

The Popularity Costs of Economic Crisis under Electoral Authoritarianism: Evidence from Russia

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Abstract: *While a large literature recognizes that economic crises threaten the stability of electoral autocracies, we know relatively little about how citizens form economic perceptions and how they attribute blame for worsening conditions in these regimes. To gain traction on these questions, I exploit subnational variation in economic performance across Russia's regions during a recent downturn, combining regionally representative surveys of more than 67,000 voting-age respondents with data on growth and unemployment. Contrary to conventional wisdom that citizens are passive consumers of propaganda, I show that they extract objective economic information from personal experience and local conditions. Moreover, I find that they give greater weight to this information where regional party dominance makes economic performance a clearer indicator of the ruling party's competence and when they believe the media are biased. These results suggest limits on illiberal regimes' ability to exploit informational asymmetries to bolster popular support during economic downturns.*

Replication Materials: The data, code, and any additional materials required to replicate all analyses in this article are available on the *American Journal of Political Science* Dataverse within the Harvard Dataverse Network, at: <https://doi.org/10.7910/DVN/XKC4R4>.

Hybrid regimes depend on popular support to lower the costs of staying in power. Declining popular support forces regimes to resort to riskier strategies, like electoral fraud and coercion, to maintain their rule. While existing research finds that the erosion of public support is a key driver of both elite defections and protest—critical sources of regime vulnerability—the microlevel mechanisms by which voters assign responsibility for worsening economic conditions in non-democracies remain poorly understood. Under what conditions does poor economic performance undermine the popularity of electoral authoritarian regimes, that is, those combining authoritarian practices with multiparty elections (Levitsky and Way 2010; Schedler 2006)? How do voters in these regimes receive and process information about economic conditions?

In conventional models of performance-based voting, citizens observe the state of the economy and use this information either to sanction incumbents or select a competent party (e.g., Fearon 1999; Ferejohn 1986; Fiorina 1981; Key 1966). An important constraint is that voters do not observe incumbent performance directly, but must instead rely on noisy and imperfect performance signals. Whether this noise is random or systematic has far-reaching consequences for the accountability mechanism implied by performance-based voting theories.¹ This raises important questions about voter behavior in electoral autocracies, which typically lack fully free and independent media and where key news outlets are state controlled (Enikolopov, Petrova, and Zhuravskaya 2011; Gehlbach 2010). When faced with declining economic performance, illiberal regimes are often thought to possess a propaganda advantage

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¹See, for example, Duch and Stevenson (2011) on bias in economic perceptions across Western democracies.

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(McAllister and White 2011; Rose, Mishler, and Munro 2011; Stockmann and Gallagher 2011).

Such an advantage might operate at two levels. First, voters may fail to update their subjective assessments of incumbents' performance in response to actual economic conditions. Alternately or additionally, autocrats may deflect blame, such that voters' changing perceptions of economic performance have little effect on incumbent support. Both mechanisms suggest that even rudimentary accountability for poor performance will be weak. Yet few studies explicitly tackle the relationship between objective economic fluctuations, voters' perceptions, and incumbent support under electoral authoritarianism.² Indeed, most empirical work on performance-based accountability relies on evidence from advanced democracies. As a recent review of the literature highlights, we still know little about economic effects on incumbent support where government manipulation may hinder informed assessments of the economy and the attribution of responsibility (Lewis-Beck and Stegmaier 2008, 321).

This article sheds light on how objective economic conditions translate into economic perceptions and how both of these affect incumbent support under electoral authoritarianism, the modal form of autocracy today (Brownlee 2007). The article makes three related claims. The first is that economic conditions do matter in nondemocratic settings, despite incumbents' putative propaganda advantage and best efforts to deflect responsibility. I argue that rather than consult official statistics or rely on state media, individuals are able to extract objective information from personal experience and local conditions and, moreover, that they use this information to punish incumbents for poor performance. Second, I argue that voters who perceive that the media are biased respond strategically by attaching even greater weight to conditions they can directly observe. Third, I propose that ruling party dominance focuses responsibility for poor performance.

To assess these arguments systematically, I exploit surveys of more than 67,000 voting-age respondents as well as regional macroeconomic indicators of growth and unemployment during Russia's 2008–9 crisis. By bridging the micro-macro divide, my approach has certain advantages over purely cross-sectional or aggregate time-series designs for addressing the potential endogeneity of economic perceptions and explicating causal mechanisms. Employing a causal mediation framework (Becher and Donnelly 2013; Imai, Keele, and Tingley 2010) allows me to test the full causal chain implied by this article's theory of regional performance-based voting. I trace the logic of

this theory from changes in the real economy, through voters' perceptions of economic performance, to their intention to vote for incumbents.

Russia shares many features in common with other hybrid regimes, making it an ideal setting for this research: multiparty elections in which incumbents enjoy an unfair advantage; extensive state economic involvement; and a government that has stifled access to independent information (Brownlee 2007; Levitsky and Way 2010; Magaloni 2006; Reuter and Turovsky 2014). By 2008, Russia's ruling party held a dominant share (70%) of seats in the national parliament and controlled the vast majority of regional governorships. Three major television channels served as the main source of news for most Russians during the crisis. Two of these outlets were run directly by the state, and the third was owned by a state-run corporation. Just under half of the world's population lives in countries, like Russia, that have an unfree media, according to Freedom House (2017, 25). Of these, Russia is in roughly the middle of the pack.

To preview the results, I find that despite informational asymmetries and ruling party efforts to deflect responsibility, Russian citizens gained valuable economic information from local conditions. Where conditions were objectively worse, citizens' evaluations were more negative. Second, I find that voters whose economic assessments were negative were less likely to support the dominant party, in line with traditional incumbency-oriented economic voting theory. Third, I find that voters who were wary of government propaganda gave greater weight to less mediated sources of economic information. Finally, I show that voters were more likely to use regional economic information to evaluate incumbents where the pattern of regional political competition yielded a clearer signal about the ruling party's responsibility. These results suggest limits on incumbents' use of official media to distort economic reality in their favor and a downside to dominance. The next section describes gaps in our understanding of how economic conditions affect incumbent support under hybrid regimes and lays out the central argument about how hybrid regime voters receive and process economic information.

Regime Type, the Economy, and Incumbent Support

Managing public opinion is a key challenge in electoral autocracies (Hale 2015). The theory of individual-level behavior this article presents highlights a trade-off that is particularly acute for such regimes during crisis periods.

²Treisman (2011) is an exception.

On the one hand, limiting political competition allows authoritarian incumbents to monopolize rents, repress citizens, and manipulate elections with impunity. On the other, restricting the political playing field focuses responsibility, and consolidating state control over the media diminishes a regime's ability to credibly deflect blame. These factors expose incumbents to declining popular support when conditions deteriorate. This article builds on several strands of the economic voting literature to theorize the individual-level dynamics behind this trade-off.

The Information Problem

Like voters in developed democracies, I assume that hybrid regime voters care about economic performance as a means of assessing incumbents' ability to promote their own well-being (Fearon 1999; Fiorina 1981; Kinder and Kiewiet 1981). However, the information problem they confront differs in key ways from that of voters in a democracy. While gathering economic information is costly for voters everywhere (Popkin 1994), as hybrid regime voters go about this task, their efforts are complicated by deliberate attempts to manipulate the media. Incumbents may use biased coverage to misrepresent actual economic conditions or blame factors beyond their control. Asked at the start of the crisis, in 2008, whether media coverage of the country's current economic situation was objective, 46% of Russians responded that it was not.³

Existing studies show that media coverage may distort perceptions of national economic performance even in democracies (Hetherington 1996). Yet we still poorly understand how perceptions of media bias affect voters' information-gathering strategies and the relative weight given to different types of economic information. This is an important gap, particularly for electoral authoritarian countries, most of which fail to meet minimum standards for press freedom. In this article, I propose that media bias has specific implications for the kind of information voters should use to evaluate incumbents.

In solving the information problem that confronts them, hybrid regime voters may privilege information about the economy from their daily lives and local conditions for three reasons: it can be obtained at low cost, is less vulnerable to manipulation, and provides a more informative signal. At least since Downs (1957, 223), scholars have suggested that voters gain valuable political information in the course of their everyday production

and consumption decisions. Economic fluctuations—often extreme in emerging markets—have a direct impact on voters through inflation, unemployment, and wage arrears (Javeline 2003; Richter 2006). In contrast to information about national conditions, which is delivered to voters by politicians or the press, these more immediate sources of information are observed by voters themselves or shared among trusted friends and neighbors.

As Dahl (1974, 263) writes: "Direct experience is a persuasive teacher; often, too, it is a stubborn enemy of manipulative propaganda." Consistent with Dahl's logic, I argue that voters who are skeptical about the objectivity of mass media will place greater weight on the local economic conditions that they can observe directly. This theoretical prediction accords with formal models of government media control, which emphasize that bias, by lowering the informational content of news, reduces media consumption. As the marginal utility of state-supplied information diminishes, viewers tune out (Besley and Prat 2006; Gehlbach and Sonin 2014, 163). It also jibes with exiting evidence that most Russians believe correcting for pro-government bias is their own responsibility (Mickiewicz 2008).

This article also joins several recent studies in revisiting the impact of local conditions on incumbent support and extends that agenda to competitive autocracies (Ansolabehere, Meredith, and Snowberg 2014; Brooks and Prysby 1999; Ebeid and Rodden 2006; Healy and Lenz 2014a). These studies emphasize that local information is both less noisy and less biased than other economic information. As Ansolabehere, Meredith, and Snowberg (2014) write, direct experience of the local economy provides a more informative signal, which has "lower sampling variance than personal information, and lower sampling bias than national information" (385). In other words, local information is less subject to idiosyncratic shocks than personal information and, at the same time, more relevant to a voter's own circumstances than national information. This implies that voters will discount national information and give greater weight to local information than their own pocketbook circumstances, which may be only weakly attributable to the actions of incumbents. In addition, autocracies offer another reason for voters to prefer local information: It is more directly observable and therefore less subject to government manipulation.

Downsides of Dominance

Of course, voters do not observe economic conditions in a vacuum, and scholars have long recognized that some

³According to the FOM 2008 GeoRating survey analyzed throughout.

institutional configurations convey more information about incumbents' responsibility than others (Duch and Stevenson 2008; Powell and Whitten 1993). Institutional configurations with a strong president or prime minister and a dominant party—as in most hybrid regimes—encourage performance-based voting by concentrating policymaking authority. According to Powell and Whitten's (1993) clarity of responsibility thesis, economic voting varies based on the nature of political power sharing, which in turn is shaped by both formal institutional structure and informal political dynamics. When clarity of responsibility for economic management is high, citizens are more likely to evaluate incumbents on the basis of observed performance.

In Russia, the period preceding the global financial crisis saw centralization of political power and the state's intrusion into economic affairs on a scale unprecedented since the collapse of communism. By 2008, there were just a handful of regional governors who were not members of the ruling party. Besides the construction of a "power vertical" during those years, Ericson (2009) describes the construction of a "financial vertical," which gave the state increased leverage to control economic activity by manipulating financial flows. As the crisis progressed, Russia's government moved "vigorously to centralize control over ... [economic] stimulus and liquidity support packages" (Ericson 2009, 228). In light of this configuration of policymaking authority, it made sense for voters to punish the ruling party in national elections for regional, and not only national, performance.

Although United Russia (UR) was dominant enough at the federal level to affect policy throughout the regions, and it controlled the vast majority of gubernatorial offices, the extent of its power nonetheless varied across the regions. Its share of seats in the regional legislatures ranged from about 20% in Stavropol to greater than 90% in Tatarstan over this period. While economic policymaking was largely centralized, policy implementation and the provision of state support during the crisis depended on "a hierarchical transmission belt" comprising state banks and enterprises alongside subordinate regional actors Ericson (2009, 228). Regions also used their own budgetary resources to stem the impact of the crisis. These decisions reflected the intertwining of regional and federal prerogatives: Although the level of budgetary funds available depended in part on federal transfers, regional party officials also helped to set priorities (Zubarevich 2011).

It follows that local conditions provided clearer evidence of the ruling party's competence in regions that were firmly under its control than in regions where responsibility for policymaking and implementation was

shared more broadly with other political parties. Under the model of regional economic voting proposed here, voters are more likely to hold the ruling party responsible for economic performance as its share of regional political power grows.

The Global Financial Crisis and Economic Voting in Russia

During the global financial crisis of 2008–9, the Russian stock market plunged, the ruble depreciated, and industrial output contracted sharply. Russia's gross domestic product (GDP) declined by 7.6%. Not surprisingly, then, when surveyed in 2009 about the issue that concerned them most, roughly 90% of Russians mentioned the economy.

Yet evidence on Russians' response to the global financial crisis has been mixed. While several early studies (McAllister and White 2011; Rose and Mishler 2010; Rose, Mishler, and Munro 2011) found that the economic crisis failed to dent Russians' views of the regime, subsequent work by Chaisty and Whitefield (2012) reached the opposite conclusion. The present study, which draws on much more fine-grained data and also captures change over time, roundly supports the latter conclusion. Russia is not an exception where incumbents are especially skillful at deflecting responsibility for worsening economic performance. Rather, Russians updated their view of the regime's performance in sensible ways that reflected the reality they observed in their region, weighing that information more when they distrusted mass media.

In Russia, most research on economic voting has used individual-level cross-sectional data (e.g., Chaisty and Whitefield 2012; Colton and Hale 2009; Rose and Mishler 2010; Rose, Mishler, and Munro 2011), with the exception of time-series studies by Mishler and Willerton (2003) and Treisman (2011) and Tucker's (2006) analysis of aggregate regional data. Treisman (2011, 590) shows that Russian presidential approval ratings are closely tied to public perceptions of economic performance—a finding that accords with my own for party support. However, rather than approval, I use vote intention as the dependent variable, a measure that is one step closer to actual voting.⁴ Although this study follows Tucker's (2006) regional

⁴The use of survey-measured vote intention is common in the economic voting literature (for a recent review, see Lewis-Beck and Stegmaier 2013). See also, for example, Duch (2001), Duch and Stevenson (2008) and the discussion in Pickup (2010). One advantage of vote intention over approval is that it more closely proxies the outcomes emphasized by both retrospective and prospective economic voting theory: the intention to punish/reward incumbents or

focus, I depart from his transitions model to examine incumbency-oriented party voting nearly two decades after communism's collapse. My approach also differs from his insofar as I incorporate individual-level measures of vote choice and economic perceptions alongside regional macroeconomic indicators.

Finally, several factors stack the deck against finding significant economic effects on incumbent support over this period. After nearly a decade of strong economic growth, the Kremlin responded to the crisis by boosting spending, providing bailouts, and pursuing an assertive regional policy. In addition, having consolidated control over television media in the preceding years, the Kremlin endeavored through its state-run channels to deflect blame onto the global financial system. Indeed, some studies have suggested that these tactics were successful (McAllister and White 2011; Rose, Mishler, and Munro 2011). The more effective these efforts were at shifting responsibility away from domestic actors, the weaker we would expect the link to be between economic perceptions and incumbent support.

Data

The data I analyze come from two unusual surveys of voting-age citizens in Russia. The surveys, conducted in November 2008 and November 2009, each with a sample size of approximately 34,000 respondents, cover 68 Russian regions. Unlike most surveys of public opinion, they are representative at both the national and regional levels.⁵ In this sense, the data could be described as 68 different surveys conducted in each of 2 years with a minimum sample size of 500. These GeoRating surveys were conducted by the Foundation for Public Opinion, a reputable Russian social research firm, face-to-face in respondents' homes. The regional macroeconomic data are from the Russian Federal State Statistics Service.

I focus primarily on two questions regarding incumbents' performance. The first concerns respondents' financial situation over the past year. The second concerns

select the most competent party. An approval measure might show stronger results than vote intention if voters consider UR the least-bad option among limited alternatives and intend to vote for it, despite dissatisfaction with its performance. It follows that popularity, as captured by this study's dependent variable, refers to popularity under the available choice set—arguably, a more politically relevant outcome.

⁵For details, see supporting information (SI) section A.1.

the situation in their region.⁶ Both are measured on a 5 point scale.⁷ The primary dependent variable, also measured at the individual level using the standard Sunday vote question, is intention to vote for United Russia, the incumbent party.⁸ This variable takes a value of 1 if the respondent intends to vote for United Russia and 0 otherwise.⁹ To measure the perception of media bias, I use an item that asks whether respondents believe Russian media provide objective coverage of the country's economic situation.¹⁰ Lastly, the surveys contain a number of demographic controls, including age, gender, education, and sector of employment, which allow me to estimate a well-specified vote model.

To complement the individual-level data, I collected annual economic growth and unemployment figures for each Russian region.¹¹ I use percent change in regional GDP (RGDP) over the current year as the key independent variable at the regional level, though I also investigate the effect of percent change in regional unemployment.¹² The choice to focus on recent performance follows the standard convention, itself based on evidence that voters apply an end heuristic (see, e.g., Healy and Lenz 2014b). Finally, using data on the composition of Russia's regional legislative bodies, I coded a continuous variable for the share of seats controlled by United Russia in each region at the time of the surveys.¹³ I then merged these contextual data with the survey data to create a multilevel data set that allows me to examine the relationship between the objective state of the regional economies, performance evaluations, and vote choice.

⁶When asked to name the issue in their region that concerned them most, nine in 10 mentioned some aspect of the economy.

⁷See SI section A.2 for full question wordings.

⁸The fact that respondents sharply criticized incumbents in response to other survey questions (e.g., regarding corruption) suggests that they did not feel constrained to give only answers that were favorable to the regime. See also studies by Frye et al. (2017) and Rose (2007), which reach generally optimistic conclusions about whether postcommunist citizens are afraid to say what they think.

⁹Supporters of other parties and those who indicate that they will either spoil their ballots or abstain are, thus, coded as 0. Both abstentions and support for the Communist Party rose between 2008 and 2009.

¹⁰This question was asked only in the 2008 survey.

¹¹See SI section A.3 for further information.

¹²Because growth did not turn negative until the fourth quarter of 2008 and the worst of the crisis was felt during the first three quarters of 2009, lagged data fail to capture most of the effects experienced prior to the 2009 survey.

¹³For additional details, see SI section A.4.

Empirical Strategy

In the analysis that follows, I trace the logic of performance-based voting in a hybrid regime using a causal mediation framework (Becher and Donnelly 2013; Imai, Keele, and Tingley 2010). While macro studies are necessarily silent on the mechanisms by which changes in the objective economy affect levels of regime support, concerns over endogeneity bedevil most micro studies (see, e.g., Chzhen, Evans, and Pickup 2014; Evans and Anderson 2006; Pickup and Evans 2013). The present design allows me to both investigate how individuals process changes in the real economy under different institutional settings and address the potential endogeneity of economic perceptions by directly estimating how much impact a change in real economic conditions has on incumbents' popularity and how much of this impact is mediated by individual economic appraisals. This section describes the modeling strategy and recaps the main hypotheses.

Define V_{irs} as a binary outcome variable representing the intention to vote for the incumbent party by individual i in region r and survey s . The continuous treatment, growth in RGDP (or unemployment), G_{rs} , is measured annually at the regional level, and the mediator, M_{irs} , is defined alternately as individual-level perceptions of regional performance and pocketbook retrospections.

I first predict individual survey respondents' perceptions about regional and pocketbook performance, the mediators (M_{irs}), using mixed effects linear regression suitable for multilevel data. The primary independent variable, or treatment (G_{rs}), is regional economic growth (unemployment), which I expect to be positively (negatively) related to perceptions. The mediator model includes random intercepts for each survey-region (α_{rs}) to account for heterogeneity across regions and survey waves and allow for correlation among observations within a given geographical unit and survey year. These random intercepts help to reduce the threat of omitted variable bias from unobserved regional characteristics. The model also includes individual-level controls (X_{irs}) and regional attributes (Z_{rs}). These include gender, age, age squared,¹⁴ eight ordered categories of education (also a proxy for skill),¹⁵ sector of employment (public, private, unemployed), the log of regional GDP, percentage of RGDP from extractive industries (as a measure of exposure to

exogenous price shocks), and United Russia's share of regional legislative seats.

Again, a potential threat to inference is endogenous confounding. That is, we want to distinguish evidence that economic considerations matter for regime support from politically motivated opinion formation. Including United Russia's seat share from the preceding election helps to mitigate the potential endogeneity of perceptions to political support. However, a more direct test of these perceptions' exogeneity is the coefficient on changes in the objective economy. If actual economic change has a significant effect on economic perceptions, we can be more confident that these perceptions have a basis that is independent of politics and coverage by biased state-run media. Hypothesis 1 and the model predicting perceptions follows:

H1: Changes in the real economy at the regional level will affect voters' pocketbook evaluations and perceptions of regional performance.

$$M_{irs} = \beta_0 + \beta_1 G_{rs} + X_{irs}\gamma + Z_{rs}\delta + \alpha_{rs} + \epsilon_{irs}. \quad (1)$$

Next, in the outcome model, I predict support for the incumbent party (V_{irs}) using a multilevel probit model suitable for a dichotomous dependent variable and nested data. The model includes the treatment, economic performance (G_{rs}), and the mediator, economic perceptions (M_{irs}). In the first specification, the mediator is interacted with the measure of United Russia's seat share ($ShareUR_r$) to assess the hypothesis that voters will be more likely to credit or blame incumbents for observed economic conditions in regions where the party is more dominant. For voters in these regions, the party controls multiple levers of administrative and fiscal power. A clear vertical of power helps voters know whom to hold responsible.

In the second specification of the vote choice model, I interact pocketbook, regional, and national assessments (M_{irs}) with perceptions of media bias ($MediaBias_{irs}$). This specification tests the hypothesis that voters who question the media's objectivity will pay greater attention to evidence they can directly observe than voters who believe the media provide unbiased reporting. In general, this suggests that media skeptics will rely more on their own experience and local conditions and less on national conditions, which voters cannot observe but must rely on the media to report. Although a voter's personal pocketbook situation is the most direct economic evidence at his or her disposal, personal financial circumstances have a large idiosyncratic component. A further implication is thus that local conditions—which are more directly observable than national conditions and more informative

¹⁴Both age and age squared are rescaled by dividing the original variable by 10.

¹⁵The results are unchanged if levels of education enter the model as dummy variables.

than pocketbook experience—will hold greater sway in the voting decision.

The two remaining hypotheses on attribution of responsibility and their respective vote choice models can be summarized as follows:

H2: Attribution of responsibility for economic performance will be stronger in regions where the incumbent party is more dominant.

$$\begin{aligned} Pr(V_{irs} = 1) = & \text{probit}^{-1}(\beta_0 + \beta_1 G_{rs} + \beta_2 M_{irs} \\ & + \beta_3 \text{ShareUR}_r + \beta_4 M_{irs} \times \text{ShareUR}_r \\ & + X_{irs}\gamma + Z_{rs}\delta + \alpha_{rs}). \end{aligned} \quad (2)$$

H3: Voters who believe the media are biased will give greater weight to the economic conditions they experience directly than those who believe economic reporting is objective.

H3a: Such voters will find local economic conditions more informative than either pocketbook or national conditions.

$$\begin{aligned} Pr(V_{irs} = 1) = & \text{probit}^{-1}(\beta_0 + \beta_1 G_{rs} + \beta_2 M_{pocketbook,irs} \\ & + \beta_3 M_{regional,irs} + \beta_4 M_{national,irs} \\ & + \beta_5 \text{MediaBias}_{irs} + \beta_6 M_{pocketbook,irs} \\ & \times \text{MediaBias}_{irs} + \beta_7 M_{regional,irs} \\ & \times \text{MediaBias}_{irs} + \beta_8 M_{national,irs} \\ & \times \text{MediaBias}_{irs} + X_{irs}\gamma + Z_{rs}\delta + \alpha_{rs}). \end{aligned} \quad (3)$$

Both models include the same regional characteristics (Z_{rs}) and standard individual controls (X_{irs}): gender, age, education, and sector of employment (see, e.g., Colton and Hale 2009; Posner and Simon 2002). I do not include either income, which is posttreatment relative to regional economic performance,¹⁶ or a measure of party identification since none exists that operationalizes the concept as a stable identity or long-term attachment distinct from current vote choice.¹⁷ As in the mediator model, these

¹⁶In none of the models does the inclusion of income change the results. See SI Tables A5, A7, and A8.

¹⁷Colton's measure of transitional partisans comes closest; however, even transitional partisanship can be difficult to separate from a voter's most recent choice at the polls. Indeed, United Russia had contested only two elections prior to these surveys. My approach

models also include a random intercept for each survey-region (α_{rs}) to account for unobserved group-level heterogeneity and allow for intragroup correlation among observations. I use random effects over regional fixed effects because United Russia's share of regional legislative seats, which does not vary within a region, would drop out of a fixed effects model.

Empirical Results

The Mediator: Performance Evaluations

I next investigate whether Russians' performance perceptions respond to changes in regional economic conditions. The results in Table 1 confirm that they do.¹⁸ Columns 1 and 2 examine the effect of changes in the real economy on pocketbook perceptions, whereas columns 3 and 4 focus on regional performance perceptions. The positive coefficient on change in RGDP in all of the models indicates that an increase in regional economic growth is associated with better perceptions of pocketbook and regional performance, whereas the negative coefficient on change in unemployment implies that an increase in the level of unemployment worsens perceptions.

Substantively, a shift from the 10th percentile of the empirical distribution of change in regional GDP to the 90th is associated with a 7.3 percentage point increase in the probability that a respondent will see regional performance as improving, a 33% increase overall. This suggests that perceptions of regional performance do indeed respond meaningfully to changes in local economic conditions, and thus have a basis that is independent of politics and biased state-run media coverage.

The Outcome: Incumbent Party Support

The first two columns of Table 2 test the effect of individuals' personal pocketbook experiences on incumbent support. The results suggest that pocketbook perceptions have a weak positive effect on vote choice (the coefficient on the main term is small and significant only at the .1 level). By contrast, columns 3 and 4 show a much stronger relationship between vote choice and regional performance evaluations, offering unambiguous support for the regional economic voting hypothesis. Moreover,

is consistent with Duch and Stevenson (2008), who exclude partisanship from all but the U.S. vote choice model.

¹⁸SI Table A4 shows virtually identical results using a limited dependent variable specification of the mediator.

TABLE 1 Mediator Model Predicting Performance Perceptions Given Changes in the Regional Economy

	Dependent Variable: Pocketbook Perceptions		Dependent Variable: Regional Perceptions	
	Growth (1)	Unemployment (2)	Growth (3)	Unemployment (4)
Δ Regional GDP	0.016*** (0.002)		0.008** (0.002)	
Δ Unemployment		-0.038*** (0.009)		-0.011 (0.011)
United Russia Seat Share	0.0003 (0.001)	0.0005 (0.001)	0.001 (0.001)	0.001 (0.001)
Log of Regional GDP	-0.026* (0.012)	-0.032* (0.014)	0.006 (0.017)	0.004 (0.018)
Share of Extractive Industries	0.002* (0.001)	0.002 (0.001)	0.003* (0.001)	0.003* (0.001)
Male	0.017* (0.007)	0.017* (0.007)	-0.026*** (0.007)	-0.026*** (0.007)
Age	-0.384*** (0.011)	-0.384*** (0.011)	-0.245*** (0.012)	-0.245*** (0.012)
Age Squared	0.041*** (0.001)	0.041*** (0.001)	0.023*** (0.001)	0.023*** (0.001)
Educational Level	0.017*** (0.002)	0.017*** (0.002)	0.006* (0.002)	0.006* (0.002)
Private-Sector Worker	0.215*** (0.009)	0.215*** (0.009)	0.005 (0.010)	0.005 (0.010)
Public-Sector Worker	0.257*** (0.010)	0.257*** (0.010)	0.005 (0.011)	0.006 (0.011)
Constant	0.662*** (0.154)	0.773*** (0.187)	0.373 (0.222)	0.407 (0.231)
Observations	62,764	62,764	62,764	62,764
Log Likelihood	-75,691.100	-75,714.300	-81,779.040	-81,781.790
Akaike Information Criterion	151,408.200	151,454.600	163,584.100	163,589.600
Bayesian Information Criterion	151,525.800	151,572.200	163,701.700	163,707.200

Note: Linear mixed models with random intercepts for each region and survey year are shown. * $p < .05$, ** $p < .01$, *** $p < .001$.

the coefficients on regional evaluations in columns 5 and 6 remain sizable and remarkably stable when pocketbook perceptions are added to the model, suggesting that these measures capture distinct dimensions (consistent with, e.g., Kinder and Kiewiet 1981).¹⁹ Though Russian authorities actively sought to deflect responsibility, these results imply that their popularity still suffered as economic perceptions worsened.

¹⁹These coefficients likewise remain stable in models that include the interaction between pocketbook perceptions and United Russia's seat share. See SI Table A6, columns 5 and 6.

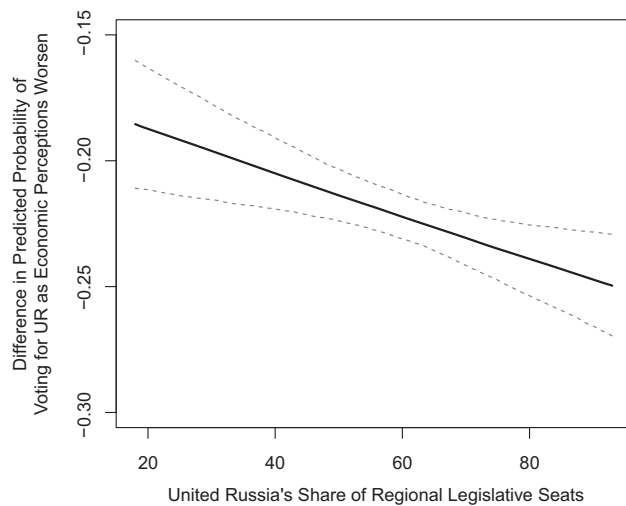
The significant positive coefficients on change in regional GDP further imply that objective changes in the regional economy affect incumbents' vote share directly, and not only through perceptions of regional performance. The direct effect of changes in unemployment is weaker, though it has the anticipated sign. Women, young people, state-sector workers, and the less educated are all more likely to support United Russia, consistent with previous studies (e.g., Colton and Hale 2009; Rose, Mishler, and Munro 2011). Wealthier regions are, on the whole, somewhat less likely to vote for United Russia, whereas regions where the economy depends on natural

TABLE 2 Outcome Model Predicting Incumbent Support

	Dependent Variable: Vote for United Russia					
	Pocketbook Mediator		Regional (Sociotropic) Mediator		Both Mediators	
	Growth (1)	Unemployment (2)	Growth (3)	Unemployment (4)	Growth (5)	Unemployment (6)
Δ Regional GDP	0.004* (0.002)		0.005** (0.002)		0.004 (0.002)	
Δ Unemployment		-0.012 (0.008)		-0.017* (0.008)		-0.013 (0.008)
Pocketbook Perceptions	0.050 (0.026)	0.050 (0.026)			0.120*** (0.007)	0.120*** (0.007)
Regional Perceptions			0.221*** (0.024)	0.221*** (0.024)	0.196*** (0.025)	0.196*** (0.025)
United Russia Seat Share	0.003** (0.001)	0.003** (0.001)	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)
Pocketbook × UR Seat Share	0.002*** (0.0004)	0.002*** (0.0004)				
Regional Perceptions × UR Seat Share			0.001** (0.0004)	0.001** (0.0004)	0.001** (0.0004)	0.001** (0.0004)
Log of Regional GDP	-0.023 (0.013)	-0.025 (0.014)	-0.030* (0.014)	-0.033* (0.014)	-0.027* (0.014)	-0.029* (0.014)
Share of Extractive Industries	0.003** (0.001)	0.003** (0.001)	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)
Male	-0.355*** (0.011)	-0.355*** (0.011)	-0.352*** (0.011)	-0.352*** (0.011)	-0.356*** (0.011)	-0.356*** (0.011)
Age	-0.139*** (0.017)	-0.139*** (0.017)	-0.142*** (0.017)	-0.142*** (0.017)	-0.102*** (0.017)	-0.103*** (0.017)
Age Squared	0.006** (0.002)	0.006** (0.002)	0.007*** (0.002)	0.007*** (0.002)	0.003 (0.002)	0.003 (0.002)
Educational Level	-0.016*** (0.004)	-0.016*** (0.004)	-0.015*** (0.004)	-0.015*** (0.004)	-0.017*** (0.004)	-0.017*** (0.004)
Private-Sector Worker	-0.047*** (0.014)	-0.047*** (0.014)	-0.008 (0.014)	-0.008 (0.014)	-0.034* (0.014)	-0.034* (0.014)
Public-Sector Worker	0.050** (0.016)	0.050** (0.016)	0.100*** (0.016)	0.100*** (0.016)	0.069*** (0.016)	0.069*** (0.016)
Constant	0.976*** (0.174)	1.011*** (0.177)	1.032*** (0.178)	1.081*** (0.181)	0.966*** (0.177)	1.002*** (0.179)
Observations	62,764	62,764	62,764	62,764	62,764	62,764
Log Likelihood	-41,554.220	-41,555.810	-40,738.570	-40,740.240	-40,573.780	-40,574.390
Akaike Information Criterion	83,136.450	83,139.630	81,505.140	81,508.470	81,177.570	81,178.770
Bayesian Information Criterion	83,263.110	83,266.290	81,631.800	81,635.130	81,313.270	81,314.480

Note: Multilevel probit models with random intercepts for region and survey year are shown. * $p < .05$, ** $p < .01$, *** $p < .001$.

FIGURE 1 Attribution of Responsibility for Poor Economic Performance Increasing in Ruling Party's Regional Dominance



Note: The negative slope implies that as United Russia's regional dominance rises, voters become more likely to punish incumbents for declining economic performance. Dotted lines are the 95% confidence interval. All other covariates are held at their empirical values.

resources are more likely to support the ruling party. Still, we might be concerned that other regional characteristics could affect both perceptions of economic performance and United Russia support, leading to omitted variable bias. The inclusion of random intercepts for each survey-region in all of the models helps to mitigate such threats by capturing unobserved regional heterogeneity.²⁰ The next section presents evidence from Table 2 showing that regional party dominance amplifies Russians' willingness to credit or blame incumbents for economic performance.

Regional Politics and Performance-Based Voting. Performance-based voting depends crucially on how individuals attribute responsibility for observed conditions. For economic assessments to have an impact on political behavior, voters must hold their government responsible for growth or contraction. The specifications in Table 2 allow the effect of performance perceptions on incumbent support to vary with the extent of the ruling party's regional power. As Figure 1 shows, the positive and statistically significant coefficients on these

²⁰Using the surveys as a regional panel, SI Figure A.5 shows that change in objective conditions is also related to change in incumbent support, providing additional evidence that neither endogeneity nor omitted variable bias can account for the observed economic effects.

interaction terms imply that attribution of responsibility for perceived regional performance is stronger where United Russia is firmly in control, in line with the argument that clarity of responsibility augments economic voting. These results are robust for different types of economic performance (growth, unemployment). They hold across different specifications of the mediator and are unchanged by the inclusion of fixed effects for survey year (see SI Tables A6 and A10).

Figure 1 displays the substantive size of these effects. The vertical axis gives the difference in the predicted probability of voting for United Russia as economic perceptions shift from "getting somewhat better" to "getting somewhat worse," and the horizontal axis covers the empirical range of United Russia's share of seats in the regional legislature. The solid line is the estimate based on the model in column 3 of Table 2; dotted lines indicate the 95% confidence interval. Whereas this counterfactual decline in regional performance perceptions leads to an 18.7 percentage point decrease, 95% CI [-21.3, -16.0], in support for the incumbent party when it holds relatively few seats, it leads to a 24.8-point decrease, 95% CI [-26.8, -22.7], when it holds many.

The results in Tables 1 and 2 imply, first, that voters gained valuable information from regional conditions and, second, that they gave this information more weight where incumbents plausibly had greater political leverage to influence economic conditions. There is no evidence that voters in competitive regions tend to punish incumbents more when the economy declines for discriminating against their region. Nor does the party of power appear to be more effective at distracting voters from poor performance in regions that it firmly controls. Support for United Russia fell in response to poor performance even—and especially—where it dominated regional politics.

Media Bias and Performance-Based Voting. I next probe how voters process economic information where mass media are not free. Given that national conditions are not directly observable and individuals must rely on the media for information about the country's economic situation as a whole, attention to local conditions may be normatively desirable in contexts where mass media are state controlled. The results in Table 3 suggest that voters who question the objectivity of economic reporting indeed give greater weight to their own experience and to directly observable local conditions than those who believe that economic reporting is objective.

The model in column 1 of Table 3 includes a measure of perceived media bias, a measure of pocketbook evaluations, the interaction of these two variables, and the set

TABLE 3 Outcome Model Predicting Incumbent Support with Media Effects (Treatment = Changes in Regional GDP)

	Dependent Variable: Vote for United Russia		
	Pocketbook Mediator	Regional (Sociotropic) Mediator	Full Model
	(1)	(2)	(3)
Δ Regional GDP	-0.001 (0.005)	-0.003 (0.006)	-0.003 (0.006)
Media Bias	-0.158*** (0.008)	-0.136*** (0.009)	-0.138*** (0.013)
Pocketbook Perceptions	0.172*** (0.009)	0.122*** (0.010)	0.110*** (0.011)
Regional Sociotropic Perceptions		0.226*** (0.009)	0.219*** (0.010)
National Sociotropic Perceptions			0.120*** (0.014)
Pocketbook Perceptions \times Media Bias	0.019 (0.010)	0.011 (0.011)	0.015 (0.012)
Regional Perceptions \times Media Bias		0.031** (0.010)	0.029** (0.010)
National Perceptions \times Media Bias			-0.005 (0.015)
Constant	0.477* (0.235)	0.490* (0.246)	0.463 (0.249)
Controls	✓	✓	✓
Observations	33,312	31,395	25,887
Log Likelihood	-21,885.780	-20,202.260	-16,576.720
Akaike Information Criterion	43,801.560	40,438.510	33,191.450
Bayesian Information Criterion	43,927.760	40,580.540	33,346.520

Note: Multilevel probit model with random intercepts for region and survey year is shown. Controls include United Russia's regional seat share, log of RGDP, the regional share of extractive industries in GDP, gender, age, age squared, educational level, and employment (public, private, or unemployed), as in all previous models * $p < .05$, ** $p < .01$, *** $p < .001$.

of micro and macro control variables included in all previous vote models. As expected, the coefficient on media bias is negative, whereas the coefficient on pocketbook perceptions is positive. The coefficient on the interaction term is also positive, as predicted, though it is significant only at the .1 level.

Column 2 adds regional perceptions and the interaction between regional perceptions and media bias. Here, the results are stronger. Consistent with Hypothesis 3, those who believe the media are biased attach greater weight to perceived regional performance than those who believe the media are objective. Further, in keeping with Hypothesis 3a, the model in column 2 suggests that voters focus more on regional evaluations than their personal pocketbook situation, which has a larger idiosyncratic component.

Column 3 provides additional support for these hypotheses. If voters who doubt the media's objectivity prefer performance metrics based on their everyday experience and that of trusted friends and neighbors, we would expect the interaction between media bias and performance perceptions to be positive for pocketbook and regional assessments, but not national assessments. Using data from the 2008 survey, which also included an item asking respondents to evaluate the condition of the national economy, I test this proposition in column 3.

As in the preceding models, the coefficients on regional and pocketbook perceptions are positively signed, as are their interactions with media bias. In contrast, the coefficient on the interaction between media bias and national perceptions is negative, though insignificant: Media skeptics do not give greater weight to

national performance, lending further support to Hypothesis 3a. Using predicted probabilities from the model in column 3 to gauge the substantive size of these interactions, I find that the impact of worsening regional evaluations on incumbent support is notably larger than that of national evaluations among those who believe economic reporting is biased, -18.9% $[-20.8, -17.1]$ versus -8.5% $[-11.3, -5.6]$, whereas this difference is smaller among those who believe economic reporting is objective, -13.9% $[-15.9, -11.7]$ versus -8.8% $[-11.5, -6.0]$.²¹ Media skeptics focus more on regional than national information. They also give regional performance greater weight than do media believers.

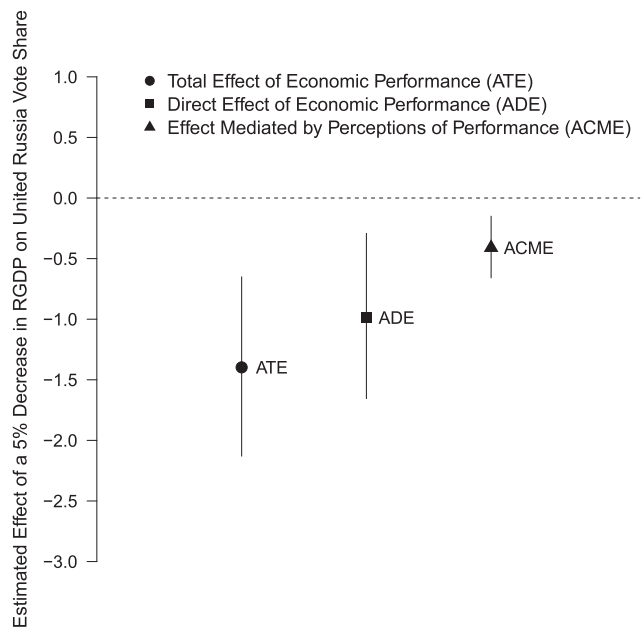
These results also bolster our confidence that the preceding findings are not driven by another correlated but unmeasured variable. Any such variable would have to moderate the effect of regional performance evaluations on vote intention but not national evaluations. Yet we might still be concerned that the measure of perceived media bias could be tapping government mistrust, rather than views on the media per se. If that were the case, opposition sentiment could be causing both the perception of media bias and the intention to vote against incumbents. A quick look at the distribution of views on the media casts doubt on this claim. In fact, regime supporters and opponents alike believe that media outlets are biased in favor of the regime. Fully half (51%) of all media skeptics remain United Russia supporters. To further evaluate this alternative, I performed several robustness tests that control for past voting behavior (see SI Table A9). If opposition to the regime indeed accounts for the effect of perceived media bias, the past voting measure should absorb it. Across all tests, the finding that voters who perceive media bias place greater weight on their perceptions of regional conditions remains unchanged.

The Full Causal Chain

This final empirical section uses causal mediation analysis to trace the effect of changes in actual economic performance, through voters' perceptions, to their voting intentions. The mediation framework allows me to succinctly summarize evidence for the causal relationships implied by performance-based voting theory in terms of average causal mediation effects, average direct effects,

²¹Each of these differences as well as the difference between these differences is significant at the .05 level.

FIGURE 2 Estimated Effects of Regional Economic Performance on Incumbent Support



Note: The figure presents three types of estimates: the average total effect (circle), average direct effect (square), and average causal mediation effect (triangle). The estimates are based on a 5% decline in RGDP. The vertical lines are 95% confidence intervals. The figure shows that changes in the real economy affect incumbent support both through worsening regional perceptions and other channels.

and total effects.²² I estimate these quantities using the algorithm specified by Imai, Keele, and Tingley (2010) and implemented in the R package `mediation` (Tingley et al. 2013), describing each in turn as I present the results.

For comparison with previous studies, I begin by estimating the total effect of a change in actual economic conditions on incumbent support, both indirectly through perceptions of performance and directly through other channels. The total effect of a 5% decline in RGDP (about .5 standard deviation in our sample) is plotted on the far left of Figure 2. Because treatment effects that are constant on the probit scale translate into varying effects on the probability scale, I first simulated the effect of declining RGDP from five different baseline levels of change, spanning the 10th to the 90th percentile of the empirical distribution. Since the results were very similar across all baseline values examined, Figure 2 presents the average point estimates and their 95% confidence intervals. The

²²SI sections A.6 and A.7 provide formal definitions of these quantities and further details on estimation (see also Imai, Keele, and Tingley 2010).

results suggest that a 5% decline in RGDP has a total effect of decreasing incumbent support by about 1.4 percentage points.²³

I next decompose this total effect (ATE, circle) into two component parts. Intuitively, the average causal mediation effect (ACME, triangle) represents the average change in support for the incumbent party, through change in perceptions of performance, when objective economic conditions shift from some baseline level to a counterfactual level.²⁴ The mediation effect thus captures the microlevel mechanism implied by regional performance-based voting. The average direct effect (ADE, square) answers the question, “How would incumbent support be affected if objective economic conditions changed but perceptions did not?” The ADE thus describes the effect of regional economic performance on vote intention that does not occur through the microlevel mechanism of regional retrospective voting.²⁵ As the figure makes clear, regional retrospective voting accounts for a significant share, 29.8%, 95% CI [12.2, 59.8], of the total effect of changing regional economic conditions on ruling party support. This suggests that subjective performance evaluations are an important channel through which actual economic conditions affect ruling party support, even in a hybrid regime.

In order to better understand the size of the effects estimated above, it is helpful to compare them to others in the economic voting literature. The main finding in Figure 2—that a shift in *actual* economic conditions reduces the popularity of incumbents by about 1.4 percentage points—is roughly equivalent to the result for OECD single-party governments in Becher and Donnelly (2013). Notably, that article uses a similar causal mediation framework, incorporating indicators of objective economic performance into Duch and Stevenson’s (2008) data from 157 national surveys conducted in 18 advanced industrial democracies between 1979 and 2001.²⁶

²³The magnitude of this total effect is quite similar to the simple bivariate OLS estimate in SI Table A3 ($.003 \times 5 = 1.5$ percentage points), implying robustness to specification. All results in this section are based on Model 3 of Table 1 and Model 3 of Table 2.

²⁴For tractability, I focus on changes in incumbent support that are mediated by regional perceptions. Since some of the change in incumbent support due to actual economic change at the local level is mediated by pocketbook perceptions, this gives a lower bound estimate.

²⁵For example, elites may be less likely to support the ruling party and to mobilize popular support for it when the economy is contracting, affecting the party’s anticipated vote share, without necessarily affecting voters’ perceptions of its regional performance.

²⁶The shift considered in both studies is about .5 standard deviations of the empirical distribution of economic performance in the sample.

Conclusion

This article sought to fill gaps in our understanding of the links between performance, popular perceptions, and support for the ruling party under a hybrid regime. To better understand these linkages, I combined macroeconomic data on growth and unemployment with unusual nationally and regionally representative surveys of more than 67,000 voting-age respondents. Integrating individual-level survey data with indicators of aggregate economic performance allowed me to assess the full causal chain implied by performance-based voting theory: from changes in the real economy, through performance perceptions, to ruling party support.

The principal contribution of this article is to show that hybrid regime voters assess incumbents on the basis of more directly observable indicators of regional performance. The analysis shows how voters weighed this information alongside important contextual factors in deciding whether to support the ruling party in national elections. Though voters might also blame the party at the regional level, I focused on support for the party in national elections since national elections have far greater importance for the stability of the regime as a whole. Future work might investigate how regional performance influences the fate of the ruling party in regional legislatures or that of other regional incumbents.

The pattern of economic voting this article uncovers has mixed normative implications. On the one hand, the findings support a guardedly optimistic view of the demand side of political accountability in an electoral authoritarian system. Despite conventional wisdom, regime propaganda proved an ineffective distraction from worsening economic performance. At the same time, accountability clearly depends on the public’s withdrawing its support from those responsible for declining welfare and putting political pressure in the right place. While support for the ruling party fell, it may also have insulated others, including the president, the prime minister, and his government (who arguably exercised greater control over the economy), from growing dissatisfaction.

This article’s findings have several further implications for understanding how hybrid regimes lose, or conversely maintain, public support. First, perceptions of performance did, in fact, respond to changes in objective conditions during Russia’s recession despite the regime’s strong preceding record of growth. This contrasts with accounts of voter behavior under autocracy that expect voters to be tolerant of short-term economic crisis if the economy has historically been growing (Magaloni 2006, 20). The findings here imply that hybrid regime voters are

not so forgiving, requiring regimes to diffuse or counter dissent. Further, given authoritarian voters' responsiveness to recent economic performance, these results suggest that authoritarian incumbents who succeed at manipulating the economy in advance of elections are likely to benefit (Magaloni 2006; Pepinsky 2007).

A second implication of this article's findings is that popular opinion may be less susceptible than commonly supposed to regime efforts to shift responsibility onto others. Despite having firm control of the media, Russian incumbents did not escape blame for regional economic conditions. Not without considerable justification, Russian incumbents blamed the global financial crisis, the West, and, especially, Western banks for Russia's economic woes. While touting Russia's sound economic fundamentals, they also appealed to popular anti-American sentiment. Given the availability of these alternative narratives and the state's control of mass media, Russia arguably represents a tough case for performance-based voting during this period.

Lastly, the findings in this article suggest that increasing authoritarianism may actually hurt autocrats' hold on power via two related mechanisms. First, rising centralization of authority clarifies responsibility for policy failures. Where the incumbent party exercised greater influence over regional politics, Russian voters were more likely to hold it accountable. Rather than insulate the party from blame, the vertical of power that the Kremlin constructed in the years preceding the crisis left it more vulnerable to popular discontent. Similarly, Treisman (2014) attributes the sharp decline in Putin's approval rating in late 2011 to a shift in how Russians attributed blame for economic performance. Insofar as the pre-election period exposed growing monopolization of political power, making the regime a focal point for dissatisfaction, Treisman's findings accord with my own.

Second, increasing influence over the media undermines a regime's ability to credibly deflect blame for policy failures. Even under an illiberal regime, voters have alternative means of acquiring information about economic performance. I find that voters who perceived bias in economic reporting compensated by giving greater weight to information gleaned from more proximate local conditions. Importantly, the perception of media bias was not strictly partisan. Future research should examine whether media skeptics also substitute economic information they can observe more directly in other contexts, including in developed democracies.

Together, the findings in this article imply limits on the degree to which illiberal regimes can exploit informational asymmetries to bolster popular support during economic downturns. The patterns this article uncovers

suggest that authoritarian incumbents weather economic crises by substituting repression and fraud where clarity of responsibility is high and trust in state-controlled media is low. Where clarity of responsibility is high, as in Russia's more autocratic regions, voting outcomes depend little on the will of voters. By contrast, in more democratic regions where coercive capacity is limited, clarity of responsibility is low and the regime finds it easier to diffuse blame for poor performance. The challenge for authoritarian incumbents is that repression and fraud are second-best strategies for surviving recession which heighten a regime's vulnerability.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

- A.1** About the Survey
- A.2** Full Survey Question Wordings
- A.3** About the Regional Economic Indicators
- A.4** Measuring United Russia's Seat Share
- A.5** Descriptive Evidence
- A.6** Definition of Average Causal Effects and Their Estimators
- A.7** Estimation
- A.8** Robustness Checks