THE POPULARITY OF AUTHORITARIAN LEADERS: A Cross-National Investigation

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ABSTRACT

How do citizens in authoritarian states feel about their leaders? While some dictators rule through terror, others seem genuinely popular. Using the Gallup World Poll's panel of more than one hundred-forty countries in 2006–2016, the authors show that the drivers of political approval differ across regime types. Although brutal repression in overt dictatorships could cause respondents to falsify their preferences, in milder informational autocracies, greater repression actually predicts lower approval. In autocracies as in democracies, economic performance matters and citizens' economic perceptions, while not perfectly accurate, track objective indicators. Dictators also benefit from greater perceived public safety, but the authors find no such effect in democracies. Covert censorship of the media and the Internet is associated with higher approval in autocracies—in particular, in informational ones—but ratings fall when citizens recognize censorship. In informational autocracies, executive elections trigger a ratings surge if there is leader turnover, but, unlike in democracies, reelected autocrats enjoy little honeymoon.

I. Introduction

HOW do the citizens of authoritarian states feel about their rulers? This question is important for understanding how such regimes survive and function. Many theoretical accounts assume widespread alienation. Models analyze how power holders manage to prevent a discontented opposition, presumed to be large, from coordinating on revolt.[1] Other scholars suppose that authoritarian governments win the tacit backing of citizens by providing material benefits in the form of economic growth, public services, or patronage.[2] A third approach sees public attitudes as influenced by propaganda and censorship. Under totalitarian orders, that means ideological brainwashing. Under less extreme autocracies, scholars posit a subtler form of information control that aims to mislead and persuade rather than to reprogram.[3]

Although such theories make various assumptions about public opin-

[1] E.g., Kuran 1991; Bueno de Mesquita 2010.
[2] E.g., Weyland 2006, 17–18.
[3] E.g., Gehlbach and Sonin 2014; Little 2017.

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ion in dictatorships, their accuracy has rarely been tested. A rich literature examines the determinants of government popularity in developed democracies, such as France,[4] the UK,[5] and the US.[6] Similar work on autocracies is much sparser. Although some articles have studied particular countries, for instance, Brazil,[7] Mexico,[8] Peru,[9] Russia,[10] and a few other Latin American states,[11] systematic cross-national comparisons have been rare.

This lack is not surprising since studying public opinion in autocracies poses particular challenges. First, international survey projects have trouble operating in unfree societies, so most cross-national polls include few authoritarian states. Second, even when pollsters can ask questions, the task of interpreting responses—hardly straightforward in democracies—is even more complicated in authoritarian settings. In free countries, social-desirability bias leads some to express opinions they believe to be popular, rather than their own.[12] In dictatorships respondents may fear not just embarrassment, but punishment. Preference falsification could be widespread.

To address this gap, we examine data from an unusually broad panel of fifty-one nondemocracies polled annually in the period 2006–2016.[13] Our source, the Gallup World Poll (GWP), uses a standard question to assess government approval. With data for multiple years, we can control for unobserved country-specific heterogeneity and explore the dynamics of opinion in a range of these countries.[14] Although we cannot make strong causal claims, the broad coverage and panel structure of the GWP allow the most comprehensive exploration to date.

We tackle preference falsification with a three-pronged approach. One advantage of a panel data set is that by including country fixed effects we can automatically control for the average level of preference falsification in each country. Stable cross-national differences in these levels, which could be large, will not distort our results. Yet that still

[4] Conley 2006.

[5] Clarke and Stewart 1995; Clarke and Lebo 2003; Sanders 2000.

[6] Mueller 1973; Brody 1991; Erikson, MacKuen, and Stimson 2002; Eichenberg, Stoll, and Lebo 2006.

[7] Geddes and Zaller 1989.

[8] Buendía 1996; Villarreal 1999.

[9] Stokes 1996; Weyland 2000; Kelly 2003; Arce 2003.

[10] Mishler and Willerton 2003; Treisman 2011.

[11] Remmer 2012.

[12] Noelle-Neumann and Peterson 2004.

[13] We compare these to a panel of ninety-five democracies with the necessary data.

[14] Throughout, we use the Polity IV standard classification, treating countries with Polity2 scores ≥ 6 as democracies, and those with Polity2 scores < 6 as nondemocracies or authoritarian states (see Center for Systemic Peace 2016). We classify on the basis of regime type at the start of the year/end of previous year. We show in the robustness section that results are similar using V-Dem's classification.

leaves the possibility of over-time changes in the frequency of insincere answers. To address this issue, we first examine the data for indirect signs of preference falsification, assuming that it will be more pronounced when repression, and therefore, fear, is greatest. Second, we embed preference falsification into our theoretical framework. We hypothesize that repression has two opposite effects on government approval. On the one hand, when observed, violent measures will outrage citizens, alienating them from incumbents. On the other hand, repression, if severe enough, should also deter individuals from responding frankly. Respondents may say they approve of the government or that they don't know whether or not they approve of it, or they may simply refuse to answer. The net impact should depend on which effect—outrage or fear—is stronger. If repression is mild and episodic, we posit that outrage will dominate, lowering approval of the regime. If repression is harsh and pervasive, fear should prevail, boosting—or at least sustaining—the government's ratings. We look for evidence for and against this hypothesis in the data. Third, we explore the robustness of our results, excluding countries in which the over-time patterns are consistent with preference falsification.

We argue that the drivers of political approval will vary across different types of authoritarian order. Recent literature emphasizes differences among such regimes related to the nature of the ruling group and its method of domination.[15] Building on our earlier work,[16] we distinguish between overt dictatorships and those we call informational autocracies. Overt dictatorship, the dominant twentieth-century model, is based on well-publicized repression, sometimes combined with indoctrination of citizens into an ideology that justifies violence against traitors. Informational autocrats seek to manipulate citizens more discreetly. They shape public beliefs via the state media and co-opt or censor the private press while pretending to be democratic. Whereas visible repression helps overt dictators intimidate opponents, it undercuts informational autocrats by exposing the true nature of their rule.

This distinction has implications for public opinion. In informational autocracies, which mimic democracies, citizens are likely to re-

[15] E.g., Diamond 2002. The power holder may be a party, monarch, military junta, or individual dictator (Geddes, Frantz, and Wright 2018). Authoritarian rulers employ a range of strategies. Totalitarians, such as Adolf Hitler or Mao Zedong, deliberately spread terror, killing millions; various other authoritarian leaders, such as Lee Kuan Yew or Hugo Chávez, were mostly nonviolent. Some have imposed official ideologies; others claim to respect freedom of thought and expression, while surreptitiously censoring or co-opting the media. Some deride Western democracy; others imitate it, holding elections that they manipulate to ensure victory; Levitsky and Way 2010.

[16] Guriev and Treisman 2019; Guriev and Treisman 2020c.

spond to rare cases of overt repression with outrage. This reaction may offset and even outweigh fear, reducing approval of the government. In such regimes, censorship of media and the Internet—if not observed—should boost approval. Yet, as with repression, censorship that is observed indicates that the regime has something to hide, which may weaken support. Overt dictators who have intimidated their critics may retain high ratings through short economic downturns and outbreaks of social disorder—indeed, crises may heighten the anxiety that fuels demand for tough leaders.[17] By contrast, in informational autocracies as in democracies, economic slumps and unrest reduce approval because they signal incumbent incompetence. Informational autocrats will try to conceal poor performance by manipulating the media but, especially with regard to economics, citizens' direct experience of changing wages, prices, and employment levels limit the power of censorship and propaganda.[18] In both types of authoritarian regimes, elections—even if rigged—could temporarily boost approval because of intensified propaganda or clientelistic handouts. In informational autocracies, elections may also confer some legitimacy among those fooled by the incumbents' imitation of democracy.

We apply the distinction between informational autocracies and overt dictatorships to the Gallup data. We pool all fifty-one nondemocracies to test hypotheses that apply to all authoritarian states and then use interaction terms to model differences across the subtypes. Unfortunately, Gallup did not poll in the few remaining quasi-totalitarian dictatorships, such as North Korea and Syria, so we cannot explore the effect of ideology and systematic terror. The differences we observe between the two authoritarian subtypes are likely to be attenuated. Still, Gallup's coverage does include a number of relatively violent authoritarian regimes. We test for robustness to the precise classification scheme.

We find that repression is negatively related to approval in informational autocracies—increased violence appears to backfire—and unrelated to it in overt dictatorships. As expected, approval in both types of authoritarian states is higher when citizens perceive stronger economic performance and, unlike in democracies, greater public safety. Perceptions are not purely idiosyncratic or distorted; they track objective indicators. But information manipulation also seems to matter. Authoritarian regimes that increase censorship of media and the Internet and that slow the expansion of Internet access are more popular, al-

[17] Kakkar and Sivanathan 2017.
[18] Rozenas and Stukal 2019.

though as expected, ratings sink if citizens learn the press is censored. In dictatorships, as in democracies, executive election years are distinctive. Perceptions of the economy tend to improve during electoral campaigns, and in informational autocracies, ratings soar after the vote if there is leader turnover. Such replacements seem to enhance the domestic legitimacy of pseudo-democratic institutions and may even restore some confidence in the independence of the media.

The next section develops our hypotheses. Subsequent sections describe the data, introduce our empirical methodology, report results, present robustness checks and extensions, and conclude.

II. Government Approval in Unfree Societies

What explains levels of support for authoritarian leaders? We divide possible determinants into four categories: repression, performance, information manipulation, and the role of the political business cycle.

Repression

Many past autocrats deliberately terrorized their citizens. Fear was not the only pillar of support, even for totalitarians like Hitler and Stalin,[19] but it was a crucial one.[20] By contrast, many recent authoritarians take pains to appear unthreatening. Even as they rig the system to consolidate power, informational autocrats like Hungary's Viktor Orbán pretend to be typical democratic politicians. When they succeed in manipulating information to secure popularity, they do not need to use violence. Indeed, mass repression—when observed—would undercut their reputation for public-spirited leadership.

Repression prompts two reactions in citizens—outrage and fear. We hypothesize that in overt dictatorships the second may offset the first. Where state violence is widespread and open, few will risk speaking out, even in a supposedly anonymous poll. Thus, in overt dictatorships where the brutality of the regime is well-known, greater repression will lead to more reticence and possibly to higher reported approval. By contrast, in informational autocracies many citizens genuinely, but incorrectly, think the incumbent is competent and benevolent. If such a regime inadvertently reveals its repressive nature, indignation may outweigh fear.[21] Some may view violent acts as aberrations, reacting angrily

[19] Overy 2004; Arendt 1968.

[20] Svolik 2012, 10.

[21] Sutton, Butcher, and Svensson 2014 find that since 1989, autocrats' violence against unarmed protesters has often provoked a backlash.

without thinking themselves at risk. They may also take seriously the leader's pretense to respect free expression. Thus, we expect the net effect of repression on approval and reticence to be null in informational autocracies, or even negative if outrage overwhelms fear.[22]

Among authoritarian regimes:

> —Hypothesis 1a (H1a). In overt dictatorships, greater repression will lead to unchanged or even higher approval and higher rates of don't knows and refusals to answer (fear offsets indignation).
>
> —Hypothesis 1b (H1b). In informational autocracies, greater repression will lead to unchanged or even lower approval and rates of don't knows and refusals to answer (indignation offsets fear).

Government Performance

As in democracies, approval of the government in autocracies may vary with its perceived performance. Governments are generally expected to promote prosperity, and many authoritarian leaders actively advertise their economic achievements. Indeed, performance legitimacy may be even more important when procedural legitimacy is lacking. Prosperity, and the public's perception of it, should boost ratings.

Besides prosperity, governments also promise to ensure law and order. Many dictators, from Benito Mussolini to Vladimir Putin, have claimed to be restoring discipline after periods of crime or corrupt political competition. Citizens in both types of dictatorship, therefore, may judge leaders on whether they feel secure.

In all authoritarian regimes:

> —Hypothesis 2 (H2). Approval will be higher when citizens judge government performance (on the economy or public safety) to be good.

Information Manipulation

All governments use public relations to improve their image. But in democracies, opposition politicians and journalists can challenge incumbents' claims and can provide alternative interpretive frames. In contrast, autocrats censor criticism and flood state media with pro-regime messages. Such censorship and propaganda aim to inflate assessments of the regime's accomplishments and to divert blame for failures.[23]

Among dictatorships, information strategies will vary. Overt dicta-

[22] In other words, in overt dictatorships increased repression leads to greater fear and a higher likelihood of preference falsification, which in turn increases reported political approval. By contrast, the indignation effect, present both in overt dictatorships and especially in informational autocracies, implies that reported approval decreases with repression. The fear and indignation effects may therefore sum to a nonmonotonic relationship between repression and reported approval; this relationship is more likely to be a decreasing one in informational autocracies.

[23] Rozenas and Stukal 2019.

torships use censorship and propaganda to indoctrinate or intimidate. Often, the exercise of censorship is quite open and propaganda can be deliberately crude and extreme. The Nazis staged public book burnings. Chile's Augusto Pinochet stationed censors in newsrooms and television studios.[24] In communist states, parties make no secret of their use of propaganda; embracing the official ideology is as much a loyalty ritual as a cognitive process.

By contrast, informational autocrats seek to genuinely persuade, which means they must keep messages more reasonable.[25] Rather than using censorship and propaganda openly, informational autocrats try to conceal their use. Because they seek an image of competence, open manipulation can backfire by suggesting they have something to hide. Recognizing censorship may also prompt citizens to more actively search for concealed information as something worth hiding is probably worth knowing. Experiments show that censorship often prompts reactance, an increased desire to overcome the obstacle.[26] For example, Chinese Internet censorship, when observed, "made people more interested in the topic" and more likely to seek related information.[27] Informational autocrats do successfully conceal the extent of their censorship: the public tends to overestimate media freedom in states where media are more restricted.[28] Several studies have tried to measure the impact of information manipulation in nondemocracies, and scholars have detected positive effects of censorship and state propaganda on election outcomes in postcommunist Russia and Nazi Germany.[29]

The Internet's role in authoritarian states remains controversial. Early techno-optimists argued that the Internet would become a "liberation technology," circumventing state censorship, providing access to international media, and exposing misinformation.[30] Authoritarian incumbents whose support relied on propaganda, they argued, would see their ratings fall. Consistent with this, growing Internet access significantly depressed the ruling party's vote in Malaysia's 2008 election.[31] But other observers raise doubts about the Internet's potential to weaken dictatorships. What citizens seek on the Internet—as on other free media—

[24] Spooner 1999.
[25] Gehlbach and Sonin 2014; Carter and Carter 2016; Rozenas and Stukal 2019.
[26] E.g., Worchel and Arnold 1973.
[27] Roberts 2018, 142.
[28] See Guriev and Treisman 2019. It could be that respondents insincerely say they believe media to be free out of fear of punishment. But if so, one might expect higher reports of media freedom in more repressive states (where fear of punishment should be greatest). In fact, the correlation across countries between the average reported assessment of media freedom and each of four indicators of repression (discussed in Section III) is negative or close to zero.
[29] Enikolopov, Petrova, and Zhuravskaya 2011; Adena et al. 2015.
[30] Diamond and Plattner 2010; Bellin 2012.
[31] Miner 2015.

may not be investigative reports, but rather entertainment.[32] And much web content is repackaged from state broadcasters.[33] If in autocracies citizens do get news online, government can restrict other sources to compensate.[34] Meanwhile, the purported difficulties of censoring the web may have been exaggerated. Countries like China quickly devised methods to disrupt online dissent. For instance, Beijing blocks online communications about protest and employs trolls to interrupt opposition discussions and to praise the regime.[35] The web also offers new, potential indoctrination channels.[36] Bots can use tailored messages to target individuals.[37] Such horizontal propaganda, spread peer-to-peer, may outperform vertical, centrally generated kinds.[38] In addition, by seeding misinformation into online discussions, rulers can co-opt society's indigenous networks. All these points suggest the need to test the techno-optimist view empirically.

In all authoritarian regimes:

—Hypothesis 3a (H3a). Greater censorship of media and the Internet will increase approval.

—Hypothesis 3b (H3b). Broader Internet access will reduce approval.

—Hypothesis 3c (H3c). Misperceptions about government performance will affect approval.

Among authoritarian regimes:

—Hypothesis 3d (H3d). In informational autocracies, approval will be lower if censorship is recognized.

Political Business Cycle

Almost all modern dictatorships hold elections, although usually with some fraud.[39] Elections, parliaments, and other ostensibly democratic institutions may serve to channel patronage,[40] co-opt or divide elites,[41] facilitate monitoring of agents,[42] project an image of strength,[43] or appease Western donors.[44]

Elections in all autocracies may intensify propaganda as well as in-

[32] Kern and Hainmueller 2009.
[33] Lipman, Kachkaeva, and Poyker 2018.
[34] Lorentzen 2014.
[35] King, Pan, and Roberts 2013; Roberts 2018.
[36] Gunitsky 2015.
[37] Sanovich, Stukal, and Tucker 2018.
[38] Ellul 1965.
[39] Gandhi and Lust-Okar 2009.
[40] Blaydes 2010.
[41] Geddes 2005.
[42] Simpser 2013.
[43] Simpser 2013; Magaloni 2006; Egorov and Sonin Forthcoming.
[44] Schedler 2006.

crease clientelistic handouts.[45] Such efforts may seem redundant if results are falsified. Yet fraud is far from foolproof.[46] Fraud, if discovered, is more likely than media distortions to discredit elections. Consequently, one may expect propaganda to surge right before a major vote to boost ratings.[47] (Conversely, some autocracies loosen media constraints before elections to make the ballot appear fair, which might enable the opposition to discredit incumbents.) If campaign propaganda works, one may also see the gap between objective and subjective measures of government performance widen prior to elections. For example, Russians' perceptions of economic performance were four to five percentage points higher than objective variables predicted during the 1996 and 2004 presidential campaigns.[48]

In overt dictatorships, elections are mostly mobilization efforts with extreme outcomes that arouse skepticism. In informational autocracies, incumbents seek to manipulate less obviously in the hope of boosting domestic legitimacy. Some citizens may take elections in these autocracies seriously, not realizing the scale of covert tampering. Even the cynical may assume less fraud than occurred, upgrade their estimates of leader popularity, and feel pressure to conform. If elections have this effect, approval of the incumbent should peak right after the vote, when memory is fresh. Alternatively, it may be not elections per se, but replacement of the top leader that matters for approval. Such turnover—even if from one insider to another, as, for instance, with the replacement of Putin with Dmitri Medvedev as president of Russia in 2008—may create a sense of genuine competition and potential renewal of the regime. If leader turnover is key, ratings should not rise when an incumbent is reelected but rather when a new leader takes power even by some nonelectoral path.

In all authoritarian regimes:

—Hypothesis 4a (H4a). Approval in months before and during a major election will be higher because of propaganda, pressure, and handouts.

—Hypothesis 4b (H4b). Misperceptions of performance will increase before elections because of intensified propaganda.

Among authoritarian regimes:

—Hypothesis 4c (H4c). Approval will be higher in the months immediately following an election in informational autocracies, especially if it results in a change of leader.

[45] Gehlbach and Sonin 2014, 166.

[46] Hyde and Marinov 2012 record fifty-one elections since 1945 in which, despite alleged irregularities, the incumbent party lost.

[47] Carter and Carter 2016 find this in African and Asian autocracies.

[48] Treisman 2011.

III. Data

Classification of Nondemocracies

To distinguish between overt dictatorships and informational autocracies, we use the extent of state violence against the general public.[49] This makes sense because public use of violent repression is a key distinction between the two regime types. Overt dictatorships rule through terror. They use violent repression and deliberately publicize it to deter opposition. Informational autocrats, who rely instead on information manipulation, use violence more rarely and conceal it when they do to sustain their image as competent and popular leaders.

We collected data on the estimated annual number of state political killings—executions of political prisoners, assassinations by state agents, use of lethal force against nonviolent protesters, and so on—under all authoritarian leaders in the period 1946–2015 who held office for at least five years. The five-year requirement reflects the fact that violent repression is unevenly distributed across dictators' tenure; estimating an average violence level for leaders in office for a very short time would often mischaracterize the nature of the regime. As a rule of thumb, we classified as overt dictatorships all nondemocracies in which, under the current leader, state political killings averaged ten or more per year.[50] In our data, fourteen countries—including Zimbabwe, Uganda, Sri Lanka, and Cambodia—fit this criterion for at least part of the period (seventy country-years). Another seventeen nondemocracies with fewer killings—including Ecuador, Russia, Singapore, and Venezuela—fit the classification of informational autocracies (eighty-eight country-years). We could not classify the remaining twenty nondemocracies because the leader did not last five years in office, rendering unreliable any estimate of the annual body count under his leadership (103 country-years).[51] We include all fifty-one countries in the aggregated analysis of authoritarian regimes, and then break them down into the three categories—overt dictatorship, informational autocracy, and unclassified—in the disaggregated analysis. For the full list of countries and regime types, see Table A2 in the supplementary material.[52]

Why use a threshold of ten state political killings a year? Figures A1 and A2 in the supplementary material show histograms of the distri-

[49] Guriev and Treisman 2019; Guriev and Treisman 2020c.

[50] Guriev and Treisman 2020c.

[51] As a robustness check, we extend the data to include all nondemocratic leaders in power for four years or more and show that the results are very similar (Table A14); Guriev and Treisman 2020b. Note, all A and B tables and figures referenced in this article can be fouind in the supplementary material.

[52] Guriev and Treisman 2020b.

bution of estimated political killings across, first, the country-years in our GWP data and, second, all country-years for which we compiled political killings estimates (1946–2015).[53] In both figures, the distribution appears bimodal, with one subgroup peaking in the zero-to-one killing a year range and the other peaking in the ten-to-one hundred range. This distribution suggests that the ten-killing threshold is a reasonable dividing line. We also test our results for robustness using four alternative thresholds (see Section VI). The results are generally similar.

Explanatory Variables

REPRESSION AND FEAR

Our main measure of overt repression is the Political Terror Scale (PTS), a five-point index that comes in two versions: one constructed from Amnesty International reports on human rights practices, and the other from those of the US State Department. Scores range from one ("Countries under a secure rule of law, people are not imprisoned for their views, and torture is rare or exceptional. Political murders are extremely rare.") to five ("Terror has expanded to the whole population. The leaders of these societies place no limits on the means or thoroughness with which they pursue personal or ideological goals."). We also use the number killed by the state in one-sided violence against unarmed civilians, from the Uppsala Conflict Data Program. To exploit respondents' own assessments of political repression, we use a GWP question that asks how many people in the country, if any, are "afraid to openly express their political views." Respondents could answer "most," "many," "some," "no one," or "don't know." The percentage that answered "most" or "many" ranged from 5 percent in Nepal (2008) to 87 percent in Congo Brazzaville (2008). Table A1 in the supplementary material contains full details and sources for all variables.[54]

GOVERNMENT PERFORMANCE

Our measure of perceived economic performance is the percentage of respondents who considered economic conditions in their country excellent or good. For objective economic measures, we use the log of GDP per capita at purchasing power parity in 2011 US dollars (lagged one year), the growth rate of GDP per capita, the log inflation rate, and the unemployment rate. For perceived public safety, we use the percentage who said they felt safe walking alone at night near their homes, and related this to several more objective measures—the rate of intentional

[53] Guriev and Treisman 2020b.
[54] Guriev and Treisman 2020b.

homicides and the percentage who said they had been robbed during the previous year. Since the GWP contained no core questions on national defense, we could not study this in detail, but we include interstate and civil war among controls (see Section VI). Since only one country-year in a nondemocracy with approval data coincided with an interstate war (the 2008 Russo-Georgian War), we could not draw reliable conclusions on this.

INFORMATION MANIPULATION

For perceived media restrictions, we use the percentage of GWP respondents who said media in their country had a lot of freedom. To measure actual press restrictions, we use Freedom House's Media Freedom index, adjusted so higher scores indicate greater freedom. For Internet penetration, we use the proportion of the GWP respondents who said their home had Internet access.

Internet censorship is a relatively recent phenomenon, which raises challenges for measurement. Our main proxy is the number of requests the country's authorities made to Google to remove material from its web platforms (including YouTube). These data begin in 2009. We set the count to zero in 2006–2008, assuming there were no such requests or almost none. We treat this as a proxy for the intensity of Internet censorship in general, rather than as a measure of Google's actions per se. To check robustness, we use the number of requests by the authorities to Twitter to block tweets. These data begin in 2012—again, we assume no requests or almost none in previous years. We also use Freedom House's Freedom on the Net index. This index began with a pilot study for 2007–2008, and increased in geographical scope over the years. Since country coverage is low, using this index required imputing a high percentage of the data, which reduced the likelihood of significant findings.

POLITICAL BUSINESS CYCLE

We include, first, dummies for whether a national executive or legislative election occurred in the given year. (Of the 261 country-years with approval data in nondemocracies, forty-nine had executive elections and fifty-four had legislative ones.) We then distinguish when the election occurred relative to the GWP polling. Last, we explore interactions of elections and leader turnover.

POLITICAL APPROVAL

Our approval measure is from the GWP. Our dependent variable is the percentage of respondents who answered yes to: "Do you approve or

disapprove of the job performance of the leadership of this country?" Possible answers were yes, no, or don't know. Although individuals' responses contain a random element caused by subtle differences of context,[55] such noise mostly disappears when answers are aggregated.[56] We use data as available for 2006–2016. Since coverage varies by year, this yields 261 observations for which current and lagged approval data are available, spanning fifty-one nondemocracies (Table A2).[57]

The limitation of using aggregate country-level data is that it does not allow us to explore individual-level differences in political approval. Such differences may be important. For example, in the presence of censorship, educated individuals are likely to be better informed than their less-educated counterparts about the actual performance of the regime and therefore more critical of the leader.[58] But as long as the composition of the population does not change substantially in the ten-year period that we study, such within-country heterogeneity should not affect our results since we control for country-level time-invariant characteristics.

Sample sizes ranged from 504 respondents (Haiti 2012) to 4,000 (Russia 2010), but most were around 1,000 per country. Almost all interviews in nondemocracies with approval data were conducted face-to-face, but 2 percent used a random-digit-dial telephone method.[59] Some previous studies—most focused on subjective wellbeing,[60] but a few focused on religion—have used the GWP.[61] While no survey is perfect, the GWP has withstood considerable scrutiny.

Across all country-years, 54 percent of respondents in nondemocracies on average approved of their government (43 percent in democracies). The average ranged from 52 percent in 2016 to 60 percent in 2010. Within countries, approval varied substantially over time. Among countries with data for all ten years from 2007 to 2016, in both democracies and nondemocracies, the average gap between highest and lowest ratings is thirty-two percentage points.

[55] Zaller 1992.

[56] The approval question may be interpreted differently in different countries. But as long as such cross-country differences are stable over time, this will not affect the results because we use a panel and method that controls for country fixed effects.

[57] We exclude the 2005–2006 waves of the GWP, which include very few nondemocracies. Results are almost identical using V-Dem's democracy classification (see Section VI); Guriev and Treisman 2020b.

[58] See Guriev and Treisman 2020c for the theoretical analysis and Guriev and Treisman 2019 for empirical evidence.

[59] Tortora, Srinivasan, and Esipova. 2010, 536.

[60] E.g., Deaton 2008.

[61] Stevenson and Wolfers 2011 use it to study trust in public institutions, but not government approval.

Are these data distorted by preference falsification? Recall that any stable cross-national pattern of preference falsification will be controlled away by the country fixed effects in our estimations. At the same time, our year fixed effects will capture any change over time that affects all countries equally. But what about cross-country variation in how much preference falsification changes over time? We might expect that changes in preference falsification in a given country would correlate with changes in the repressiveness of its government—people speak less freely as repression intensifies. We look for evidence of this using our four measures of repression. Specifically, we calculate the over-time correlation between government approval and each indicator of repression within each nondemocracy that had at least four years of data. The results are shown in Table A4 in the supplementary material.[62] Whichever indicator we use, only a minority of nondemocracies—from 6 to 41 percent—show the positive, over-time relationship between repression and approval that one would expect in the case of preference falsification. Often there is a strong negative relationship. We return to this in the analysis.

IV. Methodology

The nature of the data raises several issues. Although the approval question was asked in 324 nondemocracy country-years, certain explanatory variables are missing data. Since listwise deletion may bias estimates and underestimate standard errors, we use multiple imputation for some variables.[63] The method chosen involves taking random draws from a multivariate normal posterior distribution for the missing variables, conditioned on the observed data. We use the program Amelia II to impute ten data sets[64] and run regressions on all ten using Rubin's rules to combine results and obtain appropriate standard errors.[65]

For various reasons, one might expect approval to be autocorrelated. (For instance, Bayesian updating would lead citizens to adjust evaluations gradually rather than start from scratch whenever new information surfaced.) At the same time, many hard-to-measure country characteristics may influence ratings, potentially biasing estimates of

[62] Guriev and Tresiman 2020b.

[63] Honaker and King 2010.

[64] Honaker and King 2010; Honaker, King, and Blackwell 2011.

[65] See Rubin 1987. Specifically, we use the mi estimate command in STATA, after imputing missing data for perceived economic conditions, perceived media freedom, unemployment, log inflation, homicide rate, freedom on the net, perceived fear, and political repression. Proportions of observations imputed are shown in Table A3 along with descriptive statistics. We imposed reasonable conditions on the ranges of the imputations, for instance limiting scaled variables to the range of the scale; Guriev and Treisman 2020b.

explanatory variables. These considerations suggest the need for a dynamic model that controls for unobserved unit heterogeneity and that is appropriate for small T, large N data sets, as there are far more countries than years. We therefore use the Arellano-Bover/Blundell-Bond-system generalized method of moments (GMM) estimator.[66] This estimator instruments for the lagged dependent variable and other endogenous explanatory variables and transforms the data to expunge country fixed effects. (The system estimator instruments both for levels of the variables with deviations and for deviations with levels; we use the forward orthogonal deviations transformation rather than differencing.) The system GMM estimator is preferable to the difference estimator here because it can accommodate slowly changing or constant regressors.[67] In addition to the lagged dependent variable, we instrument for other explanatory variables that could be affected by the government's popularity. We therefore estimate the following model,

$$r_{i,t} = \alpha r_{i,t-1} + \boldsymbol{X}'_{i,t}\boldsymbol{\beta} + \gamma_i + \delta_t + \varepsilon_{i,t}, \quad (1)$$

where $r_{i,t}$ is the average approval rating of the government of country i in year t, $\boldsymbol{X}'_{i,t}$ is a vector of explanatory variables, γ_i is the country fixed effect (removed by the transformation), δ_t captures year fixed effects (included in all models), and $\varepsilon_{i,t}$ is an error term with zero mean.[68] We first address each hypothesis separately and then include all variables in a composite model.

We recognize throughout that causality may run in multiple directions. Where possible, we explore such feedbacks, tracing the hypothesized path from objective indicators to perceptions. Using models that control for unobserved country heterogeneity and a method that instruments for endogenous variables, as well as including year effects to capture international shocks, we do our best to improve identification. Still, we make no strong causal claims. Our aim—to show whether the best available data are consistent with theoretically motivated hypotheses—is more modest.

[66] Arellano and Bover 1995; Blundell and Bond 1998.

[67] Roodman 2009, 114.

[68] As advised by Roodman 2009, we test for remaining autocorrelation and use a Hansen test of overidentifying restrictions to avoid overfitting. We use lags of the endogenous variables as instruments, endeavoring to keep the total number of instruments below the number of countries. Roodman 2009, 128, strongly recommends including year dummies to guard against cross-country contemporaneous correlation that could otherwise bias standard error estimates. Nonstationarity does not raise the standard problems for the system GMM estimator, the moment conditions of which remain valid even under I(1); see Bond, Nauges, and Windmeijer 2005, 5. Still, since a unit root complicates identification, we test, using the t-test proposed by Bond and colleagues, which outperformed other available tests in their Monte Carlo study (Bond, Nauges, and Windmeijer 2005, 24). We can reject the null of a unit root at $p < .001$. A Phillips-Perron test also rejects nonstationarity at $p < .001$.

V. Results

Table 1 presents results for the full set of nondemocracies. Table A5 in the supplementary material models the relationships for informational autocracies and overt dictatorships separately, using interaction terms. Figures 1 and A3 present the estimated coefficients from Table A5. For comparison, Table A6 runs the Table 1 regressions on the GWP democracies. As expected, ratings in the nondemocracies show considerable continuity. Coefficients on lagged approval range from 0.27 to 0.58, but still fall far short of one, consistent with stationarity.[69]

Repression and Preference Falsification

Hypothesis 1 (a and b) posits that in overt dictatorships respondents would react to heightened repression with at least as much fear as outrage, generating a null or positive relationship with approval and possibly higher rates of don't know or refusals to answer the approval question. By contrast, in informational autocracies, indignation should offset fear, leading to a null or even negative relationship between repression and approval, don't knows, and refusals.

In fact, we never find a positive relationship between repression and approval, either for the full sample (Table 1) or for the overt dictatorships (Figure 1 [a]; Table A5, models 1 and 6; and Figure A3).[70] The relationship for the overt dictatorships is statistically insignificant, and the sign is actually negative. This result may be because the GWP is often unable to poll in countries where repression increases sharply to very high levels, such as Syria after 2010. In informational autocracies, greater repression is associated, as hypothesized, with lower declared approval, consistent with outrage outweighing fear (see Figure 1 [a]). Pooling the various authoritarian subtypes, repression was negative but not significant (Table 1, models 1 and 8).

In tables 1 and A5, we use the US State Department version of the PTS. Table A7 (a) and (b), also in the supplementary material, adds: (1) the Amnesty International version of the PTS, (2) the natural log of estimated fatalities in one-sided state violence against unarmed civilians, and (3) the percentage of respondents who said that most or many people in their country were afraid to discuss their political views. We also look for relationships with the percentage of people who re-

[69] Guriev and Treisman 2020b. In Table A5, we interact each independent variable with dummies for informational autocracy (IA), overt dictatorship, (OD), and unclassified nondemocracies (U), and control for the three dummies themselves.

[70] Guriev and Tresiman 2020b.

Table 1

Correlates of Government Approval: All Nondemocracies[a]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Approval, $t-1$	0.56***	0.27***	0.35***	0.38***	0.58***	0.56***	0.57***	0.33***
	(0.10)	(0.086)	(0.095)	(0.083)	(0.11)	(0.10)	(0.10)	(0.069)
Repression								
Political Terror Score (State Department), t	−2.03							−1.10
	(1.86)							(1.34)
Perceived performance								
Economic conditions "good" or "excellent," t		0.36***						
		(0.089)						
Percent who felt safe walking alone at night, t		0.57***						
		(0.19)						
Objective economic perceptions, t			0.58***					0.59***
			(0.12)					(0.12)
Economic misperceptions, t			0.32***					0.29***
			(0.085)					(0.075)
Objective safety perceptions, t			0.23**					0.20**
			(0.12)					(0.09)
Safety misperceptions, t			0.51***					0.38***
			(0.14)					(0.11)
Information								
Press freedom, t				−0.69***				−0.40***
				(0.23)				(0.16)
Percent who think media have a lot of freedom, t				0.55***				0.31***
				(0.11)				(0.09)
Percent with Internet access at home, t				−0.25**				−0.23**
				(0.11)				(0.10)
Total requests to Google to remove content, (1,000s), t				0.89***				1.5***
				(0.34)				(0.44)
Elections								
Executive election year, t					5.85***			
					(1.71)			
Legislative election year, t					−0.01			
					(1.50)			
Polling ended in 6 months before executive election						3.51	3.58	2.66
						(3.17)	(3.03)	(2.37)
Polling overlapped with executive election						0.90	1.53	1.29
						(5.87)	(5.71)	(2.93)
Polling began in 6 months after executive election						6.93***		
						(2.35)		
Polling began in 6 months after election with turnover							17.9***	9.76**
							(4.47)	(4.93)
Polling began in 6 months after election without turnover							4.11	4.64**
							(2.52)	(1.97)

(*continued*)

TABLE 1 (*cont.*)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Observations	261	261	252	258	258	258	258	252
Countries	51	51	50	51	51	51	51	50
Arellano–Bond AR(2), p	0.83	0.63	0.78	0.13	0.53	0.67	0.34	0.53
Hansen test, p	0.46	0.66	0.75	0.55	0.67	0.51	0.61	0.78
No. of instruments	18	22	27	30	19	26	30	43

SOURCE: Guriev and Treisman 2020b, Table A1.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors, clustered by country, in parentheses

[a] Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All explanatory variables instrumented with first to third lags except: objective economic and safety perceptions treated as exogenous; (model 3) lagged approval, economic and safety misperceptions first to fourth lags; (model 5) all first and second lags; (model 8) lagged approval and election variables instrumented with first lag, others with first and second lags, to reduce instruments.

sponded don't know or refused to answer. In no specifications did we find the significant positive relationship between repression and either reported approval or reticence that we would expect if the over-time patterns were driven by preference falsification.[71] In informational autocracies, the coefficients on indicators of repression were always negative in the approval regressions and were often statistically significant. Against expectations, ratings were also slightly lower and fewer respondents replied don't know in overt dictatorships in which more respondents thought that others censored themselves (Table A7b, models 4 and 8).[72] In short, these results are consistent with hypothesis 1b, but the evidence on H1a is weak.

GOVERNMENT PERFORMANCE

Perceived performance appears at least as salient in authoritarian states as in democracies. In all types of regimes, citizens approve of their government more when they see the economy booming. Indeed, the estimated coefficients for all nondemocracies (Table 1, model 2), informational autocracies, overt dictatorships (Table A5, model 2), and democracies (Table A6, model 2) were all around 0.35. In nondemocracies, a one standard deviation increase in the proportion of respondents perceiving economic prosperity (twenty-one percentage points) predicts approval seven to eight percentage points higher.

[71] We also looked for nonlinear effects (including repression squared) in case very low and very high repression produce higher ratings, sincere in the first case, coerced in the second. We found no significant results, see Table A7c; Guriev and Treisman 2020b.

[72] As one would expect, the proportion that believed others censored themselves was highest in the overt dictatorships (65 percent), followed by informational autocracies (56 percent), and democracies (41 percent).

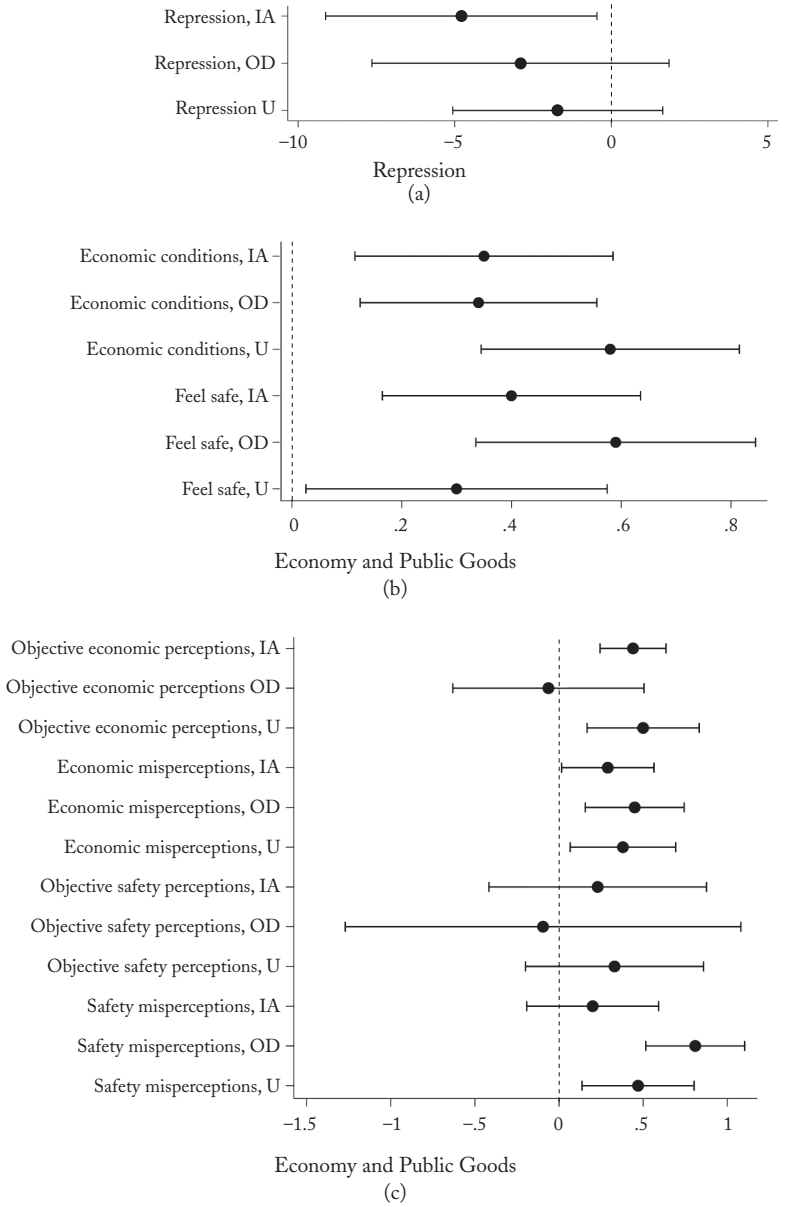


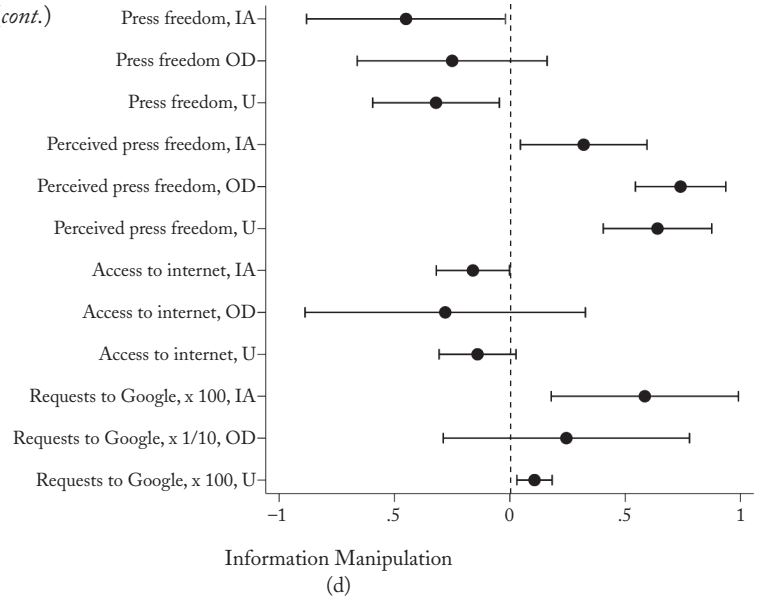
FIGURE 1
CORRELATES OF GOVERNMENT APPROVAL[a]

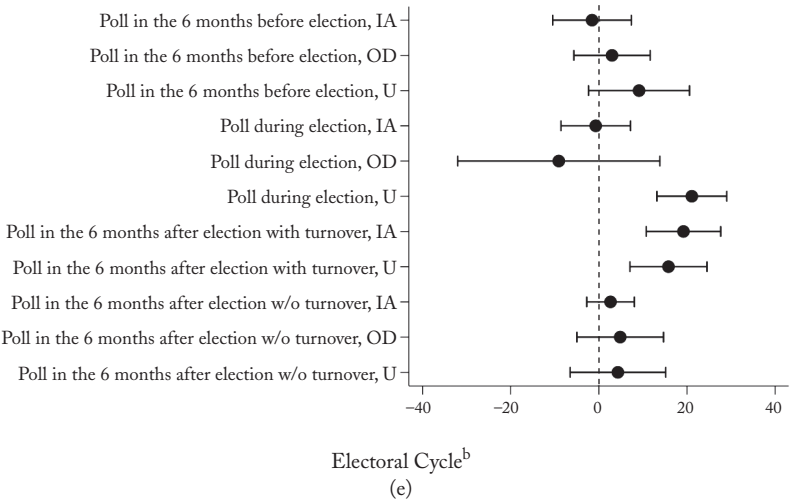
[a] Broken down among overt dictatorships (OD), informational autocracies (IA), and unclassified nondemocracies (U). Each point marks the estimated coefficient from Table A5, models 1–5; Guriev and Treisman 2020b. Horizontal lines represent 95 percent confidence intervals.

[b] There are no cases of "Poll in the 6 months after election with turnover OD."

(*continued*)

FIGURE 1 (*cont.*)





In authoritarian states, but not in democracies, ratings were higher when respondents felt safe in their neighborhoods (Table 1, model 2, and Table A6, model 2). The coefficients are significant in both informational autocracies and overt dictatorships (Figure 1 [b] and Table A5, models 2 and 6). Among all nondemocracies, a one standard deviation increase in the share that felt safe walking at night (seventeen

percentage points) was associated with a ten-point higher approval rating. The greater influence of safety perceptions in authoritarian states does not reflect a greater sense of danger there than in democracies. The proportion of respondents that said they felt safe walking at night averaged 59 percent in democracies and 61 percent in nondemocracies. But such perceptions may be distorted. We turn next to information manipulation.

Information Manipulation

Our results are consistent with the notion that media control is both effective and—when recognized—unpopular (H3 a and d). Declining press freedom, as captured by the Freedom House Media Freedom index, correlates with increasing approval of the leadership in authoritarian states. A one standard deviation decrease in press freedom (sixteen points on the hundred-point scale) predicts approval six points higher (Table 1, model 8). For example, Ecuador's twenty-three-point fall in media freedom in 2007–2014 predicts a nine-point rise in government popularity (exactly the actual increase). The coefficient on media restrictions was statistically significant in informational autocracies, but at most marginally so in overt dictatorships (Table A5, models 4 and 6). As hypothesized, ratings were lower in informational autocracies when citizens perceived the press to be restricted (see Figure 1 [d] and Table A5, model 4). In fact, this was also true, with an even larger coefficient, in overt dictatorships and in democracies (Table A6, model 4).[73] When governments are seen as stifling media freedom, they are less popular under all political regimes.

Perceptions of media freedom may be shaped by government manipulation. Perceived media freedom correlates much more closely with actual press freedom among democracies (correlation of .65) than among nondemocracies (correlation of .17). On average, citizens in democracies know how extensive censorship is in their country, while those in authoritarian states often do not. In 2016, Ukraine came eighth for press freedom among GWP nondemocracies and Rwanda came forty-third. But while 86 percent of Rwandan respondents said they thought their media had a lot of freedom, only 29 percent of Ukrainians felt that way.

What about Internet censorship? Our results provide some support for techno-optimism. In nondemocracies, a one standard deviation higher rate of home Internet access (twenty-six percentage points) predicts approval six points lower (Table 1, model 8). If Thailand had had

[73] Guriev and Tresiman 2020b.

Malaysia's Internet access in 2014, its leaders' predicted rating would have been about eight points lower. This negative relationship between Internet access and approval fits the view that where the media and political opposition are controlled, the web becomes a source of alternative information and critical coverage.[74] But online censorship may offset this result. Nondemocracies that asked Google to remove more materials had higher approval ratings than those that removed comparatively less. The coefficient was small but significant: a one standard deviation increase—448 additional requests—was associated with about .7 percentage points higher approval (Table 1, model 8). The coefficient was statistically significant for the informational autocracies taken separately, but not for the overt dictatorships (Figure 1 [d] and Table A5, model 4).

Using requests to Twitter to block tweets, we get a highly significant result of similar size (for one standard deviation, see Table A8). Internet censorship is relatively new, and such requests have so far been concentrated in a few countries. The leading web-censoring nondemocracies were Russia (120 requests in 2012 rising to 13,209 in 2016), Turkey (1,781 in 2016), Thailand (168 in 2016), and the United Arab Emirates (41 in 2014).[75] The list for Twitter is similar, led in 2016 by Turkey (5,569 requests) and Russia (2,123). Such efforts seem effective only above a certain scale; removing two or three posts is unlikely to matter. With this in mind, we tried several other formulations—the log of the number of requests, a dummy for more than twenty requests a year, and Freedom House's Freedom on the Net index. The results are consistent, although not always statistically significant.[76] In democracies, there was no robust relationship between Internet access or Internet censorship and approval (Table A6, model 8).

If restrictions on media lead to higher approval, do they achieve this by distorting perceptions of government performance? One can divide respondents' perceptions of government performance into two parts: one based on accurate information, the other on misperceptions, including those deliberately cultivated by government. In Table 2, we isolate these two types of variation. To do this, we regress the percentage of respondents who rated the economy excellent or good on four objective indicators—the growth rate, log previous year GDP per capita, log inflation, and unemployment (model 1). We also regress the percentage

[74] Internet access is not just a proxy for economic development. Development, as captured by log GDP per capita, correlates with higher approval; controlling for it in Table 1, model 4, the coefficient on Internet access is even stronger. Log GDP per capita is not at all significant.

[75] The Gallup World Polls do not cover China.

[76] See Table A8 in the supplementary material; Guriev and Treisman 2020b.

TABLE 2
CORRELATES OF PERCEPTIONS OF ECONOMIC PERFORMANCE AND SAFETY

	DV: Economic Performance			*DV: Safe to Walk at Night*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Growth rate of GDP per capita, *t*	1.30***	0.53***	0.50***			
	(0.34)	(0.17)	(0.18)			
Log GDP per capita, *t*–1	7.60***	18.6*	18.1*			
	(1.46)	(9.70)	(9.61)			
Log inflation, *t*	–4.92**	0.24	0.26			
	(2.26)	(1.28)	(1.30)			
Unemployment rate, *t*	–1.07***	–1.18*	–1.23*			
	(0.38)	(0.66)	(0.66)			
Homicide rate, *t*				–0.50***	–0.12	–0.12
				(0.13)	(0.12)	(0.12)
Homicide rate, *t*–1				–0.46***	–0.13*	–0.13*
				(0.12)	(0.07)	(0.08)
Percent robbed last year (GWP), *t*				–0.53***	–0.25***	–0.25***
				(0.12)	(0.07)	(0.07)
Press freedom (Freedom House), *t*		–0.18	–0.18		0.00	0.00
		(0.19)	(0.19)		(0.15)	(0.15)
Percent with Internet access at home, *t*		–0.00	–0.010		0.13*	0.12*
		(0.10)	(0.10)		(0.07)	(0.07)
More than 20 requests to Google, *t*		4.22	4.17		5.11***	5.12***
		(4.32)	(4.45)		(1.74)	(1.73)
Executive election year, *t*		1.74**			0.42	
		(0.85)			(0.80)	
Polling before or overlapping with executive election, *t*			2.41**			.60
			(1.14)			(1.23)
Polling after executive election, *t*			0.27			.13
			(1.09)			(1.11)
Approval, *t*–1		0.01	0.01		0.03	0.03
		(0.04)	(0.04)		(0.03)	(0.03)
Political Terror Score (State Department), *t*		–0.80	–0.85		–1.47***	–1.47**
		(1.08)	(1.06)		(0.52)	(0.52)
N	312	310	309	447	436	435
Country and year dummies	no	yes	yes	no	yes	yes
χ^2 for economic performance variables (*p* value)	.000	.001	.004			
χ^2 for objective safety variables (*p* value)				.000	.005	.007
R^2	.359	.873	.873	.407	.871	.870

SOURCE: Guriev and Treisman 2020b, Table A1.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors, clustered by country and year, in parentheses; OLS regressions

of respondents who said they felt safe walking at night on three objective indicators of domestic security—the homicide rate for the current year and for the previous year, and the percentage of respondents who said they had been robbed during the previous year (model 4). All variables have the expected signs and their joint contributions are highly significant. Models 2 and 5 add country and year fixed effects, as well as controls that may influence perceptions. (We also control for previous-period approval since this might feed back into evaluations of the economy and safety. It is always insignificant.) Joint significance tests for the objective indicators remain significant at $p < .01$. Evidently, average perceptions in nondemocracies are not purely idiosyncratic; they track actual economic performance and crime indicators.

But other variables may also contribute to perceptions. Does censorship enhance perceptions of economic performance and public safety? Press freedom is not statistically significant in any regressions, but Internet censorship is associated with greater confidence in law and order (models 5 and 6). Economic perceptions are 1.7 percentage points higher in executive election years, and this increase is concentrated where polling preceded or overlapped with the vote (model 3), suggesting the important role of preelection campaigns. Rather than making people feel more secure, greater state repression was associated with a lower reported perception of safety (models 5 and 6). It could be that governments respond to social disorder with repression, but we control for measures of actual crime.

Returning to government approval, we use models 1 and 4 in Table 2 to split the variation in perceptions into (1) objective perceptions, that is, the part related to our objective indicators, and (2) misperceptions, that is, the part unrelated to our objective indicators. Specifically, we run the ordinary least squares (OLS) regressions in these two models, and in each case keep both the predicted values, which we label objective perceptions, and the residuals, which we label misperceptions. The predicted values from model 1 represent the part of the variation in perceived economic performance that correlates with objective indicators of performance (growth, GDP per capita, inflation, and unemployment)—hence, objective perceptions. The residuals represent the part of the variation that does not correlate with at least those objective indicators that we could locate—hence, misperceptions. Similar logic applies for the public safety regression.

We use these measures of objective perceptions and misperceptions of economic performance and public safety in the regressions in Table 1, models 3 and 8, which aim to explain government approval, as

well as in Table A5, model 3, in which the types of authoritarian regime are distinguished.[77] Objective perceptions turn out to matter, but misperceptions also contribute in both cases (H3c). For economic performance, objective perceptions play a more important role. For public safety—perhaps because objective measures are more obscure—inaccurate subjective perceptions are more important.[78] As Figure 1 (c) and Table A5 show, the types of authoritarian states differ in the relative importance of accurate perceptions and misperceptions. In informational autocracies, objective perceptions of the economy and misperceptions both matter (coefficients of 0.42 and 0.32, respectively). In overt dictatorships, economic misperceptions are strongly related to approval (coefficient of 0.45), but there is no relationship with objective perceptions (coefficient close to zero and insignificant). Objective perceptions of safety are not significant for either type of autocracy, nor are misperceptions significant for informational autocracies. But exaggerated perceptions of safety correlate strongly with higher approval in overt dictatorships (coefficient of 0.79). If leaders can make citizens feel safer than conditions actually merit, it seems to render them more popular. (Of course, causation could be reversed. Approving of an authoritarian incumbent may make one feel safer.)

Next, we consider the role of elections. Table 1, model 5, shows approval was almost six percentage points higher when the GWP polled in the year of a national executive election. (There are no significant results for legislative elections.) When exactly did this surge occur? We hypothesized that in months leading up to a vote, ratings may rise because of intensified propaganda or handouts (H4a). But there was no significant relationship before elections, perhaps because some regimes loosen up on opposition during the campaign to legitimize the vote, offsetting their own heightened campaigning (Table 1, model 6). Did misperceptions increase during an election campaign, as posited in H4b? As noted above, even controlling for objective economic indicators, about 2.4 percentage points more respondents perceived good or

[77] In these regressions, we treat the objective perceptions variable as exogenous because it is based entirely on objective economic indicators. We instrument for other variables using their lags, as is standard in Arellano-Bover/Blundell-Bond system GMM estimation. In fact, results are very similar if we treat the objective perceptions as endogenous and instrument for them with their first and second lags (details available from the authors on request).

[78] Our objective data on crime include official homicide rates, compiled by the United Nations Office of Drugs and Crime mostly from national statistics and supplemented for a few countries with data from the Homicide Monitor database (https://homicide.igarape.org.br/). If some governments massage crime statistics for propaganda purposes, our estimates may exaggerate the role of objective perceptions of public safety. Thus, the role of misperception of crime levels in authoritarian countries could be even higher.

excellent economic conditions if they were asked shortly before or in the month of an executive election (Table 2, model 3).

The big election-related boost in the ratings came after the vote. When polling began shortly after an executive election, approval was almost seven points higher (Table 1, model 6). This postelection surge was considerably larger if the vote produced leader change (consistent with H4c). Models 7 and 8 in Table 1 suggest approval jumps about ten to eighteen points if this happens, but only about four to five points if the incumbent survives. Is it the election per se and any legitimacy it confers that explain the result, or just leader turnover? In Table A12, discussed in the next section, we add additional controls in column 2, including one for leader turnover (by election or any other means). Turnover not triggered by election turns out to predict a statistically significant 5.6-point drop in approval; the net effect of election-associated turnover remains around plus-fourteen points. In short, changing leaders through elections, even if manipulated, appears to buy nondemocratic regimes a significant boost. Changing leaders in other ways may burden the new leader with higher disapproval.[79]

We hypothesize that any positive relationship between elections and approval would be driven by informational autocracies, in which leader turnover lends credibility to the government's simulation of democracy (H4c). Figure 1 (e) and Table A5 show this was the case. The boost to approval if polling occurred right after an election in which the leader changed was almost twenty percentage points in informational autocracies (significant at $p < .01$). In fact, we could not even estimate the corresponding relationship in overt dictatorships because in none of the twelve elections held in such regimes in our sample did the leader change.

The logic of elections in democracies contrasts with that in informational autocracies. In democracies, we see a strong boost to approval (about ten to eleven points) if polling overlapped with the election month, suggesting the importance of campaigns (Table A6, models 6, 7, and 8). We also see a ratings surge after the election. As in the authoritarian states, the rise is greater if a new leader is elected, but the increase is also large (8.5 points compared to 4 to 5 in the nondemocracies) and highly significant even if there has been no turnover. Whereas

[79] Dropping variables from Table 1, model 8, suggests that the fall in the postelection-with-turnover coefficient (from 17.9 in model 7 to 9.76 in model 8) reflects mostly stronger perceived media freedom after a new leader is elected rather than stronger perceived economic performance. Including perceived media freedom along with actual press freedom in model 7 reduces the postelection-with-turnover coefficient to 9.06—see Table A9—whereas including economic perceptions lowers the coefficient only to 14.9; Guriev and Treisman 2020b. Elections that dislodge the leader in an authoritarian state may restore faith in freedom of the media, which translates into higher approval.

elections without turnover buy relatively little legitimacy in authoritarian states, in democracies they renew the incumbent's appeal.

In sum, although increased repression may silence critics in the most brutal despotisms, it does not boost ratings in the nondemocracies that the GWP surveyed. Across all states and years included, there was no positive correlation between any measure of repression and approval. In informational autocracies greater repression coincided—as hypothesized—with lower ratings. We believe that is because repression, while inducing fear, also undercuts the image of competence and benevolence that leaders of such regimes strive to present. Violent governments sometimes claim to use repression to protect the population. But in countries with more repressive governments, respondents were more—not less—anxious about their personal safety.

Authoritarian countries in which people did feel safe walking at night had higher approval. This was true in informational autocracies, but the relationship was even stronger in overt dictatorships. What mattered most in overt dictatorships were not accurate perceptions rooted in actual crime rates but people's idiosyncratic sense of security, perhaps fueled by the leader's propaganda. It is hard to tell in these cases what causes what: Do people approve a strongman if he makes them feel safer than they actually are, do they feel safer than they actually are if they approve of the incumbent, or do they claim to feel safe and approve of the incumbent because of pressure to conform? In any case, in such states, feelings of security and insecurity seem to be bound up with attitudes toward the ruler.

In informational autocracies, political attitudes relate closely to perceptions of economic performance. And what matters most in this type of autocracy are well-founded beliefs that correspond to objective indicators, although idiosyncratic perceptions also play some role. Moreover, in informational autocracies, respondents turn out to have quite accurate impressions on average of the state of the economy—much more accurate than those in overt dictatorships have, and comparable to those in imperfect democracies.

Still, information manipulation does seem to work. In informational autocracies, media and Internet censorship were both associated with higher ratings. The latter also coincided with greater confidence in public safety. Broader Internet access tended to accompany lower approval. But since censorship is unpopular everywhere, curbs on press freedom appear most effective when not observed. Approval was significantly lower when respondents realized that the media were unfree.

In executive election years, economic perceptions tend to improve slightly during the campaign, but we found no evidence of a preelec-

tion ratings surge in nondemocracies. What boosts approval in informational autocracies—and may also restore belief in the independence of the media—appears to be election-driven turnover of leaders. Even though such elections are often manipulated or even fraudulent, new elected leaders enjoy a huge surge. In democracies, by contrast, even elections without turnover buy the reelected incumbent a significant new honeymoon, but there is little sign of one after authoritarian elections without turnover.

VI. Robustness, Extensions, and Simulations

We distinguish overt dictatorships from informational autocracies using a state political killings threshold of ten killings per year.[80] This threshold is reasonable given the bimodal distribution of state political killings (see figures A1 and A2). Still, to check robustness to the way categories are divided, we redo all the estimations in Table A5 using four alternative thresholds. Specifically, we divide overt dictatorships from informational autocracies at thresholds representing the median levels of political killings in (1) the 2006–2016 cases included in our regressions (2.33 killings), and (2) the full Guriev Treisman database covering the 1946–2015 period (9.2 killings).[81] In addition, we use the 25th percentile (0.33 killings) and 75th percentile (40.29 killings) of the distribution for the 2006–2016 cases (Table A10 [a–d]). Most authoritarian regimes in recent decades have been informational autocracies;[82] we would not expect results to be as strong using the 0.33 killings threshold, which likely places many informational autocracies on the wrong side of the division. In fact, using these four alternative thresholds, results are similar to those in Table A5, although as expected, the media and Internet relationships weaken and lose some significance when the 0.33 killings threshold is used.

The Arellano-Bover/Blundell-Bond system GMM estimator (AB/BB) is our preferred model given the structure of the data. Table A11 shows the same regressions using OLS with country and year fixed effects and standard errors clustered by both country and year. We show versions both with and without the lagged dependent variable (LDV). Both are problematic. Including the LDV risks bias because it is automatically correlated with the errors. But to exclude the LDV is to assume, implausibly, that all effects of explanatory variables are absorbed in one period.

[80] In this we follow Guriev and Treisman 2020c.
[81] Guriev Treisman 2019.
[82] See Guriev and Treisman 2019.

Another advantage of the AB/BB estimator is that one can instrument for endogenous variables with lagged levels and differences, whereas simple fixed-effects regressions do not do so. Given these points, one should not expect results to be identical, but in fact, they are very similar.

We also tried alternative specifications of the AB/BB GMM regressions. With this estimator, there is a tradeoff between instrumenting for explanatory variables that may be endogenous, on the one hand, and overfitting by including too many instruments, on the other.[83] Although no clear rule defines how many instruments are too many, one rule of thumb is to include fewer than the number of units (countries). This condition is easily met in Table 1, models 1 through 7, but in model 8, the number of instruments approaches the number countries. Therefore, in Table A12, column 1, we reduce variables treated as endogenous to economize on instruments. Results are similar.

In addition, we add other controls that have been linked to approval in democracies—dummies for war, civil war, and leader turnover, and a measure of the leader's tenure in office (Table A12, model 2).[84] As noted in the preceding section, leader change without an election in authoritarian states was associated with a 5.6-point drop in approval. The dummy for international war is significant, suggesting a large wartime surge in approval, but because the only case in our data was Russia's 2008 war in Georgia, this should not be considered a robust finding.

If countries were transitioning into or out of democracy on the basis of explanatory variables we study, such selection might obscure the true relationships. We therefore try excluding twenty-four country-years in which a transition occurred in the current or previous year. The results change little (Table A12, model 3). We also check whether findings are sensitive to the scale used to identify democracies. Instead of Polity2, in model 4, we use the three-way ordinal polyarchy index from the V-Dem data set,[85] coding the bottom two categories (autocratic and electoral authoritarian) as nondemocracies. Again, results are similar. Model 5 shows the same regression controlling for countries' Polity2 scores to check whether press freedom picks up some broader quality of institutions. The press freedom index remains significant, with a similar coefficient, but Polity2 is not significant at all.

Table A12, model 6, shows that the results are almost identical dropping the year dummies. Last, model 7 restricts the analysis to years from

[83] See Roodman 2009.
[84] Of the 242 country-years in this regression, thirty contained leader turnover.
[85] Coppedge et al. 2016.

2012–2016 to ensure the coefficients on economic perceptions are not inflated by the salience of economics during the global recession of 2008–2011. In fact, the economic perceptions coefficients are a little higher in the non-crisis years; other estimates are similar, although slightly less significant because the number of observations falls by nearly 40 percent.[86]

The patterns we found in the data do not resemble those one would expect if preference falsification were driving the results. As an additional check, we re-estimate the Table 1, model 8, regression dropping the countries where approval correlated positively over time with measures of repression (as listed in Table A4). These are the countries where one might most expect to find (increasing) preference falsification. We do this for each measure of repression. But in each case the results are little changed, although they are occasionally less significant because of the drop in the number of observations (Table A13).

Our database on political violence includes all leaders who lasted for at least five years in a nondemocracy up until 2015.[87] We did not think it possible to confidently assess the violence level of leaders who were in power for a short time. As a result, when distinguishing types of dictatorship, as in Table A5, we have had to put cases in which the leader did not last five years in a separate category—unclassified. To check that the five-year threshold is not distorting the results, we extended the database to include an additional six leaders (nineteen country-years) who survived for between four and five years (three were informational autocracies and three overt dictatorships) in office. The results of the analysis change little from those in Table A5; see Table A14.

When opposition candidates or parties are banned, citizens have no alternative to compare to the incumbent, which may inflate approval. In Table A15, we check whether ratings are higher in nondemocracies in which: (1) the legislature contains no opposition parties, and (2) no opposition party has more than 10 percent of seats. Neither coefficient is significant, and other results are little affected. Several articles suggest that natural disasters or terrorist attacks can affect incumbents' popularity,[88] but we found no significant relationship. We also tested whether approval varied with the seasons, and found no significant patterns.

To demonstrate the magnitudes of these relationships, we produce simulations for several countries (see Appendix B in the supplementary

[86] Google requests remain significant, so this result is not driven by setting the variable at zero for early years.

[87] Guriev and Treisman 2019.

[88] E.g., Gasper and Reeves 2011; Ladd 2007.

material for the description of the methodology, and figures B1 and B2 for the results).[89] These simulations suggest, for instance, that poor economic performance weighed on Putin's and on Venezuela's Nicolás Maduro's ratings in recent years, but that media controls helped shore up their support—and also those of Ecuador's Rafael Correa and Kazakhstan's Nursultan Nazarbayev. The figures also suggest the importance of some individual leaders. Approval is higher than the models can explain in Venezuela under Chavez in 2011, but dives after the uncharismatic Maduro took over in 2013. In all cases, the simulated effects of changes in media freedom and in economic performance over the decade we study are substantial. The impact of these changes on leaders' popularity is in the range of ten to twenty percentage points. Such changes in approval may significantly affect the probability of survival of these leaders and regimes.

VII. Conclusions

Adam Przeworski suggests that "authoritarian equilibrium rests . . . on lies, fear, or economic prosperity."[90] We present comprehensive empirical evidence on how, in recent years, these three factors correlate with recorded levels of support for autocratic incumbents. We also document how two types of authoritarian regimes—overt dictatorships and the increasingly prevalent informational autocracies—differ in the basis of their popular support. These results are only suggestive. They do not constitute proof of causal relationships. Based on country-level averages, they also leave open questions about relationships at the individual level. Still, the use of a panel with country and year fixed effects allows us to control for unobserved factors better than many previous studies.

In informational autocracies as in democracies, prosperity seems to matter. For every additional 10 percent of citizens who think economic conditions are good or excellent, the ratings of leaders in informational autocracies are three to four percentage points higher. Moreover, economic perceptions, even though not perfectly accurate, do track objective indicators. Government propaganda, especially during election campaigns, may accentuate the positive, but misinformation does not allow authoritarian leaders to completely escape the consequences of poor performance. Similarly, citizens—especially in harsh, overt dictatorships—approve of their governments more when they feel confident about public safety. Although such perceptions correlate with actual

[89] Guriev and Treisman 2020b.
[90] See Przeworski 1991, 58.

crime levels, it is respondents' inaccurate beliefs about public safety that move approval most in the overt dictatorships. It is easier to manipulate diffuse feelings of safety than to fool people about the prices they see in stores and the numbers on their paychecks.

Although the perceptions of citizens are not entirely distorted, government lies also matter. And the more convincing the lies the better for maintaining control, because citizens do not like to be deceived. Authoritarian leaders who restrict the press are more popular than those who permit greater freedom. Where Internet access is narrower and where Internet content is censored, support is also higher. Simulations suggest that in countries like Russia and Ecuador, the impact of information manipulation on presidential approval has been significant. But when citizens realize that their press is censored, they like their governments less. Today's informational autocrats need to manipulate discreetly.

Modern authoritarian regimes try to blend in with democracies through an extensive use of elections. Our evidence suggests two benefits that executive elections may provide to incumbents. First, they may coordinate state agents to periodically improve perceptions of the economy. Second, and more important, in informational autocracies they reinvigorate the regime's appeal if the top leader is replaced. Citizens are not naive about the act of voting per se, but they do take electoral results seriously if they result in turnover.

The role of fear is no longer as straightforward as it used to be. Although repression probably does work in the most brutal dictatorships, it is less effective at boosting approval in less extreme cases, and seems more likely to backfire—sparking more outrage than anxiety—in informational autocracies. While economic prosperity remains important and the power of lies is amplified by modern technologies and techniques, most autocrats—although far from squeamish—face incentives to use fear less crudely than their predecessors.

Supplementary Material

Supplementary material for this article can be found at https://doi.org/10.1017/S0043887120000167.

Data

Replication data, Stata code, and a Stata log file containing all the results for this article are available at https://doi.org/10.7910/DVN/8NGKDS.

Gallup has agreed to provide temporary access to the relevant Gallup World Poll proprietary data for anyone interested in replicating the analysis. Contact datainquiry@gallup.com.

References

Adena, Maja, Ruben Enikolopov, Maria Petrova, Veronica Santarosa, and Ekaterina Zhuravskaya. 2015. "Radio and the Rise of the Nazis in Prewar Germany." *Quarterly Journal of Economics* 130, no. 4: 1885–939. doi: 10.1093/qje/qjv030.

Arce, Moisés. 2003. "Political Violence and Presidential Approval in Peru." *Journal of Politics* 65, no. 2: 572–83. doi: 10.1111/1468-2508.t01-1-00016.

Arellano, Manuel, and Olympia Bover. 1995. "Another Look at the Instrumental Variable Estimation of Error-Components Models." *Journal of Econometrics* 68, no. 1: 29–51. doi: 10.1016/0304-4076(94)01642-D.

Arendt, Hannah. 1968. *The Origins of Totalitarianism*. New York, N.Y.: Houghton Mifflin Harcourt.

Bellin, Eva. 2012. "Reconsidering the Robustness of Authoritarianism in the Middle East: Lessons from the Arab Spring." *Comparative Politics* 44, no. 2: 127–49. doi: 10.5129/001041512798838021.

Blair, Graeme, Alexander Coppock, and Margaret Moor. 2020. "When to Worry About Sensitivity Bias: A Social Reference Theory and Evidence from 30 Years of List Experiments." *American Political Science Review*: 1–19. doi: 10.1017/S0003055420000374.

Blaydes, Lisa. 2010. *Elections and Distributive Politics in Mubarak's Egypt*. New York, N.Y.: Cambridge University Press.

Blundell, Richard, and Stephen Bond. 1998. "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models." *Journal of Econometrics* 87, no. 1: 115–43. doi: 10.1016/S0304-4076(98)00009-8.

Bond, Stephen R., Céline Nauges, and Frank Windmeijer. 2005. "Unit Roots: Identification and Testing in Micro Panels." CENMAP Working Paper no. CWP07/05. London, UK: Center for Microdata, Methods and Practice. doi: 10.2139/ssrn.757316.

Brody, Richard A. 1991. *Assessing the President: The Media, Elite Opinion, and Public Support*. Stanford, Calif.: Stanford University Press.

Buendía, Jorge. 1996. "Economic Reform, Public Opinion, and Presidential Approval in Mexico, 1988–1993." *Comparative Political Studies* 29, no. 5: 566–91. doi: 10.1177/0010414096029005004.

Bueno de Mesquita, Ethan. 2010. "Regime Change and Revolutionary Entrepreneurs." *American Political Science Review* 104, no. 3: 446–66. doi: 10.1017/S0003055410000274.

Carter, Brett L., and Erin Baggott Carter. 2016. "Propaganda and Protest: Evidence from Post-Cold War Africa." At https://www.semanticscholar.org/paper/Propaganda-and-Protest-%3A-Evidence-from-Post-Cold-%E2%88%97-Carter-Carter/18b6c39eb34bc84d922773db6ee7f3b5e20f9c81, accessed August 13, 2020.

Center for Systemic Peace. 2016. The Polity Project. At http://www.systemicpeace.org/polityproject.html, accessed August 13, 2020.

Clarke, Harold D., and Marianne C. Stewart. 1995. "Economic Evaluations, Prime Ministerial Approval and Governing Party Support: Rival Models Reconsidered." *British Journal of Political Science* 25, no. 2: 145–70. doi: 10.1017/S0007123400007134.

Clarke, Harold D., and Matthew Lebo. 2003. "Fractional (Co)integration and Governing Party Support in Britain." *British Journal of Political Science* 33, no. 2: 283–301. doi: 10.1017/S0007123403000127.

Conley, Richard S. 2006. "From Elysian Fields to the Guillotine? The Dynamics of Presidential and Prime Ministerial Approval in Fifth Republic France." *Comparative Political Studies* 39, no. 5: 570–98. doi: 10.1177/0010414005276313.

Coppedge, Michael, John Gerring, Staffan I. Lindberg, and Svend-Erik Skaaning. 2016. "V-Dem Codebook v6." Varieties of Democracy (V-Dem) Project. University of Gothenburg, V-Dem Institute, and University of Notre Dame, Kellogg Institute. At https://www.v-dem.net/files/42/Codebookv6.pdf, accessed August 13, 2020.

Deaton, Angus. 2008. "Income, Health, and Well-being around the World: Evidence from the Gallup World Poll." *Journal of Economic Perspectives* 22, no. 2: 53–72. doi: 10.1257/jep.22.2.53.

Diamond, Larry. 2002. "Thinking About Hybrid Regimes." *Journal of Democracy* 13, no. 2: 21–35. doi: 10.1353/jod.2002.0025.

Diamond, Larry, and Marc F. Plattner. 2010. "Liberation Technology." *Journal of Democracy* 21, no. 3: 69–83. doi: 10.1353/jod.0.0190.

Egorov, Georgy, and Konstantin Sonin. Forthcoming. "Elections in Non-Democracies." *Economic Journal*.

Eichenberg, Richard C., Richard J. Stoll, and Matthew Lebo. 2006. "War President: The Approval Ratings of George W. Bush." *Journal of Conflict Resolution* 50, no. 6: 783–808. doi: 10.1177/0022002706293671.

Ellul, Jacques. 1965. *Propaganda: The Formation of Men's Attitudes*. New York, N.Y.: Alfred A. Knopf.

Enikolopov, Ruben, Maria Petrova, and Ekaterina Zhuravskaya. 2011. "Media and Political Persuasion: Evidence from Russia." *American Economic Review* 101, no. 7: 3253–85. doi: 10.1257/aer.101.7.3253.

Erikson, Robert S., Michael B. MacKuen, and James A. Stimson. 2002. *The Macro Polity*. New York, N.Y.: Cambridge University Press.

Frye, Timothy, Scott Gehlbach, Kyle L. Marquardt, and Ora John Reuter. 2017. "Is Putin's Popularity Real?" *Post-Soviet Affairs* 33, no. 1: 1–15. doi: 10.1080/1060586X.2016.1144334.

Gandhi, Jennifer, and Ellen Lust-Okar. 2009. "Elections under Authoritarianism." *Annual Review of Political Science* 12: 403–22. doi: 10.1146/annurev.polisci.11.060106.095434.

Gasper, John T., and Andrew Reeves. 2011. "Make it Rain? Retrospection and the Attentive Electorate in the Context of Natural Disasters." *American Journal of Political Science* 55, no. 2: 340–55. doi: 10.1111/j.1540-5907.2010.00503.x.

Geddes, Barbara. 2005. "Why Parties and Elections in Authoritarian Regimes?" Paper presented the American Political Science Association annual meeting. Washington D.C. At http://www.daniellazar.com/wp-content/uploads/authoritarian-elections.doc, accessed August 13, 2020.

Geddes, Barbara, Joseph Wright, and Erica Frantz. 2018. *How Dictatorships Work: Power, Personalization, and Collapse*. New York, N.Y.: Cambridge University Press.

Geddes, Barbara, and John Zaller. 1989. "Sources of Popular Support for Authoritarian Regimes." *American Journal of Political Science* 33, no. 2: 319–47. doi: 10.2307/2111150.

Gehlbach, Scott, and Konstantin Sonin. 2014. "Government Control of the Media." *Journal of Public Economics* 118, October: 163–71. doi: 10.1016/j.jpubeco.2014.06.004.

Gibney, Mark, Linda Cornett, Reed Wood, Peter Haschke, and Daniel Arnon. 2016. The Political Terror Scale 1976–2015 Database. At http://www.politicalterrorscale.org, accessed August 13, 2020.

Gunitsky, Seva. 2015. "Corrupting the Cyber-Commons: Social Media as a Tool of Autocratic Stability." *Perspectives on Politics* 13, no. 1: 42–54. doi: 10.1017/S1537592714003120.

Guriev, Sergei and Daniel Treisman. 2019. "Informational Autocrats." *Journal of Economic Perspectives* 33, no. 4: 100–27. doi: 10.1257/jep.33.4.100.

Guriev, Sergei, and Daniel Treisman. 2020a. "Replication data for: The Popularity of Authoritarian Leaders: A Cross-National Investigation." Harvard Dataverse, V1. doi: 10.7910/DVN/8NGKDS.

Guriev, Sergei and Daniel Treisman. 2020b. "Supplementary material for: The Popularity of Authoritarian Leaders: A Cross-National Investigation." doi: 10.1017/S0043887120000167.

Guriev, Sergei and Daniel Treisman. 2020c. "A Theory of Informational Autocracy." *Journal of Public Economics* 186, June. doi: 10.1016/j.jpubeco.2020.104158.

Honaker, James, and Gary King. 2010. "What to Do about Missing Values in Time-Series Cross-Section Data." *American Journal of Political Science* 54, no. 2: 561–81. doi: 10.1111/j.1540-5907.2010.00447.x.

Honaker, James, Gary King, and Matthew Blackwell. 2011. "Amelia II: A Program for Missing Data." *Journal of Statistical Software* 45, no. 7: 1–47. doi: 10.18 637/jss.v045.i07.

Hyde, Susan D., and Nikolay Marinov. 2012. "Which Elections Can Be Lost?" *Political Analysis* 20, no. 2: 191–210. doi: 10.1093/pan/mpr040.

Jones, Benjamin F., and Benjamin A. Olken. 2005. "Do Leaders Matter? National Leadership and Growth since World War II." *Quarterly Journal of Economics*, 120, no. 3: 835–64. doi: 10.1093/qje/120.3.835.

Jones, Benjamin F., and Benjamin A. Olken. 2009. "Hit or Miss? The Effect of Assassinations on Institutions and War." *American Economic Journal: Macroeconomics* 1, no. 2: 55–87. doi: 10.1257/mac.1.2.55.

Kakkar, Hemant, and Niro Sivanathan. 2017. "When the Appeal of a Dominant Leader is Greater than a Prestige Leader." *PNAS* June 27, 114, no. 26: 6734–39. doi: 10.1073/pnas.1617711114.

Kelly, Jana Morgan. 2003. "Counting on the Past or Investing in the Future? Economic and Political Accountability in Fujimori's Peru." *Journal of Politics* 65, no. 3: 864–80. doi: 10.1111/1468-2508.00216.

Kern, Holger Lutz, and Jens Hainmueller. 2009. "Opium for the Masses: How Foreign Media Can Stabilize Authoritarian Regimes." *Political Analysis* 17, no. 4: 377–99. doi: 10.1093/pan/mpp017.

King, Gary, Jennifer Pan, and Margaret E. Roberts. 2013. "How Censorship in China Allows Government Criticism but Silences Collective Expression." *American Political Science Review* 107, no. 2: 326–43. doi: 10.1017/S0003055413000014.

Kuran, Timur. 1991. "Now out of Never: The Element of Surprise in the East

European Revolution of 1989." *World Politics* 44, no. 1 (October): 7–48. doi: 10.2307/2010422.
Ladd, Jonathan McDonald. 2007. "Predispositions and Public Support for the President during the War on Terrorism." *Public Opinion Quarterly* 71, no. 4: 511–38. doi: 10.1093/poq/nfm033.
Levitsky, Steven, and Lucan A. Way. 2010. *Competitive Authoritarianism: Hybrid Regimes after the Cold War*. New York, N.Y.: Cambridge University Press.
Little, Andrew T. 2017. "Propaganda and Credulity." *Games and Economic Behavior* 102, March: 224–32. doi: 10.1016/j.geb.2016.12.006.
Lipman, Maria, Anna Kachkaeva, and Michael Poyker. 2018. "Media in Russia: Between Modernization and Monopoly." In Daniel Treisman, ed., *The New Autocracy: Information, Politics, and Policy in Putin's Russia*. Washington, D.C.: The Brookings Institution.
Lorentzen, Peter. 2014. "China's Strategic Censorship." *American Journal of Political Science* 58, no. 2: 402–14. doi: 10.1111/ajps.12065.
Magaloni, Beatriz. 2006. *Voting for Autocracy: Hegemonic Party Survival and its Demise in Mexico*. New York, N.Y.: Cambridge University Press.
Miner, Luke. 2015. "The Unintended Consequences of Internet Diffusion: Evidence from Malaysia." *Journal of Public Economics* 132, December: 66–78. doi: 10.1016/j.jpubeco.2015.10.002.
Mishler, William, and John P. Willerton. 2003. "The Dynamics of Presidential Popularity in Post-Communist Russia: Cultural Imperative versus Neo-Institutional Choice?" *Journal of Politics* 65, no. 1: 111–41. doi: 10.1111/1468-2508.t01-1-00006.
Mueller, John E. 1973. *War, Presidents, and Public Opinion*. Hoboken, N.J.: John Wiley & Sons.
Noelle-Neumann, Elisabeth, and Thomas Petersen. 2004. "The Spiral of Silence and the Social Nature of Man." In Lynda Lee Kaid, ed., *Handbook of Political Communication Research*. New York, N.Y.: Routledge: 339–56.
Overy, Richard. 2004. *The Dictators: Hitler's Germany, Stalin's Russia*. New York, N.Y.: W. W. Norton & Company.
Przeworski, Adam. 1991. *Democracy and the Market: Political and Economic Reforms in Eastern Europe and Latin America*. Cambridge, UK: Cambridge University Press.
Remmer, Karen L. 2012. "The Rise of Leftist-Populist Governance in Latin America: The Roots of Electoral Change." *Comparative Political Studies* 45, no. 8: 947–72. doi: 10.1177 /0010414011428595.
Roberts, Margaret E. 2018. *Censored: Distraction and Diversion inside China's Great Firewall*. Princeton, N.J.: Princeton University Press.
Roodman, David. 2009. "How to Do xtabond2: An Introduction to Difference and System GMM in STATA." *Stata Journal* 9, no. 1: 86–136. doi: 10.1177 /1536867X0900900106.
Rozenas, Arturas, and Denis Stukal. 2019. "How Autocrats Manipulate Economic News: Evidence from Russia's State-Controlled Television." *Journal of Politics* 81, no. 3: 982–96. doi: 10.1086/703208.
Rubin, Donald. 1987. *Multiple Imputation for Nonresponse in Surveys*. New York, N.Y.: Wiley.

Sanders, David. 2000. "The Real Economy and the Perceived Economy in Popularity Functions: How Much Do Voters Need to Know? A Study of British Data, 1974–97." *Electoral Studies* 19, no. 2–3: 275–94. doi: 10.1016/S0261-3794(99)00052-9.

Sanovich, Sergey, Denis Stukal, and Joshua A. Tucker. 2018. "Turning the Virtual Tables: Government Strategies for Addressing Online Opposition with an Application to Russia." *Comparative Politics* 50, no. 3: 435–82. doi: 10.5129/001041518822704890.

Schedler, Andreas, ed. 2006. *Electoral Authoritarianism: The Dynamics of Unfree Competition*. Boulder, Colo.: Lynne Rienner Publishers.

Simpser, Alberto. 2013. *Why Governments and Parties Manipulate Elections: Theory, Practice, and Implications*. New York, N.Y.: Cambridge University Press.

Spooner, Mary Helen. 1999. *Soldiers in a Narrow Land: The Pinochet Regime in Chile*. Berkeley, Calif.: University of California Press.

Stevenson, Betsey, and Justin Wolfers. 2011. "Trust in Public Institutions over the Business Cycle." *American Economic Review* 101, no. 3: 281–87. doi: 10.1257/aer.101.3.281.

Stokes, Susan C. 1996. "Economic Reform and Public Opinion in Peru, 1990–1995." *Comparative Political Studies* 29, no. 5: 544-65. doi: 10.1177/0010414096029005003.

Sutton, Jonathan, Charles Butcher, and Isak Svensson. 2014. "Explaining Political Jiu-Jitsu: Institution-Building and the Outcomes of Regime Violence against Unarmed Protests." *Journal of Peace Research* 51, no. 5: 559–73. doi: 10.1177/0022343314531004.

Svolik, Milan W. 2012. *The Politics of Authoritarian Rule*. New York, N.Y.: Cambridge University Press.

Tortora, Robert D., Rajesh Srinivasan, and Neli Esipova. 2010. "The Gallup World Poll." In Janet Harkness, Michael Braun, Brad Edwards, Timothy P. Johnson, Lars Lyberg, Peter Ph. Mohler, Beth-Ellen Pennell, and Tom W. Smith, eds., *Survey Methods in Multinational, Multiregional, and Multicultural Contexts*. Hoboken, N.J.: John Wiley & Sons: 535–43.

Treisman, Daniel. 2011. *The Return: Russia's Journey from Gorbachev to Medvedev.* New York, N.Y.: Free Press.

Villarreal, Andrés. 1999. "Public Opinion of the Economy and the President among Mexico City Residents: The Salinas Sexenio." *Latin American Research Review* 34, no. 2: 132–51. At https://www.jstor.org/stable/2503915.

Weyland, Kurt. 2000. "A Paradox of Success? Determinants of Political Support for President Fujimori." *International Studies Quarterly* 44, no. 3: 481–502. doi: 10.1111/0020-8833.00168.

Weyland, Kurt. 2006. "The Rise and Decline of Fujimori's Neopopulist Leadership." In Julio F. Carrión, ed., *The Fujimori Legacy: The Rise of Electoral Authoritarianism in Peru*, University Park, Penn.: Penn State University Press: 13–38.

Worchel, Stephen, and Susan E. Arnold. 1973. "The Effects of Censorship and Attractiveness of the Censor on Attitude Change." *Journal of Experimental Social Psychology* 9, no. 4: 365–77. doi: 10.1016/0022-1031(73)90072-3.

Zaller, John. 1992. *The Nature and Origins of Mass Opinion*. New York, N.Y.: Cambridge University Press.

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Key Words

authoritarianism, censorship, dictatorship, public opinion