Political Centralization and Economic Performance: Evidence from Russia

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What determines whether political centralization helps or hurts economic performance? This article identifies pre-existing patterns of political competition as a critical factor in determining the impact of political centralization on subnational economies. In competitive regions, political centralization undermines economic performance by removing a functioning electoral mechanism that makes leaders responsive to a wide range of economic concerns. In uncompetitive regions, however, centralization encourages economic improvement by reducing leaders' reliance on narrow interests and making previously unassailable local leaders answerable to central political bosses. I test competing hypotheses about the economic effects of political centralization using a set of Russian regional reforms that removed the direct election of governors in favor of a system of centralized appointments. The data show that, on a number of different dimensions, economic performance suffered after centralizing reforms were adopted in Russia's politically competitive regions; in contrast, political centralization improved economic performance in those regions where strong incumbent governors had previously depressed political competition.

What determines whether political centralization helps or hurts economic performance?[1] The economic effects of centralized government control is a hotly contested topic. Competing models of economic development vary in the degree to which economic and political authority is devolved from the highest levels of government down to more local levels. On the one hand, centralized governance can aid economic activity by leveraging technocratic expertise, providing more coherent and uniform policies, and supplying tighter control over how those policies are implemented (Amsden 1989; Wade 1990). On the other, decentralized governance offers potential efficiency gains by strengthening local leaders' incentives to create policies that are tailored to local demands and conditions (Oates 1972; Tiebout 1956). These questions are particularly thorny in the developing world, where the stakes are high, pervasive governance problems often undermine development efforts, and centralization can mean consolidating power in the hands of nondemocratic rulers.

While governments may centralize or decentralize on multiple dimensions, this article examines specifically how economic performance responds to political centralization—the subordination of local levels of government through centralized appointments rather than local elections. Scholars generally agree that whether political officials are appointed or elected should matter for economic activity, but the question of whether dispensing with subnational elections should hurt or harm economic performance is complicated by the fact that there is considerable disagreement about the effects that local elections actually have on economic outcomes (Bardhan 2002; Barro 1996; Enikolopov and Zhuravskaya 2007; Treisman 2007). In fact, the contradictory arguments and conflicting evidence surrounding political centralization suggest that searching for a single, monolithic effect has diverted scholars' attention away from a more productive line of investigation regarding the conditions under which centralization's economic benefits'outweigh its associated costs: how does the broader institutional context shape the economic effects of political centralization?

To this end, this article offers a conditional theory of political centralization and economic performance, arguing that whether centralization is a boon or a barrier for local economies depends upon the political context in which it occurs. Specifically, I identify preexisting patterns of political competition as a critical factor in determining whether elections were an asset to economic performance or a liability. In competitive regions, political centralization undermines economic performance by removing the electoral mechanism that kept local leaders focused on voters' economic concerns and replacing it with subordination to central officials who have more diverse and sometimes competing political priorities. In uncompetitive regions, however, centralization encourages economic improvement by making previously unaccountable local leaders answerable to central political bosses for a variety of political and economic outcomes, including local economic performance.

To test these claims about the economic effects of political centralization, this article uses a set of institutional reforms that removed the direct election of regional governors in the Russian Federation. By examining the removal of local electoral institutions, as opposed to their creation, this study offers a fresh vantage on a well-established debate that has relied heavily upon instances of decentralization for making inferences. Moreover, given the country's varied and sometimes messy subnational political and economic environments, insights from Russia have a better chance of generalizing to the developing countries that might contemplate such reforms than do the institutional experiences of well-ordered, developed democracies.

The next section identifies prominent disagreements in the literature on political decentralization and the linkages between elected government and economic performance. The article then offers a conditional framework that unifies the seemingly opposed viewpoints, highlighting how electoral competitiveness is a key determinant of the accountability that is needed to unlock the economic benefits of local elections. After providing an account of the Russian reforms, I test competing hypotheses about the economic effects of political centralization using data on the election and appointment of Russian governors and regional economic indicators in 80 regions over the period 2003–10. The data show that, on a number of different dimensions, economic performance suffered after centralizing reforms were adopted in Russia's politically competitive regions; in contrast, political centralization improved economic performance in those regions where strong incumbent governors had previously depressed political competition. The article concludes by discussing the research's implications and contributions.

ELECTIONS, APPOINTMENTS, AND ECONOMIC PERFORMANCE

In this article, the terms "political centralization" and "decentralization" refer explicitly to the question of who selects local leaders as opposed to the separate question of how authority is divided across levels of government (Bednar 2009). Scholarly research on political centralization's economic effects often highlights the trade-offs associated with appointing local political leaders versus electing them, drawing particular attention to the diverging incentives each mechanism creates for the local government leaders who will shape and implement important economic policies. Unfortunately, while political scientists and economists have provided ample reasons to believe that there are economic consequences for whether government leaders are elected from below or appointed from above, predictions from their theories often point in different directions.

A significant body of research has championed the economic benefits of political decentralization—the devolution of political control to lower levels of government through subnational electoral institutions. According to this view, economies benefit from having political leaders who are elected rather than appointed because elections act as a disciplining device that allows voters to sanction and replace unsatisfactory leaders at regular intervals (Ferejohn 1986; Maskin and Tirole 2004). These arguments assume that voters prefer a healthy economy to a struggling economy and punish poorly performing leaders at the polls. Consequently, knowing that their survival in office hinges on voters' approval, elected leaders work harder to satisfy voters by removing obstacles to economic activity and seeking policies that promote growth.

Indeed, leaders' electoral accountability underpins many arguments that seek to link economic outcomes to democratic institutions (Persson and Tabellini 2000). In addition to election's direct effects, prominent research indicates that there might be indirect economic benefits as well, with electoral accountability boosting leaders' incentives to provide stronger protections for property rights (Jensen 2006) and supply more public goods (Lake and Baum 2001). Inasmuch as political decentralization is conceptually analogous to local democracy, then it is useful to consider these arguments as offering additional and nuanced explanations for how increasing political centralization might potentially remove the linchpin of electoral accountability needed to encourage investment and spur economic growth.

Of course, political leaders within a politically centralized system may also care about economic performance, and central leaders' appointment authority allows them to sanction and replace poorly performing agents in a fashion

similar to voters (Landry 2008; Li and Zhou 2005). However, centralization may still suffer from informational disadvantages. That is, even when central leaders want to hold local appointees accountable for economic performance, they may lack sufficient information about local conditions to evaluate their agents' reported actions (Laffont and Tirole 1988; Miller 2000). In contrast, local citizens know much more about local conditions and observe, at least impressionistically, whether local leaders' actions help or hurt the economy. If this is true, then decentralization helps by placing the evaluation of officials' economic track record in the hands of those best able to pass judgment (Seabright 1996).

On the spectrum's opposite end, prominent arguments assert that political centralization, not decentralization, improves economic performance by creating a stable policy environment that promotes investment and encourages competition. Interestingly, these arguments exhibit deep suspicions about the exact features that ostensibly connect political decentralization to improved economic performance—elections and the incentives they create for elected officials. The first set of arguments rests upon the charge that elections generate uncertainty that deters investment and disrupts economic activity. Investors respond negatively to volatility and the threat of unpredictable political changes that might damage their business interests (Aizenman and Marion 1993; Nooruddin 2011). In this regard, elected officials' control over economic policies can depress investment since electoral turnover and fickle electorates make frequent and unanticipated changes to regulatory rules more likely (Alesina and Perotti 1996). Concerns about politicians' inability to commit credibly to economic actors fall under this category. The literature asserts that, because electoral cycles often lead elected officials' short-term and long-term incentives to diverge, businesses may curtail their investment plans unless today's policies cannot be easily reversed tomorrow (Jensen 2006, Levy and Spiller 1994). Inasmuch as officials' *electoral* incentives create the underlying time-inconsistency problem (Kydland and Prescott 1977; Rogoff 1985), then appointing local leaders may assuage local economic actors' concerns by breaking the link between subnational policymakers and local electorates.

A second set of arguments supporting political centralization worries that making public officials accountable to smaller constituencies invites capture and corruption. Public choice and political economy models have long argued that democratic processes allow lobbyists and organized interests to disproportionately influence public policy, often

to the detriment of social welfare (Grossman and Helpman 1996; Olson 1982; Stigler 1971). The sheer number of competing interests at the national level often creates a political landscape of shifting coalitions and compromise that reduces specific groups' ability to dominate policy completely (Bardhan and Mookherjee 2000), but smaller political districts may not be able to foster the competitive dynamics needed to prevent capture by particularistic groups.[2] Given the potentially negative economic consequences of capture by vested interests (Hellman, Jones, and Kaufman 2003; Slinko, Yakovlev, and Zhuravskaya 2005), this argument bodes ill for economic performance in decentralized systems: the lower the level of government, the greater the danger that parochial economic elites will manipulate policies to benefit their own interests at the expense of their competitors and the broader public. Political centralization may mitigate these dangers by making local leaders accountable to an entirely different audience. So long as higher-level officials are not closely tied to the same local interest groups, appointed officials may be better positioned to adopt policies that disregard local elites' particularistic agendas and keep markets competitive (Bardhan and Mookherjee 2000).

POLITICAL COMPETITION, ACCOUNTABILITY, AND THE EFFECTS OF CENTRALIZATION

With its unsettled theoretical disagreements and conflicting empirical evidence, the existing literature does not provide strong conclusions about the direction and magnitude of political centralization's economic impact (Treisman 2007). Rather than debate about whether political centralization is either good or bad for economic performance, we might instead make more progress by theorizing about the conditions that help determine whether political centralization benefits subnational economies or not. Since political centralization is a homogenizing process that can involve dismantling existing electoral institutions and disrupting a wide spectrum of politician-constituent relationships, we should expect that centralization's effects to depend upon the underlying political conditions that prevailed before reforms took place. While many different social and institutional arrangements might plausibly condition political centralization's effects, I call attention here to one particular

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2. James Madison (1787) voiced this very concern in Federalist Paper No. 10: "The smaller the society, the fewer probably will be the distinct parties and interests composing it . . . and the smaller the compass within which they are placed, the more easily will they concert and execute their plans of oppression."

characteristic of the political environment that influences whether political centralization hurts or helps economic activity—the level of political competition.

Ultimately, the economic effects of centralization and removing local elections depend upon whether those elections were competitive enough to have been an asset to economic performance or whether they were a liability. To preview the argument, I claim that in regions where political competition has helped voters hold local leaders accountable, political centralization undermines economic performance by shifting local leaders' accountability away from voters, with their dominant interest in local economic concerns, to central government officials who have more diverse political priorities. Alternatively, in regions where uncompetitive politics have allowed leaders to maintain office by favoring narrow economic interests at society's expense, centralization encourages economic improvement by making previously unaccountable local leaders responsible to central bosses for a number of things, including local economic performance.

How do preexisting patterns of political competition alter the economic effects of political centralization? The answer starts with the link between political competition and leaders' accountability. Scholars have correctly identified public officials' electoral accountability as a powerful motivation to adopt growth-friendly policies and nurture an attractive investment environment (Besley and Case 1995; Persson and Tabellini 2000). But, elections by themselves are insufficient to generate that accountability; competition is the key to making elections meaningful instruments of accountability.

Political competition enhances elections' economic benefits by strengthening accountability. Political competition makes losing elections a real possibility for incumbents, and elections lose their disciplining effects on public officials as the threat of being replaced decreases. Consequently, a lack of competition blunts the electoral instruments thought to make leaders responsive to concerns about local economic conditions and grants leaders more leeway to pursue personal agendas.[3] Political competition also assists electoral accountability by pushing incumbents to court groups of mainstream voters and build broad political coalitions. This type of inclusive politics helps to insulate against state cap-

ture and prevents any one group of vested interests from controlling economic policy in the long-term (Acemoglu and Robinson 2012; Hellman, Jones, and Kaufman 2003). Thus, by increasing leaders' need to appeal to a broad base of voters, competition acts as a countervailing force against the cronyism that critics of decentralization associate with local elections.

As a critical linchpin in the relationship between electoral institutions and economic performance, political competition plays an important role in determining the economic effects of scrapping local electoral institutions. Where competition has given the voting mechanism its bite, economic conditions have benefited from leaders who are more likely to attend to constituents' economic concerns and less likely to jeopardize their reelection by favoring narrow economic cliques at society's expense. Political centralization, however, severs local leaders' electoral connection to voters and replaces it with new, bureaucratic career incentives to execute the priorities of the central government. In one example, Besley and Coate (2003) show in US states that elected energy regulators are more pro-consumer than appointed regulators since the latter's policy choices are often tied to other nonregulatory issues that are important to their principals' political agenda. In a similar manner, even when central officials care about local economic performance, appointed local leaders may have a bundle of other political imperatives handed down from above. Such imperatives might include party recruitment or political mobilization, which compete for resources and draw attention away from fostering local economic growth and job creation (Blaydes 2011; Reuter and Robertson 2012).[4] Thus, if politically competitive environments encourage elected leaders to expend more effort on nurturing economic growth, we should expect those locations' economies to suffer as centralization dilutes local leaders' incentives to watch over economic performance.

In contrast, centralization should be expected to have a positive effect where uncompetitive elections have not done much to hold elected leaders accountable. The decentralization literature largely avoids the topic of political competition, encouraging the implicit assumption that political decentralization will engender something that approximates the competitive elections we observe in advanced democ-

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3. Political competition may also affect economic performance via additional pathways. For example, without competition to expand the pool of potential candidates, the probability of selecting a leader with strong economic credentials diminishes sharply (Besley, Montalvo, and Reynal-Querol 2011; Galasso and Nannicini 2011.

4. Reuter and Roberston note the difficulty of building a local political machine for the center and fostering economic development at the same time, since the "corruption, prebendalism, and patronage spending needed to build a political machine that can deliver the vote is also likely to have deleterious effects on the economy" (2012, 1025).

racies. However, even casual observation tells us that elections (local and national) in many places are decidedly uncompetitive and do not necessarily strengthen leaders' accountability to voters (Gervasoni 2010; Levitsky and Way 2002). At a basic level, local elections in uncompetitive environments make easily elected leaders complacent, weakening their incentives to attend to voters' economic (and other) concerns. Less benignly, elections in uncompetitive localities can also produce subnational autocrats who use one-sided electoral contests to consolidate authority, suppress popular dissent, and use state institutions to generate economic rents for themselves and their elite supporters (Gibson 2005; McMann 2006).

In those types of environment, political centralization should make local leaders *more* accountable, albeit to central government officials rather than local voters. Assuming that central leaders include economic performance among the many criteria they use to evaluate their subordinates (Landry 2008), then local-level appointees may actually have stronger incentives to pursue progrowth policies, encourage economic competition, and seek outside investment than elected leaders who preside over politically uncompetitive regions.[5] This logic predicts that replacing locally elected officials in previously uncompetitive regions with bureaucratic appointees will lead to positive changes in economic performance.

In sum, this theoretical argument leads to the following empirical predictions. Where preexisting levels of political competition have been high, political centralization should have a negative effect on economic performance. Alternatively, where political contests have been uncompetitive, political centralization should be associated with improved economic performance.

These hypotheses contradict the empirical predictions implied by scholarly arguments regarding the economic drawbacks of electoral uncertainty and political instability. If elections represent an institutionalized source of policy uncertainty that undermines the predictability of the investment environment (Alesina and Perotti 1996), then the threat of unanticipated or drastic policy changes should increase as electoral races between opposing candidates become more competitive (Canes-Wrone and Park 2012; Frye 2010). This reasoning also implies that preexisting patterns of political competition should condition the effects of political centralization, but in the exact opposite direction of the argument outlined above. If competition stymies economic activity by heightening political uncertainty, then political centralization is most likely to have economic benefits in high-competition regions because it eliminates the threats of electoral volatility and its attending policy changes. Alternatively, investors in low-competition regions should have benefited from an environment where leadership was very predictable. By introducing the possibility that long-standing leaders will be replaced or that policies may change to reflect the new governance structure, centralization should increase investors' uncertainty, thereby creating a drag on economic performance.

POLITICAL CENTRALIZATION AND ELECTORAL REFORM IN RUSSIA'S REGIONS

I test the claims of my theoretical argument in the context of the Russian Federation, making use of centralizing reforms in 2005 that removed the direction election of regional governors in favor of gubernatorial appointments by the Kremlin. Before discussing the empirical tests in the next section, I describe the reforms and discuss the benefits of using Russia to test my argument's empirical predictions.

Constitutionally, Russia is a federal state comprised of 83 subnational political units collectively referred to as "regions."[6] Russia's regions have taken divergent trajectories following the USSR's death, leading to a surprising diversity in political, social, and economic contexts that is reminiscent of differences across sovereign states. For most of Russia's postcommunist history, the regions' popularly elected governors have been strong political figures, both within their own regions and vis-à-vis the central government. During the 1990s, while the Russian state struggled to survive its tumultuous transition experience, many governors exploited the central government's weakness by flouting federal authority and consolidating control over both political and economic spheres within their regions (Hale 2003; Stoner-Weiss 2006).[7] Upon entering office in 2000, President Vladimir Putin made reining in regional governors' centrifugal ambitions a top priority. The coup de grace of Putin's recentralization efforts came on December 3, 2004, when the Russian State Duma passed the president's initiative to switch from a system of popularly elected governors to a system of

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5. Even if central governments are no more public spirited than local despots, central leaders are likely to be pressured by different sets of interests such that centralization redivides the local spoils in ways that undercut parochial elites' previous barriers to economic competition. For a similar argument, see Bardhan and Mookherjee (2000).

6. Formally, these subnational entities bear the unwieldy constitutional designation of "Subjects of the Federation." I use the more colloquial term "regions" as shorthand and refer to their regional executives collectively as "governors."

7. In a few tense cases, challenges to federal authority took on strident tones, with governors calling for succession from the Russian Federation. For more on separatist activism in early transition, see Treisman (1997).

gubernatorial appointments managed closely by the federal executive.

From 2005 until 2013, the appointment system worked in the following manner.[8] On paper, regions retained some say in who governed since regional legislatures needed to ratify the president's nominee. In practice, the Kremlin dominated the process from beginning to end. Regional legislatures dutifully rubber-stamped every nominee—the Amur regional legislature's ratification vote of 75% in favor of Leonid Korotkov in 2005 represents the lowest support received by any Kremlin-nominated candidate. Moreover, while removing an elected governor required regional impeachment proceedings, the president could dismiss appointed governors solely on the pretext of a "loss of confidence." Thus, regional governors in the appointment era now became wholly accountable to the Russian president.

Putin's gubernatorial reforms had at least three aims. First, removing the electoral foundations of governors' autonomy furthered Putin's broader agenda to reclaim the federal government's authority that governors had undermined during the Yeltsin administration. Second, Putin explicitly justified the reform initiative to the Duma and the broader public as a way to clean up degenerate regional politics by weakening the ties between governors and regional economic elites. Although such statements probably reflect populist window dressing, scholars have shown that well-connected firms in Russia's regions have long received preferential treatment from regional governments in exchange for political and financial support, often at the expense of other regional businesses and economy more generally (Gehlbach 2008; Hale 2003; Slinko, Yakovlev, and Zhuravskaya 2005; Stoner-Weiss 1997). Perhaps most crucially, the reforms allowed Putin to extend personal control over regional politics. Out of 72 elections between 2001 and 2004, Kremlin-backed candidates successfully challenged incumbent governors in only 15 races. This has led some to argue that political centralization was the Kremlin's second-choice alternative for ousting independently minded governors to make way for loyalist cadres (Chebankova 2005; Goode 2007). By eliminating gubernatorial elections, Putin simultaneously undermined the political independence of

potential rivals and gained access to extensive political networks in a number of regions that could be coopted to mobilize voters on behalf of United Russia, Putin's political party.

The theoretical argument specifies that the effects of Putin's political centralization on the regions' economies should depend upon the competitiveness of their pre-reform political environments. Prior to the gubernatorial reforms, political competition varied greatly across Russia's more than 80 regions (Moraski and Reisinger 2003). Elections in some regions, such as the Sverdlovsk and Nizhniy Novgorod regions, had been highly competitive with close electoral races for executive office, open recruitment, and regional legislatures filled with representatives from a spectrum of national and regional parties. Russia has also produced a number of "regional autocracies," such as the Republic of Bashkortostan, where strong political machines based on clientalism and coercion stifled any competition, despite regularly occurring elections.[9]

Comparing the least and most competitive regions (i.e., lower and upper quartiles), we see some indication that political competition in the pre-reform period may have indeed heightened governors' electoral incentives to foster better economic performance. Table 1 shows that the highly competitive regions as a group outperformed the uncompetitive regions by statistically significant margins for a number of economic indicators. For instance, during the reported three-year period, the mean of the competitive regions' average economic growth was 3.3 percentage points higher than in the uncompetitive regions. Table 1 also reveals that prior to centralization uncompetitive regions on average adopted more laws granting economic preferences to specific regional firms, suggesting a higher incidence of cronyism and state-induced economic rents in politically uncompetitive regions.[10] If elections in Russia's politically competitive regions did hold governors accountable for economic performance in a way that uncompetitive regions' elections did not,[11] then the correlation between economic performance

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8. In May 2012, the Russian Duma voted to return gubernatorial elections while effectively giving the ruling party's control over which candidates can run. Only candidates that have the support of 5–10% of local legislative deputies (depending on regional legislatures' size) or 75% of local administrations are allowed to take part. Moreover, the new system maintains the Kremlin's ability to remove elected governors for "misconduct." Very few governors have taken office since the law went into effect, making it too soon to tell how this new hybrid system works in practice.

9. Among such regions, for example, it was not uncommon for incumbent governors to win reelection with 90% of the vote. Hale (2003) provides an in-depth discussion of these regional political machines in Russia.

10. The next section describes the data on political competition and economic performance. Preferential laws data come from Slinko, Yakovlev, and Zhuravskaya (2005), counting regional laws that specifically mention region's top firms (1999–2003).

11. Konitzer (2006) argues that gubernatorial elections were a useful, if flawed, mechanism for holding regional executives accountable for poor economic performance. This is particularly true for high-competition regions. During years with negative economic growth, 61% of elections in competitive regions brought new governors to office, compared to 37% in

Table 1. Comparing Russia's Regional Economies Prior to Centralization Reforms

| Variable | Political Competitiveness | | n_L, n_H | p-value |
	Low	High		
Economic growth	3.491	6.819	(23, 20)	0.019
annual change (%)	(1.187)	(0.934)		
Private investment	6.947	9.109	(24, 20)	0.000
mil. of rubles (logged)	(0.364)	(0.253)		
Small businesses per capita	3.119	6.871	(24, 21)	0.001
small businesses per thousand residents	(0.304)	(1.135)		
Preferential laws	11.938	8.737	(16, 19)	0.057
total laws mentioning specific firms by name	(1.697)	(1.118)		

Note—Economic data for Russia's regions from *Rosstat*, with regional averages for the period 2003–2005 averaged by group; preferential law data from Slinko et al. (2005), cumulative total for the period 1999– 2003. "Low" and "high" categories correspond with the first and fourth quartiles of POLITICAL COM- PETITION, an index created using data from Moscow Carnegie Center. Standard errors in parentheses below group means; p-values are one-tailed, testing directional hypotheses that low-competition regions have higher (lower) means than high-competition regions.

and political competition in the pre-reform period strongly suggests that governors' differing incentives to attend to economic conditions may have indeed had an impact on regional economies.

For Russia's governors, the new appointment system fundamentally changed the nature of their political accountability and their career incentives. Appointed governors acquired a new political principal in the Kremlin who had additional, noneconomic demands—most notably, loyalty to the center and voter mobilization to ensure United Russia's political success in their region. Examining reappointment patterns, Reuter and Robertson (2012) demonstrate convincingly that the Kremlin's decision to keep or dismiss governors largely hinged upon appointees' ability to turn out the vote for United Russia in regional and federal elections, frequently even more so than upon their competence at managing the economy.[12] Yet, we observe that regional economic performance did not disappear from the central government's radar, primarily due to worries that regions' deteriorating economic conditions might destabilize Putin's regime (Von Twickel 2008). In fact, the Kremlin

stressed repeatedly that governors were expected to improve their region's standard of living and that Moscow would not turn a blind eye to flagging economic performance (Iosebashviti 2009; Reuters 2009). Thus, where Russia's elected governors once varied in their need to attend to voters' primary concerns about the economy, political centralization made appointed governors uniformly accountable to a powerful political principal with intentions to evaluate their performance across multiple, sometimes competing, tasks.

The theoretical framework implies that the changes to accountability and new demands should have affected competitive and uncompetitive regions differently. If the competitiveness of politics had influenced regional leaders' previous policies and priorities, then appointed governors responding to their new career incentives would need to reallocate resources to those pursuits that would improve their region's weaker performance criteria. In regions where political competition had previously incentivized governors to expend effort on nurturing economic growth, centralization required that executives shift administrative resources away from an acceptably performing economy towards cadre development and mobilizing resources to help United Russia win elections. For such regions, the theory predicts that centralization will have had a negative economic impact by diluting the economy's relative importance to governors' political survival.

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election years with positive growth ($t = 2.652$, $p = 0.009$); in less competitive regions, there is no statistical difference between corresponding rates of gubernatorial turnover. Results available in the appendix.

12. For more on appointed governors' incentives, see also Sharafutdinova (2009) and Reisinger and Moraski (2013).

Conversely, in politically uncompetitive regions, political centralization required no special investment of administrative resources in order to turn out votes for Putin's party of power—quasi-autocratic governors had long been engineering elections via effective political machines and strong clientelistic networks. But, centralization did make these nearly unaccountable governors answerable in a meaningful way to the presidential administration for economic problems such as poverty and weak growth. For these regions, the theory predicts that centralization would improve economic performance by increasing regional leaders' motivation to pursue policy initiatives that would demonstrate their commitment to regional development as a whole rather than exclusively favoring narrow economic interests at society's expense.

A number of substantive and methodological factors make the Russian case a good fit for studying the economic effects of political centralization. In contrast to the developed democracies where such questions are often investigated, Russia provides us insight into the type of "untidy" political and economic environments that typically prevail in the developing countries who are the most likely candidates for such reforms. Similarly, by transferring leaders' accountability from subnational voters to the central government, the Russian gubernatorial reforms permit us to study an institutional shift that targeted high-profile, powerful political actors, but in the opposite direction of the decentralization events around which much of the empirical literature has been framed. Finally, given Russia's questionable democratic record, this venue presents a window into the economic implications of centralization in the shadow of creeping authoritarianism.

METHODS AND EMPIRICAL ANALYSIS

In this section, I evaluate the economic impact of political centralization by examining how economic performance in both politically competitive and uncompetitive regions of the Russian Federation responded to the removal of direct gubernatorial elections. To perform the analyses, I collect available data on a number of economic and political indicators for each of Russia's 83 regions for the time period 2003–10.[13]

For the main and auxiliary analyses, I adopt multiple indicators of economic performance in order to evaluate the economic effects of political centralization broadly. For the main analyses reported here, I measure ECONOMIC GROWTH using the year-on-year change in percentage terms of regions' gross domestic product.[14] In supplementary analyses that appear in the appendix, I also estimate models using additional indicators of economic performance: investment by private sector enterprises in fixed capital assets (logged millions of constant rubles), a measure of enterprise creation (new firms registered per 1,000 existing firms), spending on research and development (per firm average, in thousands of constant rubles), firm profitability (profitable enterprises as percent of total enterprises), and small business volume (averaged per small firm, in millions of constant rubles). Results across all these additional markers of economic performance match the patterns reported below and appear in the appendix.[15]

Russia's gubernatorial reforms offers us two ways to operationalize the key independent variable, POLITICAL CENTRALIZATION. First, one can code centralization as taking place immediately and uniformly for all regions in the beginning of 2005, right after the Duma approved Putin's proposed reforms. Referred to hereafter as the "simultaneous" coding of centralization, the resulting measure is coded 1 for all region-years beginning in 2005 and coded 0 otherwise. Alternatively, although the first round of gubernatorial appointments began in February 2005, the new law also allowed incumbent governors to finish their elected terms, effectively staggering the reforms' implementation across a five-year period to correspond with regional electoral calendars. This creates a second operationalization of "staggered" centralization, and it is coded with a 0 in each year that regions have an elected governor for at least six months and set equal to 1 for all years that regions have an appointed governor for six months or more.[16]

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party of power. Using alternate start years as far back as 1997 show that, although the magnitude of the coefficient estimates of interest attenuates, the statistical results remain substantively similar. Results available in the appendix.

14. The measure of GDP is expressed in base units of constant rubles, benchmarked in the year 2000.

15. Data for these variables come from the Russian State Statistical Agency (Rosstat). Data available in annual publications of the regional statistical yearbook *The Regions of Russia*.

16. The dates of governor appointments come from Labyrinth, a database on Russian political figures and organizations. The Kremlin appointed over 40 governors by the end of 2005, 10 more in 2006, 18 in 2007, and the remainder over the following two years. I code any region-year in which a governor is first appointed after July as an "elected" year rather an "appointed" year. All results hold if region-years count as "appointed" regardless of appointment month.

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13. Going back too far in time to establish a pre-reform baseline raises concerns about intertemporal comparability since Russia's debt default and currency devaluation in late 1998 generated economic volatility for a number of years following the crisis. As pointed out by a reviewer, the year 2003 is a politically relevant start year since United Russia's overwhelming electoral success in the 2003 State Duma elections marks a major consolidation of Putin's power and represents the Kremlin's first truly successful efforts at marshaling local administrative resources on behalf of the

These two measures represent the lower and upper bounds on the time required for the effect of Putin's centralization to take hold. Coding centralization as "simultaneous" captures a clean structural break in governors' incentives—once the law has passed, sitting governors would understand quickly that they no longer face electoral pressure and should now seek to satisfy Kremlin demands. Of course, it also assumes that governors all immediately understood exactly what their new political principal wanted from them and acted accordingly; given the nontransparent manner in which appointments took place (Chebankova 2008), initial uncertainty about the Kremlin's performance criteria calls that important assumption into question. On the other hand, the staggered coding of political centralization reflects actual appointments in the regions and offers a measure that can account for "stickiness" in elected governors' behavior following Putin's announcement due to limited information ex ante about Kremlin preferences.[17] Yet, in contrast to the simultaneous measure, staggered centralization errs by assuming that, despite the changes in legislation and elections' cancellation, elected incumbents did not act fully on their new career incentives until they become appointed governors. In recognition that these two operationalizations capture different facets of the same centralization process, the main analyses presents both codings of POLITICAL CENTRALIZATION side by side.

To measure POLITICAL COMPETITION in Russia's regions, I employ an index of regional democracy created for use in the Moscow Carnegie Center's Regional Monitoring project. The original index reflects expert assessment of regional political environment along many different dimensions for four distinct time periods (i.e., not annually) between the years 1991 and 2006.[18] For the time period immediately preceding Putin's gubernatorial reforms (2000–2004), regions receive a single score on each of three dimensions: representative elections (existence of free and fair elections, few limitations on political rights), the openness of political life (the extent of transparency and public involvement in the political sphere), and pluralism (participation by stable parties or legislative factions before and after elections). Ranging from from 1 (worst) to 5 (best), each of the three separate components scores are added together to form a time-invariant, additive index of regional political competition.[19] Because the theoretical argument focuses specifically on how this variable interacts with POLITICAL CENTRALIZATION, I also center the additive index around the sample mean to ease substantive interpretation of the statistical results.

Even before adding statistical controls, we can see evidence of centralization's conditional effects. Using the staggered centralization measure, Figure 1 displays regions' average GDP growth rate for the three years preceding and following the introduction of gubernatorial appointments, aggregated for the lower and upper quartiles of POLITICAL COMPETITION. Where political competition was low, regions averaged 5.5% growth in the three years before their governors were appointed and 7.7% growth for their first three postappointment years.[20] The difference between pre- and postappointment periods is more striking in the highly competitive regions; prior to appointed governors, regions in this group averaged 8.3% growth, compared to 2.9% after ($p = 0.002$).[21] Contrary to what conventional debates would suggest, centralizing reforms in Russia's regions do not appear to have generated some monolithic economic response. In line with the empirical predictions of my argument, we instead observe differing economic outcomes, conditional on previous levels of political competition. With this as my starting point, I continue with the more rigorous statistical tests to help ensure that these results are not spurious.

In some model specifications, I include controls for variables that economic theory indicates should be correlated with economic performance: regions' level of economic development, population size, and regional infrastructure. The variable GDP PER CAPITA measures in logged terms regions' gross domestic product in constant 2,000 rubles per person and allows us to control for level of economic development, which is plausibly correlated with both regional economic performance and the level of political competition. The denominator in this variable is regional POPULATION, which also enters the model in logged terms as a separate variable to proxy for market size, which is an important

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17. Auxiliary analyses in the appendix using the staggered measure provide empirical evidence in support of this uncertainty hypothesis, demonstrating that actual appointments had their most discernible effects on economic performance in the initial years after reforms' adoption, when preappointment governors' uncertainty about Kremlin preferences would have been highest.

18. For a description of earlier versions of the dataset, see McMann and Petrov (2000). The main analyses use only the theoretically relevant components, but results are robust to using an index built from the full set of measures.

19. See the appendix for empirical evidence supporting the external validity of this measure.

20. This change is positive as predicted, but the difference falls short of statistical significance ($p = 0.276$).

21. The simultaneous measure of centralization produces similar results: between the pre- and postreform period, economic growth improved in the low competition regions while stagnating or declining in high competition regions. See the appendix for favorable evidence from multiple comparisons using that measure.
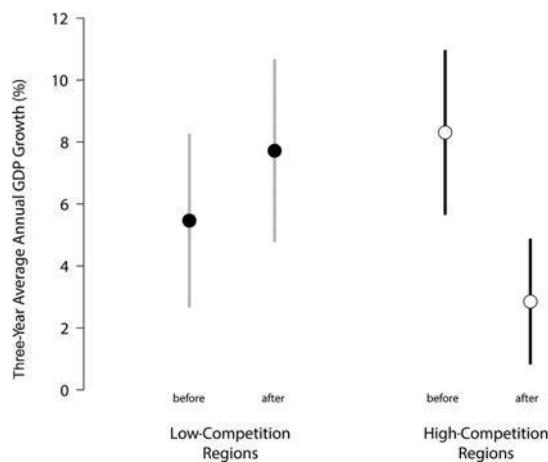
Figure 1. Regional economic performance, before and after centralization. Plot compares group means of year-on-year economic growth (in percentages) in Russia's regions for the three years proceeding and following the appointment of regions' governor. "Low" and "high" political competition groups include those regions in the first ($n = 21$) and fourth ($n = 21$) quartiles of POLITICAL COMPETITION, respectively. Bands represent 90% confidence intervals.

factor for many kinds of investment and economic activity. In addition, the variable INFRASTRUCTURE measures the density of paved roads in a region per 1000 km. In recognition of the fact that indicators of economic performance such as private investment and economic growth are not likely to respond instantaneously to political centralization, I lag all right-hand-side variables one time period.[22]

To analyze the relationship between political centralization, political competition, and economic performance, I employ two different empirical approaches. The first approach relies upon a fixed effects specification of the following form:

$$ECON_{it} = \alpha + \beta_1 R_{it-1} + \beta_2(R_{it-1} \times PC_i) + \gamma X_{it-1} + \eta_i + \theta_t + \varepsilon_{it},$$

where i indexes each region and t indexes each year; ECON$_{it}$ is one of several measures of economic performance; R is the measure indicating whether or not centralization reforms have taken place; PC is the time-invariant measure of regional political competition; $\mathbf{X}$ is a vector of control variables and is excluded in some specifications to highlight that underlying results do not depend on adjusting for these factors; α, β, and γ are parameters to be estimated; θ and η are fixed-effects parameters for year and region, respectively; and ε is the error term. As a note, the incompatibility of

the fixed-effects specification and time-invariant measures makes it so that the POLITICAL COMPETITION variable appears only in the interaction term and not elsewhere in the equation as a constituent term. I estimate the model using ordinary least squares (OLS) and report region-clustered standard errors to account for within-region correlations, including serial autocorrelation (Angrist and Pischke 2009).

For the measure of simultaneous centralization, this empirical approach represents an interrupted time-series design. One identification challenge of that design is that the adoption of reforms may correlate perfectly with other unobserved, contemporaneous changes that also affected regional economic performance.[23] Fortunately, the interaction with political competition provides partial identification since it is highly unlikely that such confounding factors would have changed at the same time as gubernatorial reforms, but in a way that also affected low-competition regions' economies differently than the economies of high-competition regions. Alternatively, under the fixed-effects specification, the staggered centralization measure represents a generalized difference-in-differences (diff-in-diff) design wherein the regions that do not undergo reforms in a given year act as a counterfactual or control group for comparing economic changes in those regions that have just replaced elected governors with appointees. Under the identifying assumptions of the difference-in-differences framework, the estimates measure the effect of political centralization on economic performance conditional upon the competitiveness of region's political environment.[24]

The second econometric model takes the following form:

$$ECON_{it} = \alpha + \rho ECON_{it-1} + \beta_1 R_{it-1} + \beta_2 PC_i$$
$$+ \beta_3(R_{it-1} \times PC_i) + \gamma X_{it-1} + \theta_t + \varepsilon_{it}.$$

In contrast to the initial approach, this second strategy adds a lagged dependent variable and deletes the region fixed effects.[25] Compared to the previous model, the identifying assumption in this approach is that the lagged value for regions' economic performance controls for any unobserved heterogeneity that might otherwise bias the estimates of

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22. Using longer lag lengths, such as two- or three-year lags, produces similar results to those presented here.

23. This collinearity is reflected by empirical models dropping the dummy for the reform year from the results.

24. Both strategies leverage pre- and postreform changes, meaning that the analyses identify *immediate* changes in regional economic performance due to centralization, rather than capturing its long-run economic effects.

25. I omit the region fixed effects here because OLS estimates are biased in models with both a lagged dependent variable and unit fixed effects.

Table 2. Political Centralization and Economic Performance, Conditional on Political Competition

DV: GDP Growth annual change (%)	Simultaneous Centralization reforms announced				Staggered Centralization actual appointments			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
POLITICAL CENTRALIZATION$_{t-1}$	1.845	7.788	1.883	−2.639	−0.819	−0.363	−1.340	−0.882
dummy; 1 = postreform	(0.887)	(2.277)	(0.916)	(1.498)	(1.164)	(1.007)	(1.043)	(1.001)
	0.041	0.001	0.043	0.082	0.484	0.719	0.203	0.381
POLITICAL COMPETITION$_{t-1}$			0.557	0.730			0.223	0.537
mean-centered; -5 = low, 5 = high			(0.234)	(0.268)			(0.285)	(0.245)
			0.020	0.008			0.437	0.031
CENTRALIZATION$_{t-1}$	−1.112	−0.724	−1.073	−0.987	−0.897	−0.968	−0.798	−0.966
× COMPETITION$_{t-1}$	(0.356)	(0.373)	(0.325)	(0.353)	(0.377)	(0.406)	(0.401)	(0.351)
	0.002	0.056	0.001	0.007	0.020	0.020	0.050	0.007
GDP PER CAPITA$_{t-1}$		−38.024		−0.557		−38.509		−0.517
constant 2000 rubles (logged)		(5.034)		(0.956)		(5.164)		(0.987)
		0.000		0.562		0.000		0.602
POPULATION$_{t-1}$		−24.331		−0.784		−23.198		−0.706
thousands of persons (logged)		(23.407)		(0.714)		(23.182)		(0.716)
		0.302		0.275		0.320		0.327
INFRASTRUCTURE$_{t-1}$		0.012		0.003		0.010		0.002
km paved roads/km² land area		(0.014)		(0.004)		(0.016)		(0.005)
		0.418		0.530		0.527		0.587
GDP GROWTH$_{t-1}$			0.016	0.019			0.014	0.010
lagged dependent variable			(0.029)	(0.039)			(0.030)	(0.037)
			0.578	0.621			0.640	0.781
Region fixed effects	Yes	Yes	No	No	Yes	Yes	No	No
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	671	640	671	640	661	640	661	640

Note—Data on Russian gubernatorial appointments collected by author from Labyrinth.ru, and measures of political competition come from the Moscow Carnegie Center; all economic data from *Rosstat*. Parameter estimates for fixed effects and model constants not presented in table to save space. Region-clustered standard errors in parentheses; *p*-values appear below standard errors.

interest. This specification also estimates a coefficient for *all* constituent parts of the interaction term, thereby addressing concerns about the implicit restrictions imposed by the first model excluding the time-invariant POLITICAL COMPETITION. Accordingly, this strategy bases statistical estimates on comparisons between appointed/elected governors, competitive/uncompetitive regions and their interactions, conditioning on a region's recent economic performance, year dummies to control for common shocks in a given time period, and the previous list of control variables. As before, I estimate the model using OLS and cluster the standard errors on regions. Table 2 reports the statistical results for these analyses.

Is there evidence that political centralization's effects on Russia's regional economies was conditional upon the competitiveness of regional politics? A basic inspection of the interaction term's coefficient estimates across the entire ta-

ble indicates that there is indeed consistent evidence for that political centralization's economic effects vary by regions' political competitiveness. Substantively, the negative sign on the interaction term's coefficient indicates that the higher a region's level of political competition, the more negative political centralization's economic effects. I discuss the results in turn for each coding of centralization, beginning with the simpler, simultaneous measure of reforms. Along with fixed effects for region and year, the results in Column (1) include only the key independent variables for centralization, political competition, and their interaction. The estimated coefficient for CENTRALIZATION is 1.845 with a standard error of 0.887, and the coefficient on the interaction between centralization and competition is equal to −1.112 with a standard error of 0.356. Column (2) indicates that, although reduced in magnitude, this estimated coeffi-

cient remains statistically significant after adding the control variables to the specification ($\beta = -0.724$, se $= 0.373$). Looking at the results in Columns (3) and (4), we see in those models that include a lagged measure of economic growth and omit the region fixed effects, the coefficient estimates on the interaction term are also in the hypothesized direction and statistically distinguishable from zero. The fact that these estimates are roughly the same magnitude (-1.073 and -0.987, respectively) as in the fixed-effects models helps to soothe concerns that dropping a constituent part of the interaction in the first models would untowardly bias my findings.

The remaining columns in Table 2 tell a similar story, but this time using the staggered measure of actual regional appointments to investigate centralization's conditional effects. Columns (5) and (6) reveal that, as before, the interaction between CENTRALIZATION and COMPETITION is negatively signed and statistically significant at conventional levels in the generalized diff-in-diff setup, both without additional controls as well as with controls included.[26] Once again, these results hold even after switching estimation strategies to the lagged DV models; in the table's final two columns, we see coefficient estimates on the interaction term that are entirely consistent with the previous parameter estimates. Using two different measures of POLITICAL CENTRALIZATION, two estimation strategies and adjusting for differences in level of economic development, population size, and level of regional infrastructure, the results indicate that replacing elected governors with Kremlin appointees affected economic growth conditional upon the level of political competition with the region. Moreover, the results are all consistent with the theoretical expectation that the move to gubernatorial appointments should be most damaging to the economic performance of regions with previously high levels of political competition.

Based on the estimates from Column (1) and (5), Figure 2 plots the estimated marginal effects of Putin's centralizing reforms on regional economic growth, conditional on regions' preexisting level of political competition. In high-competition regions, shifting from elections to appointments is associated with reduced economic growth; in the most competitive of regions, centralization is estimated to have been very harmful to the economy, slowing growth in the range of four to five percentage points. In contrast to both standard arguments in favor of political decentrali-

zation as well as concerns about electorally generated political uncertainty, in regions where political competition was lowest in the pre-reform period, economic growth actually *increased* after receiving appointed governors. Substantively, political centralization in the least competitive regions resulted on average in a more than four percentage-point increase in economic growth. Together, Table 2 and the marginal plots in Figure 2 provide compelling evidence that abolishing gubernatorial elections within Russia's uncompetitive regions was associated with a statistically and substantively significant increase in economic growth, while removing gubernatorial elections in competitive regions corresponded with an equally significant decrease in economic growth.

Turning our attention away briefly from the main variables of interest, we see that the results for the control variables in Table 2 vary depending the estimation strategy. The variable GDP PER CAPITA bears a negative and statistically significant relationship to economic growth in some models. Although the relationship is not consistent across all models, this finding is suggestive that regions with higher levels of economic development tend to grow more slowly than less-developed regions. The correlation between either POPULATION or INFRASTRUCTURE (as proxied by road density) and economic performance is statistically indistinguishable from zero in these data.

In sum, the consistency of the statistical findings across multiple measures and under competing modeling specifications is persuasive evidence of centralization's conditional effects. In addition to the results presented in Table 2, these findings are robust to a variety of estimation strategies and model specifications. I explore an alternate strategy for modeling regional economic performance over time: replacing the year dummies with a linear time trend has no substantive effect on the results. In light of the importance of natural resources to Russia's national and subnational economies, plus the large social science literature linking oil wealth to reduced political competition, we might worry that not controlling for regional oil wealth could lead to omitted variable bias that would confound the analyses. Adding a measure of oil production (in thousands of tons) does not alter the findings in any meaningful way. Results are also robust to adopting different measures for the key independent variables. For instance, the findings do not change if the additive index of political competition is replaced by its separate component scores, recoded into a three-point categorical indicator of low/medium/high competition or substituted altogether by proxying political competition with the number of registered civil organizations in the region.

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26. The coefficient estimates are -0.897 (se $= 0.377$) and -0.968 (se $= 0.406$), respectively.
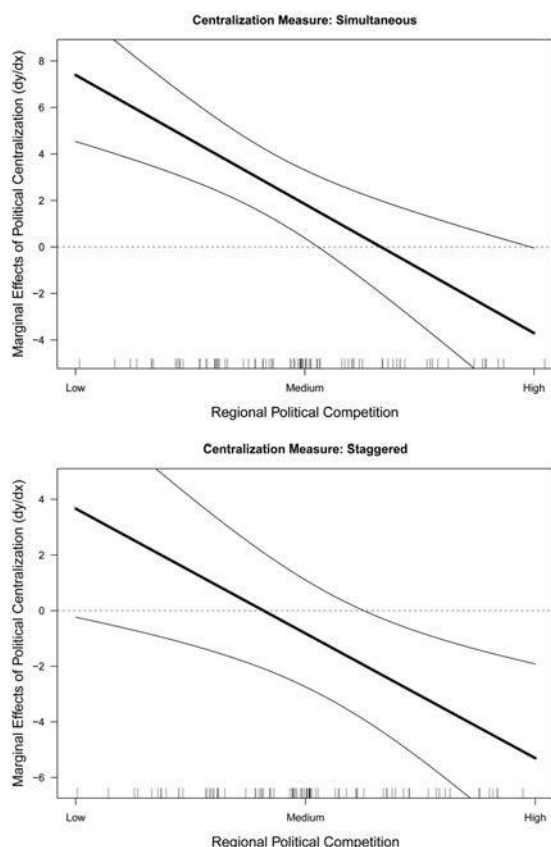
Figure 2. Marginal effects of centralization on economic growth. Plots generated using coefficient estimates from columns (1) and (5) in Table 2. The dependent variable is year-on-year change in regional GDP in percentage terms. Bands represent 90% confidence intervals. Markers along the bottom of the graph indicate (jittered) location of regions on the x-axis.

Finally, additional analyses demonstrate that empirical support for the conditional theory manifests itself in other economic indicators besides growth, including private investment, enterprise creation, spending on research and development, firm profitability, and small business volume. Furthermore, if finding a relationship in other indicators of regional economic performance bolsters confidence, then finding a conditional effect of centralization where we expect none would raise suspicions that spurious relationships may be driving the empirical findings. Therefore, I conduct an additional placebo-style test using FEDERAL INVESTMENT,[27] an economic policy output decided at the federal level that should *not* reflect heterogeneous changes in regional executives' career incentives. Additional analyses provide no evidence for a conditional relationship between centralization and the decoy dependent variable, federal investment. On the whole, then, the data agree: whereas the switch from

truly competitive elections to bureaucratic appointments represents a setback to economic performance on multiple fronts, dismantling uncompetitive electoral institutions can actually stimulate growth and create new economic opportunities. To save space, tables and figures for these supplementary analyses appear in the appendix.

ADDITIONAL ANALYSES

The findings from the statistical analyses provide at least two insights. First, removing gubernatorial elections had a significant effect on Russia's regional economies. Second, the analyses provide compelling evidence for centralization's heterogeneous effect across regions, depending upon regions' prior patterns of political competition. Electorally uncompetitive regions seem to have benefited economically from the transition, while competitive regions appear to have suffered negative economic consequences from losing electoral control over their governors. In this section, I adopt alternate modeling strategies to address potential counterarguments to my theoretical interpretation of these findings, deal with potential sources of endogeneity, and provide statistical evidence that helps to alleviate the concerns that they raise.

The previous models' reliance on annual data might raise concerns that measurement error or noisy fluctuations in the yearly data on regional growth and investment could be driving the within-region estimates of political centralization's (conditional) effects.[28] Accordingly, I reestimate the fully controlled models from Table 2 using two-period panels of regional averages, comparing the average growth in each region for the three-year periods immediately preceding and following the region's gubernatorial appointment.[29] Table 3 below reveals that if the annual data are causing any problems for the main analyses, they are leading to attenuation bias. Columns (9) and (10) report coefficient estimates for the interaction term that look identical in sign and significance to earlier results, but larger in magnitude (simultaneous: $\beta = -1.159$, se $= 0.413$, staggered: $\beta = -1.432$, se $= 0.521$). One way to interpret this finding is that the aggregated data help us to establish an upper limit on the magnitude of centralization's (conditional) economic effects.

One reasonable alternative interpretation of the empirical findings is that changes in regional economic perfor-

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27. This variable measures federal investment in fixed capital assets (in millions of constant rubles, logged).

28. This should be less problematic for the lagged dependent variable models, but it is a legitimate concern for models that rely on the fixed-effects estimator (Angrist and Pischke 2009).

29. The centralization measure's coding of before/after appointment eliminates the time dummies in this setup.

Table 3. Political Centralization, Competition, and Economic Performance: Additional Analyses

DV: GDP Growth annual change (%)	Averages three-year avg. pre vs. post		Replacement controlling for gov. turnover				Alt. Timing elec. schedule
	(9)	(10)	(11)	(12)	(13)	(14)	(15)
SIMULTANEOUS CENTRALIZATION$_{t-1}$ dummy; 1 = post-announcement	−1.256 (1.983) 0.000		7.226 (2.342) 0.265		9.407 (1.856) 0.461		
STAGGERED CENTRALIZATION$_{t-1}$ dummy; 1 = post-implementation		−4.851 (1.268) 0.000		−1.359 (1.210) 0.265		−0.996 (1.351) 0.461	
CENTRALIZATION$_{t-1}$ × COMPETITION$_{t-1}$	−1.159 (0.413) 0.006	−1.432 (0.521) 0.007	−0.740 (0.372) 0.050	−1.014 (0.402) 0.014	−0.735 (0.362) 0.042	−0.997 (0.385) 0.010	
GDP PER CAPITA$_{t-1}$ constant 2000 rubles (logged)	11.648 (7.978) 0.148	13.820 (7.254) 0.060	−38.558 (4.859) 0.000	−39.279 (4.970) 0.000	−38.384 (4.963) 0.000	−38.998 (5.094) 0.000	−38.520 (5.134) 0.000
POPULATION$_{t-1}$ in thousands of persons (logged)	−56.116 (46.744) 0.234	−69.720 (26.629) 0.011	−25.276 (22.865) 0.272	−22.859 (22.457) 0.312	−24.968 (22.491) 0.267	−22.983 (22.380) 0.304	−22.041 (23.074) 0.339
INFRASTRUCTURE$_{t-1}$ km paved roads/km² land area	0.023 (0.019) 0.221	0.006 (0.016) 0.694	0.011 (0.015) 0.477	0.009 (0.017) 0.595	0.011 (0.015) 0.445	0.010 (0.016) 0.559	0.010 (0.016) 0.532
REPLACEMENT$_{t-1}$ dummy, 1 = incumbent replaced			2.211 (1.131) 0.054	2.973 (1.390) 0.036			
REPLACEMENT (IV)$_{t-1}$ 2SLS using governors' birth year					1.489 (2.008) 0.458	1.889 (2.345) 0.420	
CENTRALIZATION (IV)$_{t-1}$ 2SLS using scheduled turnover							−1.415 (1.814) 0.435
CENTRALIZATION (IV)$_{t-1}$ × COMPETITION$_{t-1}$							−1.091 (0.485) 0.024
First-stage F-stat					56.22	52.25	88.26
F-stat p-value					0.000	0.000	0.000
Region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	No	No	Yes	Yes	Yes	Yes	Yes
Number of observations	160	156	640	640	640	640	640

Note—Data on Russian gubernatorial appointments and birth year collected by author, and data on political competition from the Moscow Carnegie Center; all other data from *Rosstat*. Parameter estimates for fixed effects and model constants not presented to save space. Columns (9) and (10) compare changes in three-year regional averages directly before and after reforms. Columns (13) and (14) use two-stage least squares regression (2SLS) with BIRTH YEAR as an instrument for governors' replacement; Column (15) reports 2SLS estimates using ELECTORAL SCHEDULE to instrument for regions' introduction to reforms. First-stage results available in appendix. Region-clustered standard errors in parentheses; p-values appear below standard errors.

mance after political centralization actually reflect personnel changes and that the Kremlin improved economic conditions in low-competition regions by bringing in outsiders who were more competent than previous governors who had to be elected from within the region. While it is a provocative idea, the data show that only eight out of

32 governors were replaced in the less competitive regions, none by outsiders.[30] More broadly, recent empirical work reveals few differences in governors before and after the

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30. High-competition regions had governors replaced and retained in roughly equal numbers (29 versus 22, respectively). A test comparing the

appointment reforms on dimensions that correlate with economic competence, such as professional qualification or education (Buckley et al., n.d.). Although the technocratic replacement hypothesis appears doubtful, differences across retained versus replaced governors may raise other potentially more serious concerns about how to interpret the statistical findings. For instance, given the appointment process's opacity (Chebankova 2008), uncertainty about whether the Kremlin would replace or retain an incumbent governor might have encouraged investors to delay (or move up) their business plans (Canes-Wrone and Park 2012).[31]

Columns (11) and (12) in Table 3 reestimate the fixed-effects models of economic growth from Table 2, this time controlling directly for REPLACEMENT—a dummy indicator that is equal to 1 if the incumbent governor was replaced at the time of centralization (beginning the reform year and then continuing thereafter) and equal to 0 otherwise.[32] Controlling for governors' replacement or retention adds an empirical wrinkle. Since the Kremlin's choice to retain or replace incumbent governors may be endogenous to regions' recent economic performance, adding REPLACEMENT to the regression could bias all coefficient estimates in the model. Thus, in addition to controlling for REPLACEMENT directly, I estimate a second model in Columns (13) and (14) using two-stage least squares (2SLS) regression, taking the incumbent governor's BIRTH YEAR as an instrument for REPLACEMENT. The instrument's validity is based on the logic that birth year is an important predictor of whether Kremlin leaders will want to retain a sitting incumbent or need to replace him due to old age.[33] Assuming that a governor's age is correlated with the Kremlin's replacement decision but orthogonal to economic outcomes in the region, BIRTH YEAR is an allowable instrument for REPLACEMENT.[34]

Table 3 shows that controlling for the potential effects of incumbent retention on economic performance, either directly or instrumented by BIRTH YEAR, produces no meaningful changes to my statistical findings.

The remaining model in Table 3 addresses a separate concern surrounding the timing of political centralization that is specific to the staggered measure of centralization. Although regions' elected governors could sit out their terms before appointments began, they could also petition the president to consider their candidacy for reappointment before their scheduled term's end. Overall, 16 governors exercised this privilege with roughly one year remaining in their terms, plus 12 more with two years or more left in their elected terms. Although all regions were eventually "treated" with centralized appointments, the problems is that governors self-selecting into the *timing* of gubernatorial reforms could produce misleading inferences about the effects of treatment.[35] To deal with this concern, I estimate a 2SLS model of regional economic growth that uses ELECTORAL SCHEDULE as an instrument for the POLITICAL CENTRALIZATION variable. The instrument ELECTORAL SCHEDULE replaces the region's measure of *observed* transitions to centralized appointments with a binary indicator for *scheduled* transitions, which were determined exogenously by regional constitutions' electoral calendars and can plausibly be considered as-if randomly assigned. This variable takes a value of 0 for region-years up until the period in which the last elected governor's term would have expected to end (absent the early petition option) and a value of 1 for all following years.[36] Table 3 reports the second-stage results from this instrument variables analysis in Column (15) and reveals no meaningful differences from the main results. Reassuringly, the choice of some executives to seek early consideration for appointment does not appear to have biased my statistical inferences in one direction or another.

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difference between the regional groups reports a statistic of $\chi^2(1) = 2.81$, $p = 0.094$.

31. In the appendix, I specifically investigate the anticipatory effects of actual appointments using various leads of reform; the results do not provide convincing evidence for this anticipation hypothesis.

32. Results hold using the alternate lagged dependent variable strategy; see the appendix for the analogous table.

33. The data corroborate this idea: statistical comparison shows that retained incumbents were, on average, born five later than replaced governors (1951 vs. 1946, $p = 0.023$). The correlation between the instrument and the endogenous regressor is an important factor determining the suitability of the IV strategy (Sovey and Greene 2011). An F-test on BIRTH YEAR in the first-stage regression of both models indicates that the correlation passes the weak instruments test ($F = 56.22$, $p = 0.000$; $F = 52.25$, $p = 0.000$). Complete first-stage results are in the appendix.

34. Proving the IV conditions hold is impossible for any econometric instrument, but it seems plausible that birth year is exogenous to regions' economic performance. Empirical investigation regressing economic per-

formance on BIRTH YEAR in the pre-reform years does not reveal that younger governors are predictive of better (or worse) economies.

35. Reassuringly, governors' decision to seek the Kremlin's vote of confidence does not seem directly tied to their performance record or level of political competition: governors with recent negative economic growth petitioned in the same ratio as those with recent positive growth records (35% versus 31%, $p = 0.754$), and governors from low- and high-competition regions went up early in similar proportions (36% versus 30%, $p = 0.593$).

36. While ELECTORAL SCHEDULE and POLITICAL CENTRALIZATION have the same coding for roughly 94% of observations, this instrument reflects intention to treat, rather than actual treatment (Angrist and Pischke 2009). The resulting analysis is best interpreted as estimating the impact of scheduled gubernatorial appointments on regional economic growth, conditional on levels of political competition. First-stage results appear in the appendix.

CONCLUSION

A principal argument of this article is that we are better served by looking for the conditions that shape political centralization's economic effects rather than continue searching for one consistent, monolithic effect. Here, I offered one particular set of such conditions, identifying the preexisting patterns of political competition as a critical factor in determining the impact of political centralization on subnational economies. In competitive regions, political centralization undermines economic performance by removing a functioning electoral mechanism that makes leaders responsive to wide range of economic concerns. In uncompetitive regions, centralization encourages economic improvement by reducing leaders' reliance on narrow interests and making previously unassailable local leaders answerable to central political bosses.

These findings can help us to resolve tensions in the literature regarding political centralization's effects. The perceived benefits of political decentralization tend to assume competitive democratic processes, but, unfortunately, truly competitive elections are neither inevitable nor universal. This research implies that political decentralization may only be better for local economies inasmuch as elections remain competitive; compared to decentralization under unresponsive local leaders, political centralization may prove a more attractive option for nurturing economic development. By adding competitiveness as a second dimension, this article's conditional theory avoids conflating elections with accountability and opens the door for further nuanced theorizing about the consequences of selecting local leaders at the polls versus by appointment.

One potential avenue of interest is the degree to which political centralization's economic effects may depend upon the incentives and preferences of those who make appointments. This article gains its empirical leverage on a contentious theoretical debate by studying unique institutional reforms within the Russian Federation, a strategy which holds the Kremlin's performance criteria more or less fixed across regions. We should, however, recognize that the value of subnational economic performance to national leaders may vary across countries and political institutions, thus changing the conditioning influence of political competition on political centralization's economic effects. This should be most visible at the theoretical extremes. When subnational economic performance is the only salient factor for central leaders, centralization may benefit both high- and low-competition localities; likewise, when economic performance is not a criterion at all, the theory would lead us to expect that economic performance will suffer in both types of places.

Cast in that light, this research contributes to our general understanding of political centralization by highlighting two insights. First, the article makes clear that the economic effects of political centralization depend upon the difference in the relative emphases that national and locally elected leaders place on local economic performance. Second, it underscores that those differences are shaped by the competitiveness of those leaders' political environments. Future research can build upon this study by uncovering other factors that would affect centralization's impact by changing the relative weights that national and local leaders assign to local economic performance.

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REFERENCES

Acemoglu, Daron, and James Robinson. 2012. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Random House Digital.

Aizenman, Joshua, and Nancy Marion. 1993. "Macroeconomic Uncertainty and Private Investment." *Economic Letters* 41 (1): 207–10.

Alesina, Alberto, and Roberto Perotti. 1996. "Income Distribution, Political Instability, and Investment." *European Economic Review* 40 (6): 1203–28.

Amsden, Alice. 1989. *Asia's Next Giant: South Korea and Late Industrialization*. Oxford: Oxford University Press.

Angrist, Joshua, and Jörn-Steffen Pischke. 2009. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton, NJ: Princeton University Press.

Bardhan, Pranab. 2002. "Decentralization of Governance and Development." *Journal of Economic Perspectives* 16 (4): 185–205.

Bardhan, Pranab, and Dilip Mookherjee. 2000. "Capture Governance at Local and National Levels." *American Economic Review* 90 (2): 135–39.

Barro, Robert. 1996. "Democracy and Growth." *Journal of Economic Growth* 1 (1): 1–27.

Bednar, Jenna. 2009. *The Robust Federation: Principles of Design*. Cambridge: Cambridge University Press.

Besley, Timothy, and Anne Case. 1995. "Does Electoral Accountability Affect Economic Policy Choices? Evidence from Gubernatorial Term Limits." *Quarterly Journal of Economics* 110 (3): 769–98.

Besley, Timothy, and Stephen Coate. 2003. "Centralized versus Decentralized Provision of Public Goods: A Political Economy Approach." *Journal of Public Economics* 87 (12): 2611–37.

Besley, Timothy, Jose G. Montalvo, and Marta Reynal-Querol. 2011. "Do Educated Leaders Matter for Growth?" *Economic Journal* 121 (554): 205–27.

Blaydes, Lisa. 2011. *Elections and Distributive Politics in Mubarak's*. Cambridge: Cambridge University Press.

Buckley, Noah, Timothy Frye, Guzel Garifullina, and Ora John Reuter. N.d. "The Political Economy of Russian Gubernatorial Election and Appointment." *Europe-Asia Studies*. Forthcoming.

Canes-Wrone, Brandice, and Jee-Kwang Park. 2012. "Electoral Business Cycles in OECD Countries." *American Political Science Review* 106 (1): 103–22.

Chebankova, Elena. 2005. "The Limitations of Central Authority in the Regions and the Implications for the Evolution of Russia's Federal System." *Europe-Asia Studies* 57 (7): 933–49.

Chebankova, Elena. 2008. "Adaptive Federalism and Federation in Putin's Russia." *Europe-Asia Studies* 60 (6): 989–1009.

Enzikolopov, Ruben, and Ekaterina Zhuravskaya. 2007. "Decentralization and Political Institutions." *Journal of Public Economics* 91 (2007): 2261–90.

Ferejohn, John. 1986. "Incumbent Performance and Electoral Control." *Public Choice* 50 (1–3): 5–25.

Frye, Timothy. 2010. *Building States and Markets after Communism: The Perils of Polarized Democracy*. Cambridge: Cambridge University Press.

Galasso, Vincenzo, and Tommaso Nannicinni. 2011. "Competing on Good Politicians." *American Political Science Review* 105 (1): 79–99.

Gehlbach, Scott. 2008. *Representation through Taxation: Revenue, Politics, and Development in Postcommunist States*. Cambridge: Cambridge University Press.

Gervasoni, Carlos. 2010. "A Rentier Theory of Subnational Regimes: Fiscal Federalism, Democracy, and Authoritarianism in the Argentine Provinces." *World Politics* 62 (2): 302–40.

Gibson, Edward L. 2005. "Boundary Control: Subnational Authoritarianism in Democratic Countries." *World Politics* 58 (1): 101–32.

Goode, Jon Paul. 2007. "The Puzzle of Putin's Gubernatorial Appointments." *Europe-Asia Studies* 59 (3): 365–99.

Grossman, Gene, and Elhanan Helpman. 1996. "Electoral Competition and Special Interest Politics." *Review of Economic Studies* 63 (2): 265–86.

Hale, Henry. 2003. "Explaining Machine Politics in Russia's Regions: Economy, Ethnicity, and Legacy." *Post-Soviet Affairs* 19 (3): 228–63.

Hellman, Joel, Geraint Jones, and Daniel Kaufman. 2003. "Seize the State, Seize the Day: State Capture and Influence in Transition Economies." *Journal of Comparative Economics* 31 (4): 751–73.

Iosebashvili, Ira. 2009. "Medvedev Welcomes Criticism on Crisis." *Moscow Times*. March 16. http://www.themoscowtimes.com/sitemap/free /2009/3/article/medvedev-welcomes-criticism-on-crisis/375298.html (accessed August 22, 2014).

Jensen, Nathan M. 2006. *Nation-States and the Multinational Corporation: A Political Economy of Foreign Direct Investment*. Princeton, NJ: Princeton University Press.

Konitzer, Andrew. 2006. *Voting for Russia's Governors: Regional Elections and Accountability under Yeltsin and Putin*. Baltimore: John Hopkins University Press.

Kydland, Finn E., and Edward C. Prescott. 1977. "Rules Rather than Discretion: The Inconsistency of Optimal Plans." *Journal of Political Economy* 8 (3): 473–92.

Laffont, Jean-Jacques, and Jean Tirole. 1988. "The Dynamics of Incentive Contracts." *Econometrica* 56 (5): 1153–76.

Lake, David, and Matthew Baum. 2001. "The Invisible Hand of Democracy: Political Control and the Provision of Public Services." *Comparative Political Studies* 34 (6): 587–621.

Landry, Pierre. 2008. *Decntralized Authoritarianism in China: The Communist Party's Control of Local Elites in the Post-Mao Era*. Cambridge: Cambridge University Press.

Levitsky, Steven, and Lucan Way. 2002. "The Rise of Competitive Authoritarianism." *Journal of Democracy* 13 (2): 51–65.

Levy, Brian, and Pablo Spiller. 1994. "International Trade and International Investment in the Product Cycle." *Journal of Law, Economics, and Organizations* 10 (2): 201–46.

Li, Hongbin, and Li-An Zhou. 2005. "Politcal Turnover and Economic Performance: The Incentive Role of Personnel Control in China." *Journal of Public Economics* 89 (9–10): 1743–62.

Madison, James. 1787. "Federalist No. 10." http://thomas.loc.gov/home /histdox/fed_10.html.

Maskin, Eric, and Jean Tirole. 2004. "The Politician and the Judge: Accountability in Government." *American Economic Review* 94 (4): 1034–54.

McMann, Kelly. 2006. *Economic Autonomy and Democracy: Hybrid Regimes in Russia and Kyrgyzstan*. Cambridge: Cambridge University Press.

McMann, K. M., and Petrov, N. V. 2000. "A Survey of Democracy in Russia's Regions." *Post-Soviet Geography and Economics* 41 (3): 155–82.

Miller, Gary J. 2000. "Above Politics: Credible Commitment and Efficiency in the Design of Public Agencies." *Journal of Public Administration Research and Theory* 10 (2): 289–328.

Moraski, Bryon, and William Reisinger. 2003. "Explaining Electoral Competition across Russia's Regions." *Slavic Review* 62 (2): 278–301.

Nooruddin, Irfan. 2011. *Coalition Politics and Economic Development: Credibility and the Strength of Weak Governments*. Cambridge: Cambridge University Press.

Oates, Wallace. 1972. *Fiscal Federalism*. New York: Harcourt Brace Jovanovich.

Olson, Mancur. 1982. *The Rise and Decline of Nations*. New Haven, CT: Yale University Press.

Persson, Torsten, and Guido Tabellini. 2000. *Political Economics*. Cambridge, MA: MIT Press.

Reisinger, William, and Bryon Moraski. 2013. Governance or Deference? A Survival Analysis of Russia's Governors under Presidential Control. In *Russia Beyond the Kremlin: Comparative Subnational Politics*, ed. William Reisinger. New York: Routledge, 40–62.

Reuter, Ora John, and Graeme Robertson. 2012. "Subnational Appointments in Authoritarian Regimes: Evidence from Russian Gubernatorial Appointments." *Journal of Politics* 74 (4): 1023–37.

Reuters. 2009. "'Work Better or Else . . .' Medvedev Warns Governors." *Reuters*. June 10. http://in.reuters.com/article/2009/06/10/financial -russia-medvedev-idINLA15608920090610 (accessed August 22, 2014).

Rogoff, Kenneth. 1985. "The Optimal Degree of Commitment to an Intermediate Monetary Target." *Quarterly Journal of Economics* 100 (4): 1169–89.

Seabright, Paul. 1996. "Accountability and Decentralization in Government: An Incomplete Contracts Model." *European Economic Review* 40 (1): 61–89.

Sharafutdinova, Gulnaz. 2009. "Subnational Governance in Russia: How Putin Changed the Contract with His Agents and the Problems It Created for Medvedev." *Publius: The Journal of Federalism* 40 (4): 672–96.

Slinko, Irina, Evgeny Yakovlev, and Ekaterina Zhuravskaya. 2005. "Laws for Sale: Evidence from Russia." *American Law and Economics Review* 7 (1): 284–318.

Sovey, Allison J., and Donald P. Green. 2011. "Instrumental Variables Estimation in Political Science: A Readers' Guide." *American Journal of Political Science* 55 (1): 188–200.

Stigler, George. 1971. "The Theory of Economic Regulation." *Bell Journal of Economics and Management Science* 2 (1): 3–21.

Stoner-Weiss, Kathryn. 1997. *Local Heroes: The Political Economy of Russian Regional Governance*. Princeton, NJ: Princeton University Press.

Stoner-Weiss, Kathryn. 2006. *Resisting the State: Reform and Retrenchment in Post-Soviet Russia*. Cambridge: Cambridge University Press.

Tiebout, Charles. 1956. "A Pure Theory of Local Expenditures." *Journal of Political Economy* 64 (October): 416–24.

Treisman, Daniel. 1997. "Russia's Ethnic Revival: The Separatist Activism of Regional Leaders in a Post-Communist Order." *World Politics* 49 (2): 212–49.

Treisman, Daniel. 2007. *The Architecture of Government: Rethinking Political Decentralization*. Cambridge: Cambridge University Press.

Von Twickel, Nickolaus. 2008. "Signs of a Kremlin Fearful of Unrest." *Moscow Times.* December 12. http://www.themoscowtimes.com/news/article/373091.html (accessed August 22, 2014).

Wade, Robert. 1990. *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*. Princeton, NJ: Princeton University Press.