	611.374***	100.434***	269.313***
N	2028	2028	1243	3321	879	2028



## Appendix D. Model Specification

	(1) 5-Yr MA	(2) Lag	(3) Region FE	(4) Country FE	(5) OLS	(6) IV	(7) STADL
Internet (%)	0.035*** (0.006)	0.523*** (0.103)	0.399*** (0.114)	1.068* (0.551)	0.018*** (0.003)	0.284*** (0.069)	0.679*** (0.136)
Populism (Gov)	0.165 (0.143)	0.070 (0.137)	0.177 (0.165)	0.542 (0.412)	0.009 (0.006)	0.123* (0.073)	0.189 (0.145)
GDP Growth	-0.284 (0.173)	0.002 (0.131)	-0.286* (0.158)	-0.441* (0.263)	-0.006 (0.007)	-0.146 (0.103)	-0.289 (0.182)
Per Capita GDP	-1.499*** (0.330)	-2.059*** (0.336)	-0.113 (0.455)	-1.450 (3.085)	-0.015*** (0.004)	-0.533*** (0.194)	-1.456*** (0.310)
Electoral Democracy Score	0.174 (0.348)	1.735*** (0.304)	-0.238 (0.378)	-1.111 (1.402)	0.009 (0.014)	-0.056 (0.207)	0.193 (0.344)
Presidentialism	0.030 (0.101)	-0.001 (0.104)	-0.112 (0.170)	-0.054 (0.375)	0.008* (0.004)	0.033 (0.049)	0.006 (0.103)
Polarization	0.421*** (0.162)	0.342** (0.149)	0.467** (0.195)	2.143** (1.027)	0.017*** (0.006)	0.229*** (0.084)	0.427*** (0.162)
Spline 1	-0.341*** (0.042)	-0.376*** (0.045)	-0.346*** (0.041)	-0.356*** (0.050)	-0.040*** (0.002)	-0.167*** (0.015)	-0.344*** (0.042)
Spline 2	2.094*** (0.325)	2.293*** (0.342)	2.128*** (0.316)	2.784*** (0.461)	0.227*** (0.012)	0.994*** (0.123)	2.093*** (0.322)
Spline 3	-3.692*** (0.594)	-4.027*** (0.621)	-3.747*** (0.580)	-5.105*** (0.883)	-0.393*** (0.021)	-1.745*** (0.229)	-3.682*** (0.589)
Spatiotemporal Lag							-1.367 (1.084)
Constant	-0.217 (0.521)	-1.763*** (0.426)	1.109* (0.667)	-2.818 (3.211)	0.632*** (0.035)	0.204 (0.308)	0.086 (0.507)
Wald Test	313.908***	333.007***	245.862***	177.081***		369.118***	317.369***
N	2030	2104	1310	558.000	2028	1978	1985

Standard errors in parentheses; \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

## Appendix E. Geopolitical Interests

	(1) US	(2) Autocrats	(3) NRR
Internet (%)	0.587*** (0.110)	0.547*** (0.108)	0.555*** (0.110)
Populism (Gov)	0.164 (0.146)	0.171 (0.144)	0.196 (0.152)
GDP Growth	-0.304* (0.175)	-0.298* (0.170)	-0.304* (0.183)
Per Capita GDP	-1.356*** (0.316)	-1.432*** (0.315)	-1.307*** (0.298)
Democracy	0.204 (0.347)	0.215 (0.343)	0.279 (0.348)
Presidentialism	0.028 (0.103)	0.163 (0.135)	0.056 (0.106)
Polarization	0.397** (0.164)	0.441*** (0.163)	0.412** (0.164)
Spline 1	-0.347*** (0.042)	-0.347*** (0.042)	-0.344*** (0.042)
Spline 2	2.153*** (0.329)	2.158*** (0.328)	2.086*** (0.321)
Spline 3	-3.805*** (0.603)	-3.811*** (0.599)	-3.668*** (0.587)
POTUS Visits	0.215 (0.363)		
Distance (USA)	0.000 (0.000)		
Distance (China)		-0.000 (0.000)	
Distance (Russia)		-0.000 (0.000)	
Natural Resource Rents			-0.212 (0.244)
Constant	-0.325 (0.685)	0.468 (0.572)	-0.098 (0.497)
Wald Test	343.146***	326.660***	331.621***
N	2028	2028	1990

Standard errors in parentheses; \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

## Appendix F. Interaction Effect

	(1) Polarization
Internet (%)	-0.015 (0.024)
Anti-pluralism (Gov)	1.269*** (0.117)
Internet (%) # Anti-pluralism (Gov)	0.390*** (0.056)
Democracy	-0.860*** (0.221)
Per Capita GDP	-0.105*** (0.019)
GDP Growth	-0.016 (0.031)
Presidentialism	-0.003 (0.015)
Constant	-0.205 (0.213)
F Test	35.3***
N	2189

Standard errors in parentheses; \*\* p<0.05, \*\*\* p<0.01