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BUREAUCRATIC APPOINTMENTS IN HYBRID REGIMES

Scholars associate bureaucratic quality with economic development. One particularly important component of a well-functioning bureaucracy is meritocratic promotion. This paper explores the conditions under which politicians will appoint high-level bureaucrats on the basis of economic performance. We argue that two key features of democracy—electoral competition and media freedom—*increase* the incidence of performance-based appointments among high-level bureaucrats. We test these claims using original data on turnover among 3762 vice governors in Russia's 89 regions between 2001 and 2011. We also find that levels of bureaucratic turnover depend on the characteristics of the principal making those appointments.

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Introduction

Bureaucratic quality has been linked to a range of positive outcomes, including economic growth, efficient policy implementation, policy stability, and low levels of corruption. One particularly important component of a well-functioning bureaucracy is meritocratic promotion. Since Weber (1958), scholars have associated effective bureaucracies with career advancement policies that depend on impersonal, meritocratic evaluation, whereby bureaucrats are promoted on the basis of their ability to promote good governance. By contrast, ineffective bureaucracies are characterized by politicized selection mechanisms, in which government jobs are exchanged for political support. Meritocratic selection is the lynchpin of an effective bureaucracy, because such a promotion policy provides strong career incentives for bureaucrats to foster good governance. This is why scholars believe that meritocratic promotion is associated with strong economic performance (Evans and Rauch 1999). Similarly, high levels of bureaucratic turnover, which is usually a sign of a politicized bureaucracy, have been associated poor bureaucratic performance (Suleiman 2003, Lewis 2008).

Studies of high-level bureaucrats come to similar conclusions. A voluminous literature on China has linked that country's economic miracle to cadre appointment schemes that make elite career advancement dependent on economic performance in a cadre's locality (Bo 2002; Landry 2008, Li and Zhou 2005). Meanwhile, scholarship on the post-communist world finds that high-level bureaucratic turnover is associated with policy instability and low levels of private investment (Kenyon and Naoi 2010, Szakonyi et al. 2012).

Given the importance of meritocratic promotion schemes to economic development, a crucial question arises: when will bureaucrats be appointed on the basis of meritocracy, as opposed to political or patronage-based criteria? The literature on performance-based promotions among high-level bureaucrats has focused almost entirely on identifying the occurrence of performance-based appointments. It has not studied the conditions that lead to the implementation of performance-based appointments. Existing literature that focuses street-level bureaucracy *has* examined the conditions under which governments adopt civil-service reform that takes hiring and firing power out of the hands of elected politicians (e.g Johnson and Libecap 1994, Geddes 1994). Because patronage-based appointment systems help incumbents win elections, elected officials are reluctant to jettison them. Implicitly or explicitly, much of this literature argues that administrative reform is most likely when politicians are shielded from electoral competition (Evans 1995, Geddes 1994, Lewis 2008). Indeed, according to this perspective, performance-based promotions are more likely in autocracies where officials need not win elections and thus have less incentive to exchange political favors for political support.

Focusing on high-level bureaucrats (e.g. settings where administrative reform does not usually apply), we adopt a different argument and come to different conclusions about the link between elections and performance-based promotions. We argue that electoral competitiveness increases the incidence of performance-based appointments, especially if the performance metric in question is economic development.⁴ Electoral competition opens politicians to popular pressures. As a large literature on economic voting shows, voters demand accountability when economic performance is poor. Thus, when elections are competitive, self-interested politicians may fire high-level appointees to placate popular demands for economic accountability and obtain much-needed votes. By contrast, when elections are not competitive, self-interested politicians are freed from popular pressure for performance-based promotions and, assuming their time horizons are short, have no extra incentive to pursue performance-based appointment schemes.

Voters may also demand civil service reform, but since administrative reform is a complex issue, it does not animate most voters. By contrast, voters require far less information and sophistication to make the judgment that high-level officials should be fired for high unemployment. Additionally, many voters benefit from the spoils system of clientelistic bureaucracies, so they have little reason to support administrative reform. Myopic, self-interested voters can demand economic accountability among elite bureaucrats, without demanding that the broader patronage system be dismantled. For these reasons, electoral competition may increase the incidence of performance-based appointments among high-level bureaucrats, but still decrease (or have no effect on) the probability of administrative reform.

But electoral competition is not the only factor that increases popular demand for performance-based appointments. Accountability mechanisms such as free media also increase this demand by providing information on government malfeasance, economic performance, and the conduct of bureaucratic appointments. Thus, we also argue that performance-based appointments are more likely when press freedom is higher.

Our paper also examines the conditions under which elite bureaucrats turn over more generally. In contrast to much of the literature on bureaucratic turnover, which usually focuses on outside opportunities for earning, partisan conflict, and turnover in the principal, we explore how the characteristics of the principal affect turnover. Specifically, we focus on the principal's ties to the locality (or agency) where they serve. Principals with stronger ties to their locality are more likely to be dependent on existing elite networks, which are usually represented in the bureaucracy. Thus, insider principals are reluctant to fire the clients and colleagues that helped

⁴ Throughout the paper, we use the term "performance-based appointments" as short hand for appointments made on the basis of economic performance (Shih et al 2012).

bring them to power. By contrast, outsiders owe no such debts to local elite networks, and newly appointed outsiders will fire subordinates at a higher rate.

We test these arguments with original data on turnover among 3762 regional vice governors in 89 Russian regions between 2001 and 2011. Vice governors are the most important regional bureaucrats in Russia after the governor. Vice governors are appointed by regional governors and vice governor turnover is higher in years after the governor changes, but there is also substantial variation in vice governor turnover in 1) years that do not follow governor turnover and 2) the extent of turnover in the vice gubernatorial corpus when a new governor takes office.

Substantial variation in economic performance, regional characteristics, and the characteristics of the principal (Russian governors) across 89 regions makes Russia makes a good setting for testing arguments about bureaucratic turnover. The period under investigation is also rich with variation in how principals are selected (appointments by central leaders vs direct elections).

Analysis of this data yields several findings of note. First, we find that performance-based promotions are not the general rule for Russian vice governors: in additive models, poor economic performance is not associated with higher levels of turnover among vice governors. Rather there is some evidence that political factors drive turnover among vice governors. Specifically, there is suggestive evidence that vice governors are punished for poor performance by the ruling party, such that they turn over at a higher rate when United Russia performs poorly.

However, there are conditions under which vice governors are punished for poor economic performance in the region. Performance-based promotions are more likely when elections in the region are competitive and when there are relatively high levels of press freedom in the region. Performance-based promotions are most likely when both of these conditions obtain.

We also find that turnover levels are determined by certain characteristics of Russian governors. Levels of turnover are significantly higher under new governors with few ties in the region, while new governors with ties to the region are more likely to retain some part of the old vice gubernatorial corpus. In addition, there appear to be importance differences between appointed and elected governors in the way that they manage their vice governors. Turnover rates are higher under appointed governors. In particular, for years that do not follow gubernatorial turnover, the turnover rate is much higher under appointees. This conforms with press accounts about how Russia's appointed governors have had difficulty working with local elites.

Finally, we find that vice governor turnover rates vary according to the professional background of Russia's governors. Governors who spent the majority of their careers before taking office in regional divisions of federal government bureaus are associated with much higher rates of turnover. Conversely, governors with substantial career experience in regional executive positions (positions perhaps similar to those of the subordinates whose promotion decisions they are making) are much less likely to fire vice governors. Insider ties to regional players or personal experience as a bureaucrat serve to mitigate rates of turnover. Finally, we find that greater career experience in the private sector is associated with higher rates of turnover.

The findings in our paper have several important implications. First, and most importantly, they imply that democracy may have a positive effect on the quality of bureaucracy, at least at the elite level, where most literature has argued the opposite. Indeed, the link between democracy and elite bureaucratic quality may be direct: some of the same institutions that allow citizens to hold their elected representatives accountable—competitive elections and a free press—increase the likelihood that politicians will respond to popular demands for performance-based appointments.

Second, with respect to Russia, our findings illustrate some of the effects of the cancellation of gubernatorial elections in 2004. Newly installed governors, many of whom were outsiders, actively dismantled existing vice gubernatorial corpuses and injected instability into the regional bureaucracy. For better or worse, this instability likely had significant effects on policy stability, the quality of policy output and investment incentives.

A Review of the Literature

Since Weber, scholars have been concerned with how meritocratic promotion affects bureaucratic performance (Weber 1958). Theoretically, promoting bureaucrats on the basis of job-performance metrics should provide bureaucrats with the strongest possible incentive to foster good governance and avoid rent-seeking. By contrast, in politicized bureaucracies, career advancement is dependent on political considerations, and government jobs are exchanged for political support. Cross-national empirical research shows that more meritocratic bureaucracies are associated with better agency-level outcomes and lower levels of corruption (Rauch and Evans 2000). Other empirical analyses have shown that macro-level patterns of meritocratic promotion can have a positive impact on economic performance (Evans and Rauch 1999, Keefer and Knack 1995, Mauro 1993, Wagner 2011). Bureaucratic capacity also affects politicians' ability to implement desired policies (Huber and McCarty 2004).

A separate strand of research focuses on the politicization of state agencies. This work argues, in one fashion or another, that depoliticized bureaucracies are superior at generating economic development (e.g. Evans 1995, Johnson 1992, Wade 1990). This focus of the state-led development literature on bureaucratic autonomy largely sidesteps issues of political loyalty, explaining the emergence of meritocratic bureaucracies with identity and ties to the private sector (Evans 1989). In the American politics literature, it has been argued that agencies with large numbers of political appointees are less effective than those populated by career officials (Suleiman 2003, Lewis 2009). Other research focuses on policy competence or bureaucratic expertise. Policy competence may be a function of the interaction of bureaucrats' outside options and their time horizons (Wagner 2011) or of policymaker expertise, the nature of the policy being implemented, and uncertainty about social preferences (Alesina and Tabellini 2007).

The rate of bureaucratic turnover, which is often associated with politicization, also affects bureaucratic quality. In American politics, it has been observed that turnover among public servants creates leadership vacuums and shortfalls in expertise (Hecló 1977, Fesler and Kettl 1991, Mann and Doig 1965). Turnover may result from low relative wages, partisan conflict, or frustration with multiple principals (Brauer 1987, Fisher 1987, Young 1966, Hecló 1977, Dodd and Schott 1979). Excessive levels of turnover among officials may raise levels of policy volatility and uncertainty, potentially discouraging investment (Canes-Wrone and Kim 2012, Frye 2002, Kenyon and Naoi 2010, Szakonyi et al. 2012).

While there have been many attempts to understand the effects of meritocratic promotion practices on outcomes, there has been less research on the specific conditions that lead to the implementation of performance-based standards. Most have sought simply to identify and quantify the extent of meritocracy. China figures prominently here, with an extensive research program detailing the personnel management system governing the advancement of Central Committee members in China (Shih et al. 2012, Landry 2008). Some contend that the Chinese *nomenklatura* system has been successful in making performance-based criteria important determinants of career advancement. Several studies have now shown that economic performance in a cadre's locality determines his/her chances of advancement (Bo 2002, Li and Zhou 2005, Landry 2008). Indeed, China's record of autocratic stability and economic growth has been attributed to the Chinese Communist Party's successful combination of meritocratic and political loyalty based promotion standards (Landry 2008). At the same time political loyalty and factional ties also seem to play important roles (Li and Walder 2001, Zang 2004, Landry 2008, Shih et al. 2012). Indeed, using sophisticated new statistical techniques, the most recent work on the Chinese bureaucracy suggests that political loyalty outweighs the economic performance metrics that had previously been thought to be driving promotion (Shih et al. 2012)

Similar conclusions are reached in research on cadre selection in other authoritarian contexts. Reuter and Robertson (2012) find that policy competence is relegated to the back seat as the imperatives of winning elections force Russian leaders to appoint politically loyal governors. In non-democratic settings, elite conspiracies, defections, and coups often constitute the main threats to regime stability (Tullock 1987, Wintrobe 1998). Authoritarians have developed elaborate schemes for rewarding elite loyalty with career advancement. The most institutionalized variety of these schemes is the dominant party regime, where party loyalty is rewarded with institutionalized guarantees of career advancement (Brownlee 2007, Magaloni 2008, Reuter and Turovsky 2011). Much ink was also spilled trying to determine whether economic performance plays a role in career advancement in classical Communist regimes. Sovietologists found some evidence for this phenomenon (Hough 1969, Reissinger and Willerton 1989), but the preponderance of evidence in the field pointed toward party loyalty (Harasymiw 1984) and informal ties between patrons and clients as the primary determinants of career advancement in the CPSU. (Rigby and Harasymiw 1980, Willerton 1992).

Existing research has less to say about the conditions under which meritocratic promotions actually *happen*. Most literature in this vein has focused on the adoption of civil service reforms that legislate the creation of merit systems for low-level bureaucrats (Mayhew 1986, Johnson and Libecap 1994, Ruhil 2003, Geddes 1994, Lewis 2008). Much of this literature starts from the premise that patronage-based appointment systems provide incumbents with important electoral advantages. In patronage systems, jobs are a currency that politicians can use to secure financial and political support (Carpenter 2001, Lewis 2008). This makes elected officials reluctant to initiate reforms that would deprive them of these resources. Literature in this vein argues that civil service reform is most likely when politicians are shielded from electoral competition (Evans 1995, Geddes 1995, Lewis 2008). Indeed, performance-based promotions are most likely, according to this logic, in authoritarian systems where officials do not need to win elections and thus need not exchange political favor for votes (Evans 1995, Geddes 1995)

Most of the work that explores variation in meritocratic promotion does so by looking at the adoption of civil service reform. Variation in meritocratic promotion among high-level bureaucrats has not been explored. In this paper, we examine variation in the actual practice of meritocratic promotion among high-level bureaucrats. By examining the conditions under which principals choose to employ merit-based promotion practices we advance the field's understanding of when leaders prefer competent officials to politically loyal agents.

Political Competition and Performance-Based Promotions

As the section above suggests, patronage-based appointment systems can help politicians win elections. In a practice that is widespread around the world, politicians exchange jobs for votes and political support at election time. When such clientelism pervades the bureaucracy, such that positions within it are traded for political support, a bureaucracy can be said to be politicized. Politicians need high-level elite bureaucrats that can coordinate patronage distribution at lower levels. In other words, patronage-based bureaucracies must operate within the framework of an unbroken chain of patron-client ties that runs from the politician down to the street-level.

In elections, such patronage can be highly valuable. When politicians are faced with competitive elections they have extra incentive to favor patronage-based appointments (including at the elite level) because patronage distribution can give incumbents the extra edge needed to win close races. At the extreme, as many have suggested, autocratic regimes are maximally autonomous from competitive pressures and thus should eschew patronage-based appointments (e.g. Evans 1995). If the regime is oriented toward development then it has a free hand to pursue elite appointment strategies on the basis of economic performance (Geddes 1994). Thus, one perspective about the relationship between political competition and performance-based promotions suggests that higher levels of electoral competition will reduce the probability of performance-based appointments.

On the other hand, for a self-interested politician with short time horizons, popular pressure to make performance-based appointments is the only incentive to make such appointments. Indeed, much of the neo-institutional literature on economic development suggests that self-interested autocrats have little incentive to provide public goods or implement growth-oriented policies. Rather, the self-interested autocrat with short time horizons has incentives to engage in rent-seeking and expropriate private property (North 1990, Baum and Lake 1993, Olson 1993). Popular pressure for performance-based appointments may arise from 1) popular demand for an appointment policy that creates incentives for bureaucrats to pursue economic development, 2) from popular demand for rational bureaucracy, or 3) from a desire by citizens to see that high-level officials are punished for economic calamity. The first of these requires a sophisticated median voter with a thoroughgoing understanding of the effects of bureaucracy on development. The second of these is slightly more plausible, requiring only that citizens disdain corrupt, cronyistic practices, and prefer instead that positions in the elite bureaucracy are distributed on a meritocratic basis. Still, this type of popular pressure applies more to demands for administrative reform than it does to demands for select performance-based elite appointments. The third requires only that citizens regard the state of the economy when

evaluating their leaders and prefer to see incumbents punished for poor economic performance. This proposition has been confirmed by decades of research on economic voting (Kramer 1971, Fiorina 1981).

If citizens prefer appointments that are made on the basis of economic performance, then electoral competition should increase the probability of such appointments. When incumbents face close electoral contests, they may seek extra votes by responding to citizen demands for performance-based promotions. On the other hand, when incumbents expect to win by large margins, they need not cater to public opinion and can make appointments on whatever basis they desire. At the extreme, autocrats who do not hold elections are maximally insulated from popular pressure and thus need not listen to public demands for performance-based promotions.

This sets up two competing hypotheses about the effect of electoral competition on performance-based appointments in the elite bureaucracy. The literature on administrative reform suggests that electoral competition should reduce performance-based appointments in the elite bureaucracy. Meanwhile, the neo-institutional literature on economic development and the economic voting literature suggest that electoral competition should increase the incidence of performance-based promotions.

We are inclined to agree with the latter perspective for three reasons. First, the literature suggesting a linkage between low electoral competition and performance-based appointments derives from the literature on administrative reform. In this literature, administrative reform—e.g. civil service reforms that take hiring and firing power out of the hands of politicians—has drastic effects on the ability of politicians to exchange political favor for support in elections. Usually, this literature has in mind reforms that affect large swathes of the bureaucracy. Moreover, to the extent that rescinding such reforms is costly it does so for the foreseeable future. In this way, the political benefits of eschewing administrative reform are truly large. By contrast, while, firing a coterie of high-level politicized appointees undermines the ability of leaders to distribute patronage at lower levels, it does not eliminate it. Moreover, leaders may fire elite bureaucrats for poor economic performance in one competitive election cycle, only to return to a politicized appointment scheme in the next uncompetitive elections. This contrasts with administrative reforms, which are sticky.

Second, many voters directly benefit from the spoils systems of clientelistic bureaucracies. They or someone in their social environs may depend for employment on the current system of patronage. This raises the costs to administrative reform in competitive electoral settings. Meanwhile, a politician may fire some set of elite bureaucrats when economic performance is poor without dismantling the broader patronage system.

Finally, there is likely to be greater popular pressure for performance-based elite appointments than there is for thoroughgoing administrative reform of the bureaucracy. The normative debate surrounding administrative reform is complex and is not one to animate most voters. Voters require far less information and sophistication to make the judgment that high-level bureaucrats should be fired for high unemployment in a country. Moreover, voters need to adopt long time horizons if they are to reap the tangible benefits of administrative reform. Meanwhile, myopic voters are known to demand accountability for poor economic performance (Van der Brug, Van der Eijk, and Franklin 2007).

Thus, our first two hypotheses are the following.

H1: Poor economic performance increases turnover of elite bureaucrats

H2: High levels of electoral competition will increase the probability that elite bureaucrats will be dismissed on the basis of economic performance

Transparency, Information, and Performance-Based Promotions

The literature on bureaucracy has considered the effect of electoral competition on bureaucratic quality. As noted previously, most of this literature has argued that electoral competition reduces bureaucratic quality. The perspective developed above suggests that electoral competition may increase bureaucratic quality, at least at the elite level. One factor that has not been considered is the ability of citizens to monitor politicians and hold them accountable. We have argued that politicians will make performance-based appointments when popular pressure—via competitive elections—forces them to do so. But the intensity of popular pressure on politicians is determined not only by the competitiveness of elections, but also by accountability mechanisms such as free media and strong civil society. Without access to free information about the conduct of appointments and the state of the economy, citizens are unlikely to develop strong opinions about elite appointments and thus less likely to exert pressure on incumbents for performance-based appointments. Thus, our third hypothesis is the following:

H3: Performance-based appointments are more likely as press freedom increases.

In hybrid and electoral authoritarian regimes, such as Russia, we also expect that the effect of electoral competition on performance-based promotions will be diminished in settings with low levels of press freedom. When citizens lack access to information about the conduct of appointments, then they are unable to hold politicians accountable for cronyistic appointments before competitive elections. By contrast, when elections are competitive and press freedom is high, the incidence of performance-based promotions should be highest.

H4: The effect of electoral competition on performance-based appointments will be higher in settings where press freedom is high.

Competence, Loyalty, and Authoritarian Elections in a Power Vertical

As noted above, the rate of turnover in top-level officials is an outcome of interest in its own right. Turnover may generate vacuums of authority that harm the quality of policy outputs, or turnover may create uncertainty and volatility that discourages investment. In this section we develop several hypotheses about the determinants of turnover in top-level bureaucratic circles in hybrid and authoritarian regimes.

Studies of appointments in authoritarian regimes have focused on the tradeoff between appointing economically competent officials and politically loyal ones. In electoral authoritarian regimes, where winning elections by large margins is a major priority for the leadership, subnational officials tend to be appointed on the basis of their ability to mobilize votes for the regime in elections (Reuter and Robertson 2012, Blaydes 2011). This choice often comes at the expense of appointing officials who are competent at promoting economic development. The elite bureaucrats that we study here—Russian regional vice governors—may also be held accountable for the poor performance by the ruling party in elections that are held in their area of jurisdiction, so we test the following hypothesis:

H5: As the electoral performance of the ruling party in the most recent elections decreases, the rate of turnover among elite bureaucrats increases.

Characteristics of the Principal

Most studies of elite bureaucratic turnover pay little or no attention to the characteristics of the principal. In this study, we analyze turnover among regional vice governors who are appointed by regional governors. Thus, in contrast to most studies of performance-based promotions, which examine appointments made by national leaders (Reuter and Robertson 2012, Shih et al. 2012), we can capitalize on variation in the characteristics of appointment makers over time. For clarity, we refer to appointment-makers as “principals”

The first and most obvious principal-specific determinant of elite bureaucratic turnover is turnover of the principal himself. Given that principals make the appointments, it is natural that new principals will remove some officials appointed by the previous principal. It is worth noting, however, that if the elite bureaucracy operated purely on merit, then turnover should not, *ceteris paribus*, be any higher in years when the principal changes. Thus, the rate of turnover under a new principal is indicative of the level of politicization in the elite bureaucracy (Lewis 2008).

H6: Elite bureaucratic turnover will be higher when a new principal enters office.

Principals may be either appointed or elected. In the Russian case, regional governors were elected from 1995-2005 and appointed from 2005-2012. Inside the academy and out, those who advocate selecting regional officials through appointments—as opposed to through elections—argue that appointed officials are less likely to be captured by local, particularistic interests, which makes them more likely to govern in the public interest. Public-spirited proponents of appointments and most academic arguments take this view. Authoritarian leaders may also prefer appointments because they allow leaders to be sure that loyal officials are installed in positions of power. Stripping officials of their independent electoral mandates deprives them of local power bases that could be used to challenge the center.

Indeed, in Russia, the introduction of gubernatorial appointments coincided with a precipitous increase in the number of governors with no previous ties to their regions.⁵ Principals with no ties to their locality are less likely to owe debts to existing elite networks. By contrast, principals who are from the locality where they serve may owe their position of power to local elite networks. Insiders are reluctant to fire the clients that helped bring them to power. Outsiders feel no such loyalty to existing elite networks. Clearly this argument applies best to situations where an elite bureaucrat works in a geographically defined locality, but it may also apply to insider-outsider status in agencies.

H7: Elite bureaucratic turnover will be higher under principals with few ties to the localities where they serve.

The Dependent Variable: Turnover in Russia's Regional Vice Governors

To test our hypotheses, we use original data on turnover among vice governors in all regional administrations of Russia's 89 (83) federal subjects from 2001-2011.⁶ Regional administration is a generic term for the regional executive branch in Russia's regions. The regional administration in most regions is comprised of three tiers, headed in all regions by a head of administration, colloquially called a "governor".⁷ Below that are the governor's deputies, colloquially called "vice governors." The formal titles of vice governors vary. They may be called "Deputy Head of Administration" "Deputy Governor", "Vice Governor", or if the

⁵ This precipitous rise did not mean that all appointed governors were outsiders. To the contrary, in the first two years of the appointment system, the Kremlin replaced only 16 governors, reappointing most sitting governors. By December 2010, 64 governors had been replaced. Twenty one of those 64 new governors had never lived in the region where they were appointed. During the election period there were virtually no outsider governors.

⁶ Russia contained 89 federal subjects from 1991-2005. Between 2005 and 2008, the number was reduced to 83.

⁷ Until 2006, Dagestan was the only region without a head of administration. From 1991-2006, the chief executive was the chairman of parliament. From 1991-2006, regional chief executives in Russia's 21 ethnic republics were called Presidents.

governor also holds the title of “Government Chairman” they may be called “Vice Government Chairmen.” Russia’s ethnic republics often feature a presidential administration as well as a separate cabinet of ministers, sometimes called a government. In these cases, the Presidential administration and its staff—much like the Presidential Administration at the federal level—serves as the administrative and political support staff to the president, while the Cabinet of Ministers contains officials (often called deputy prime ministers) who hold policy portfolios and are responsible for the coordinating policy-making and policy implementation. Given that our goal is to study the conditions under which bureaucratic-appointment schemes favorable to good governance are established, we focus on turnover among officials in the Cabinet of Ministers (or its equivalent) in the ethnic republics. More information on Vice Governor nomenclature and the officials we study in each region is contained in the appendix.

Vice governors are responsible for coordinating the work of the various departments and ministries that make up the third tier of the regional administration. Many of these department heads are appointed directly by the vice governors. In most cases, vice governors hold one or more policy portfolios, such that they are responsible for coordinating policy in a specific area or set of areas. As executive branch officials, their primary task is policy implementation, but they also sign legal acts that can only be overridden by the governor or a law passed by the legislature.

Informally, vice governors are key intermediaries between the governor and lobbying interests. For medium and large businesses, they are the main point of personal contact with regional government. Expert surveys confirm the importance of vice governors. In the 2006, the Russian business weekly *Expert* published a survey that asked experts to rank the top 10 most influential people in 32 regions.⁸ In all 32 regions, at least one vice governor made the list. In 9 of 32 regions more than four of the spots were occupied by vice governors, while in 16 of the regions 2 or 3 vice governors made the list.

For all their policy-making authority it is clear that vice governors also become involved in politics. Vice governors who are situated higher in the hierarchy, such as first deputy heads of administration, often overtly take on political responsibilities. Indeed, some vice governors have specifically political portfolios, such as “Vice Governor for Internal Politics.” On average, 19% of vice governors serving in a given region in 2011 were members of the regional political council of the ruling party, United Russia. Indeed, vice governors are frequently tapped to run regional election campaigns for the ruling party, and, as of July 2012, 14 of United Russia’s 83 regional party secretaries were vice governors.

⁸ Available online at http://expert.ru/ratings/table_261101/

We study turnover in vice governors. Our dataset consists of 3762 vice governors serving in all Russia's regions between 2001 and 2010. Data for 2001-2011 was compiled from yearly directories of regional government officials published by Maximov Press. These volumes list telephone contact information for all key figures in Russia's regional administrations. They are published once a year.

The raw dataset is in region-year format containing information on all the vice governors serving in a region for each year (9565 region-year observations). The database contains the name, position, policy portfolio, and place of work after leaving office for each vice governor.⁹ Data for 2011 was compiled from the websites of regional administrations. The number of vice governors serving in a region ranges from a low of 3 to a high of 24. The average number is 9 (standard deviation 2.9).

Our dependent variable is the percent of vice governors that turnover in a given year. One simple way of calculating this measure is to take the number of vice governors who lost their positions year in $t-1$ and divide this figure by the number of vice governors in year $t-1$:

$$Turnover_1 = \frac{L_{t-1}}{S_{t-1}} \quad (1)$$

where L is the number of vice governors that leave office and S is the size of vice gubernatorial corpus. A given vice governor is deemed to have left office if he or she is a vice governor in time $t-1$, but not in time t , and the vice governor was not promoted, die, or leave office for health reasons. Promotions, deaths, and health-related dismissals are censored such that the vice governor that experiences one of these events in a given year is not counted as leaving in that year. However, the vice governor is not counted as a member of the vice gubernatorial corpus serving in the next year.¹⁰ $Turnover_1$ captures the share of vice governors who leave the administration from one year to the next.

One problem with this measure is that the number of vice governors in a region changes from year to year. Particularly problematic are situations where, for whatever reason, the number of vice governors decreases from one year to the next. In this instance $Turnover_1$ can produce values that may not accord with reality, especially if many of the vice governors in the previous year continue serving in the administration in posts outside the vice gubernatorial corpus. Consider, for example, a region that has 10 vice governors in 2005. Suppose that the number of vice governors shrinks to 5 in 2006, but all 5 vice governors serving in 2006 were serving in 2005. In this case, $Turnover_1$ tells us that there is 50% turnover in 2006. But it is just as

⁹ The dataset also contains a range of biographical information (place of work, age, education, party affiliation, business background) for about 45% of all vice governors. Unfortunately, this data has not been sufficiently cleaned to be used in this analysis.

¹⁰ There are only 225 promotions in our sample. For most vice governors, this post is a peak-of-career position.

reasonable to conclude that there was 0% turnover in 2006, given that all the vice governors serving in 2006 are holdovers from 2005. This interpretation is supported by the fact that in many cases where the number of vice governors shrinks from one year to the next the vice governors from time $t-1$ are still serving in the regional administration in time t , but no longer have the title “vice governor.” This phenomenon often suggests a simple reorganization of nomenclature, such that the title of vice governors is restricted to fewer individuals for a given year. In these cases, the vice governors who lose their titles in $t-1$ should not be counted as having been dismissed.¹¹ Our second measure of turnover takes this into account by using the size of the vice-gubernatorial corpus in time t as the baseline *when the size of the vice-gubernatorial corpus in t is smaller than in $t-1$* . It is calculated as:

$$Turnover_2 = 1 - \frac{R_t}{S_t} \quad (2)$$

Where R is the number of vice governors remaining in the vice-gubernatorial corpus from the previous year and S is the size of vice-gubernatorial corpus. This measure shows the share of vice governors in a given year who were vice governor in a previous year. When the size of the vice gubernatorial corpus in a given year is larger than in the previous year, then we use the share of vice governors who left office in the previous year such that $Turnover_1 = Turnover_2$.

For all analyses in this paper we use $Turnover_2$ as the dependent variable, but results are robust to using $Turnover_1$. The two measures are correlated at $\rho = .92$. For simplicity, we refer to $Turnover_2$ as *Turnover* for the remainder of the paper. To make results more interpretable we multiply *Turnover* by 100 so that it ranges from 0 to 100. Calculating *Turnover* measures gives us a region-year specific measure of turnover that is non-missing for 860 region-years.

Figures 1a-1c show *Turnover* across time for all Russia’s 89 regions. Note that *Turnover* in a given year indicates the percent of vice governors who turned over from the previous year to the given year. So in Voronezhskaya oblast, for instance, the 100% turnover in 2010, indicates that none of the vice governors serving in 2009 returned to office in 2010.

¹¹ In general, we do count instances of demotions—when a vice governor is transferred to a lower post in the regional administration—as turnover. $Turnover_2$ makes exceptions to this rule in instances where the size of the vice-gubernatorial corpus decreases.

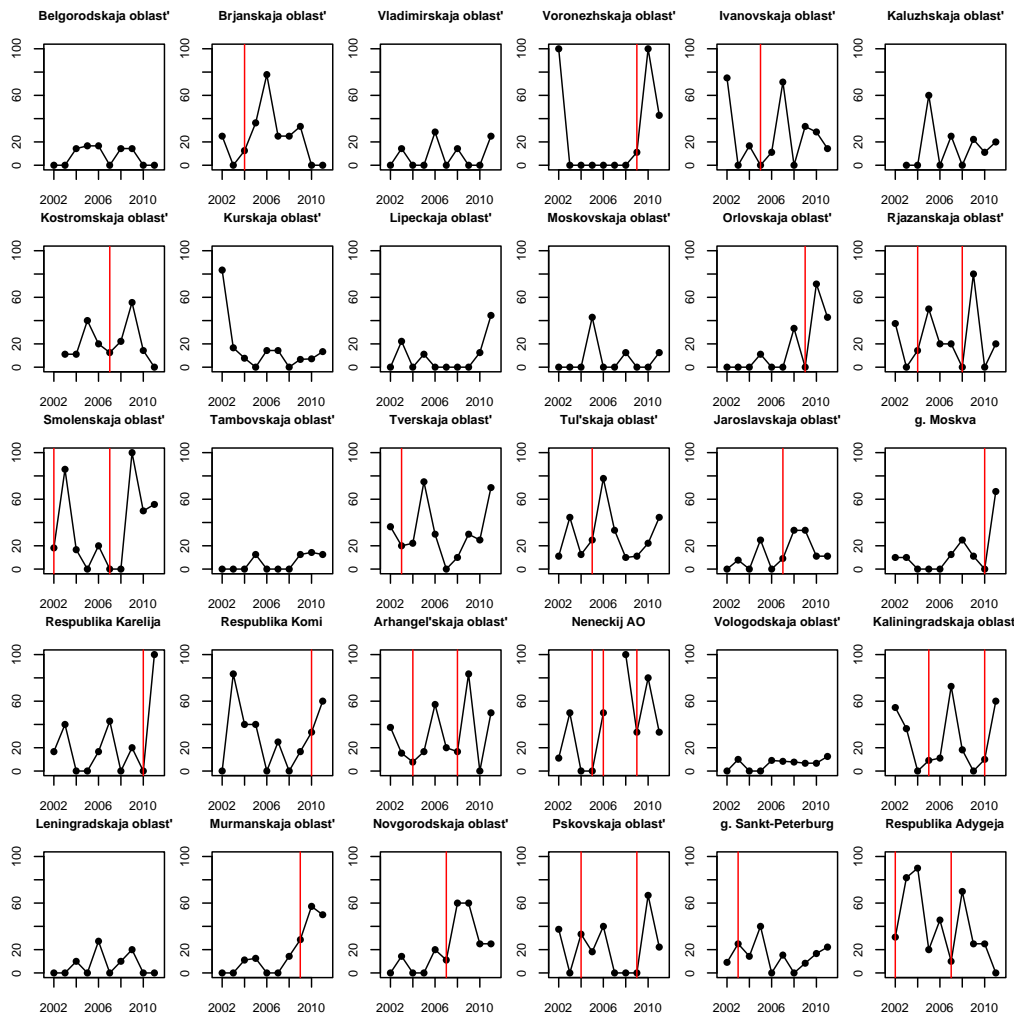


Fig. 1a. Turnover by year

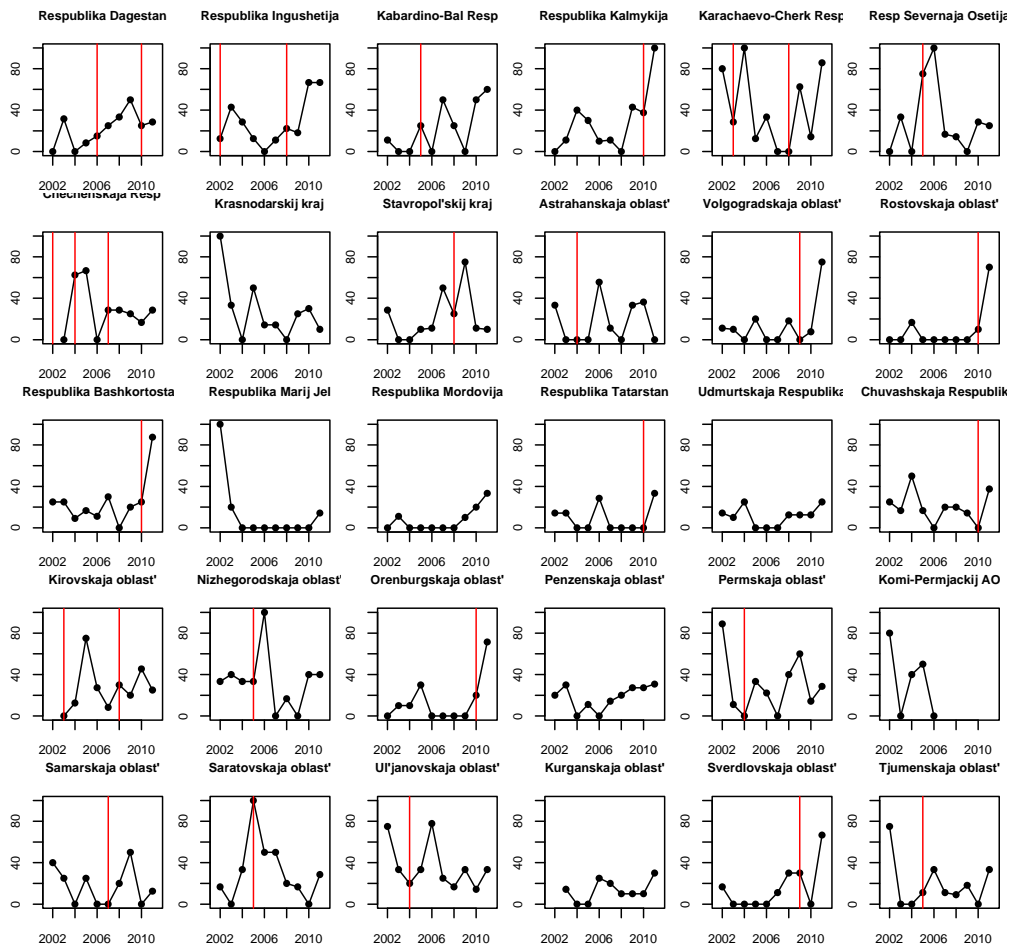


Fig. 1b. Turnover by year

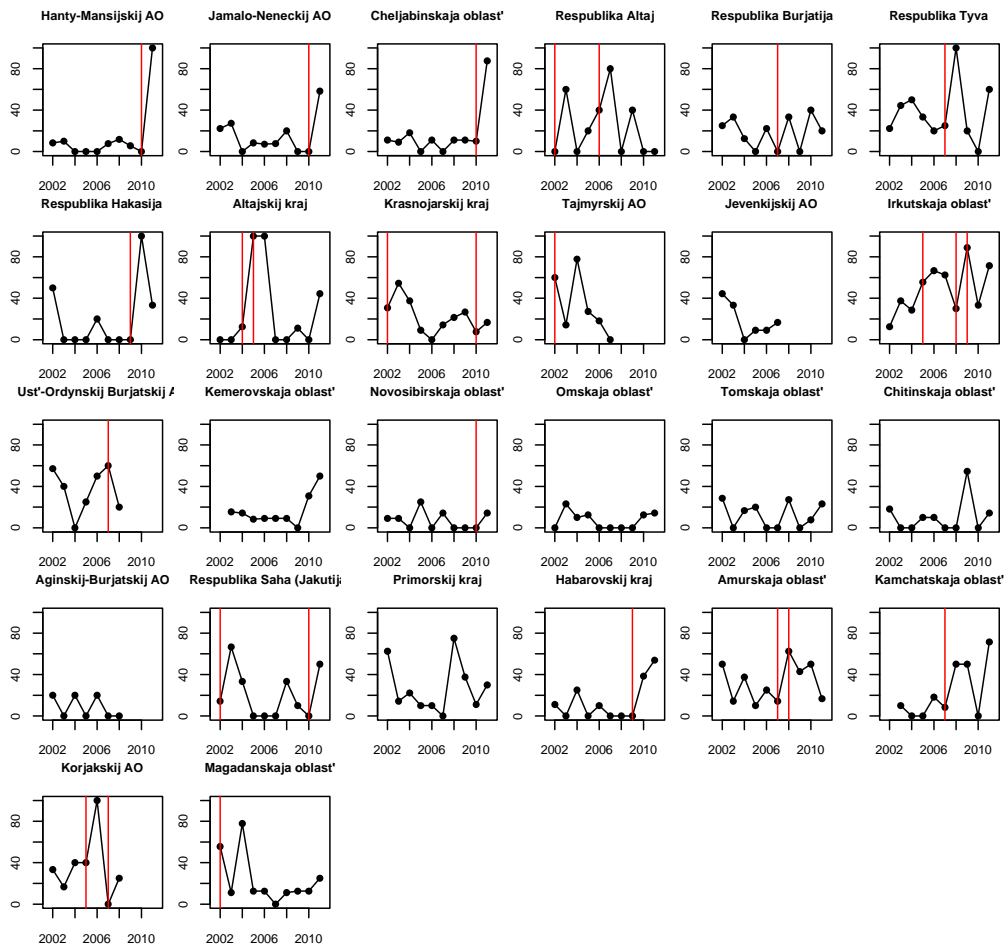


Fig. 1c. Turnover by year

As the figures show, *Turnover* varies widely both across and within regions. Some regions, such as Karachayevo-Cherkesia, Tyva, Saratov, and Irkutsk are beset by constant changes in the elite bureaucracy. Other regions such as Vologda, Omsk, Kurgan, and Yaroslavl have relatively low levels of turnover.

The red reference lines indicate the years in which there was a change in governor. The spikes in turnover in the year after those red lines indicate that, as expected, years after governor turnover are a natural time for vice governors to turn over. One thing to note about the time-series data in these figures is that the shock of replacing a governor seems to destabilize the elite bureaucracy for many years afterward. Regions with long-serving governors in the 2000s (e.g. Belgorod, Tambov, Leningrad, Vologda, Mordovia, Penza, and Tomsk) tended to maintain stable and low rates of vice governor turnover. By contrast, once a region experiences governor turnover they tend to experience volatility in the vice governor ranks for the remainder of the time series.

However, as Figures 2a and 2b indicate, there is a great deal of variation in the extent to which the vice gubernatorial corpus is renewed when a new governor comes into office. These

At the same time, as Figures 1a-1c show, there is also significant variation in vice governor turnover in years that do not follow governor turnover. Thus, vice governor turnover and governor turnover are two different phenomena.¹²

Figure 3 shows the distribution of turnover across time in all regions. With the exception of 2011, there are no significant temporal shocks affecting all regions. The uptick in turnover between 2010 and 2011 is likely due to the large number of governors that were replaced by President Medvedev in 2010.

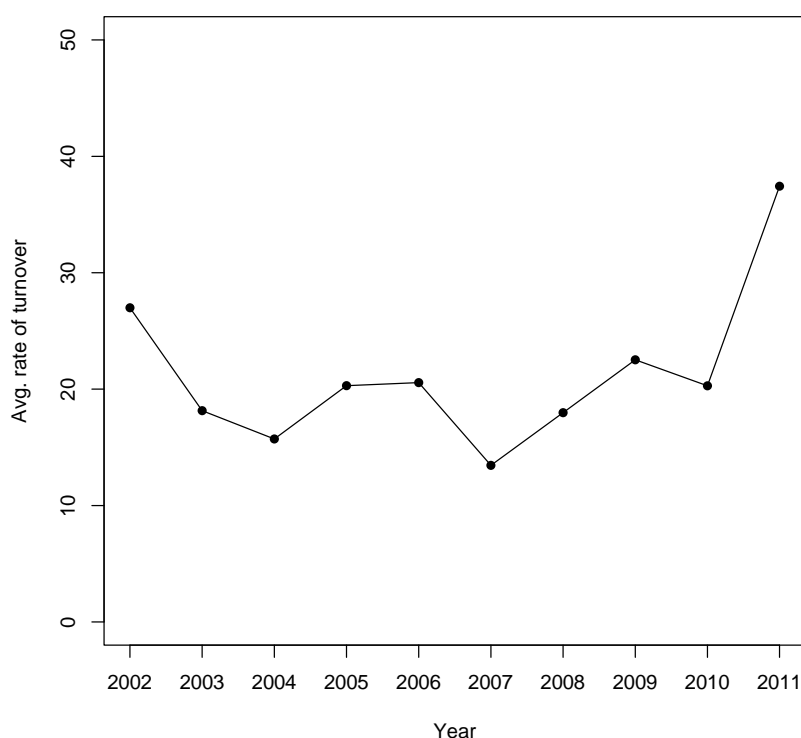


Fig. 3: Average yearly turnover

Independent Variables and Research Design

In this section, we describe the independent variables and methods used to test the hypotheses above. Sources and descriptive statistics on all variables can be found in the appendix. We use two measures of regional economic performance to measure the extent to which vice governors are dismissed for poor economic performance (H1-H4). The first is *Lagged Unemployment* and the second is *Lagged Economic Growth*, which is a measure of the growth in gross regional product, a measure of total output that is similar to gross domestic product at the national level.¹³

¹² Studies of turnover in cabinet ministers in parliamentary democracies come to similar conclusions: individual cabinet ministers turnover even when governments do not, and vice versa (Huber and Martinez-Gallardo 2008)

¹³ Because *Turnover* measures the turnover in vice governors from time $t-1$ to time t , *Lagged Unemployment* and *Lagged Economic Growth* are actually two period lags. In this way, we test the effect of growth and unemployment

Performance-based promotions occur when there is higher (lower) turnover as a result of poor (strong) economic performance. In order to test Hypotheses 2-4 about the conditions under which performance-based appointments occur, we use a series of interaction terms. First, in order to measure electoral competition and test Hypothesis 2, we use two measures of electoral competitiveness in Russian regional elections. Since our data extends into three years of the appointment era, our first measure of electoral competitiveness is the incumbent's margin of victory in gubernatorial elections, *Gubernatorial Election Competitiveness*. This measure is calculated for a given year by taking subtracting the nearest challenger's margin of victory in an upcoming election from the incumbent's. Races in which the incumbent was not running are dropped. One significant drawback of this measure is that, since our first year of data on turnover is for 2002 and our models include a lagged dependent variable, we can only analyze 2003 and 2004 (36 elections where the incumbent was running).

A better measure of electoral competitiveness is United Russia's vote share in regional legislative elections, *Legislative Election Competitiveness*. This measure is constructed for a given year by subtracting the party list vote share of the runner up party in forthcoming regional elections from United Russia's party list vote share.¹⁴ This allows us to analyze all our data from 2004-2011. Because governors were reappointed largely on the basis of how well they did at turning out the vote for United Russia in regional elections (Reuter and Robertson 2012), governors had a strong incentive to ensure high vote totals for United Russia in these elections.

Another possible measure of electoral competitiveness is the popularity of the governor. If the literature on administrative reform is correct here, it may be that popular governors feel free from particularistic demands for patronage and thus can appoint on the basis of economic performance. By contrast, if the perspective we offer is correct then popular governors will feel no particular sense of urgency to promote on the basis of economic performance. Thus, we include a measure of the *Governor Popularity* and interact it with our economic performance measures. The data on *Governor Popularity* come from regional surveys conducted by the Public Opinion Foundation's (FOM) Geo-rating project. Respondents in 68 regions are asked: "Do you think the leader of your region is doing a good job or a bad job?" We use the percent of

at time $t-2$ on dismissals in time $t-1$, which are observed in our data in time t . Results are robust to using the one period lag, such that unemployment and growth at $t-1$ affects dismissal at $t-1$, which is observed in time t .

¹⁴ Prior to December 2003, most regional elections were conducted using single member districts, and the vast majority of legislators were elected as independents. Therefore, we use United Russia results from December 2003 onward. United Russia was on the ballot in all elections from December 2003 onward. It was first in all but 3 of the 164 regional elections held.

respondents who think their governor is doing a good job as an indicator of the *Governor Popularity*.¹⁵

Hypothesis 2 states that performance-based promotions will be more likely when elections are competitive. Thus, we expect that governors will be more likely to make cadre decisions on the basis of economic performance indicators when elections in their region are competitive. To test this hypothesis, we create four interaction terms *Gubernatorial Election CompetitivenessXLaggedEconomicGrowth*, *Gubernatorial Election CompetitivenessXLagged Unemployment*, *Legislative Election CompetitivenessXLagged EconomicGrowth*, and *Legislative Election CompetitivenessXLagged Unemployment*. If our hypothesis is correct, then poor economic performance should have a larger effect on vice governor turnover when elections are competitive.

Hypothesis 3 states that performance-based promotions will be more likely when press freedom is high. We measure *Press Freedom* using a three-point scale of regional press freedom compiled by experts at the Glasnost Defense Foundation. The scale assigns a value of 1 to regions where media is deemed to be “Not Free”, a 2 to regions where it is deemed to be “Somewhat Not Free” and 3 to regions where it is deemed to be “Somewhat Free”. If our hypothesis is correct, then poor economic performance should have a larger effect on vice governor turnover, when levels the press is more free. Thus, we interact *Press Freedom* with both our measures of economic performance. We also expect that the effect of economic performance on vice governor turnover will be jointly conditioned by *Press Freedom* and electoral competitiveness. Thus, we also include the triple interaction between *Press Freedom*, *Lagged Unemployment*, and *Legislative Election Competitiveness*.¹⁶ We predict that poor economic performance will have its largest effect on vice governor turnover when both *Press Freedom* and *Legislative Election Competitiveness* are high.

According to our fifth hypothesis, turnover in vice governors will also be determined by political factors. In the appointment period, governors turn over at a higher rate when United Russia performs poorly, so we test the same hypothesis for vice governors. As a measure of United Russia’s electoral performance, we include the share of the party list vote won by United Russia in the most recent legislative elections in a region, *UR Electoral Performance*.

¹⁵ Unfortunately, this polling is only done in 68 regions. Polling is not conducted in Adygea, Dagestan, Kalmykia, North Ossetia, Chechnya, Ingushetia, Karachaevo-Cherkessiya, Kabardino-Balkariya, Altai Republic, Republic of Tuva, Yamalo-Nenets Okrug, Chukotskii Avtonomnii Okrug, Republic of Sakha (Yakutia), Nenetsk Autonomous Okrug, Komi-Permyatskii Autonomous Okrug, Taimyr Autonomous Okrug, Evenki Autonomous Okrug, Ust-Ordynskii Autonomous Okrug, or Koryak Autonomous Okrug.

¹⁶ In the appendix we discuss why we do not use *Lagged Economic Growth* in place of *Lagged Unemployment*.

To measure governor turnover, we include a dummy variable equal to one in the first two years after a change in governor in the region, *Governor Turnover*. This measure is meant to tap turnover in the vice gubernatorial corpus that is induced by governor turnover (H6). We take the two years after governor turnover as opposed to just one because governors that turn over late in the year often do not have the time or wherewithal to replace the vice-gubernatorial corpus in the current year. They may fire many of the old vice governors in the next year, but this vice governor turnover then appears in our measure for the following year.

For example, in December 2005, Mikhail Men replaced Vladislav Tikhomirov as governor of Ivanovskaya Oblast. Men began replacing Tikhomirov's corpus of vice governors in early 2006, so the high level of vice governor turnover in 2007 was directly attributable to governor turnover. In this instance, there was a change in governor in 2005, but the turnover induced by the governor does not reveal itself in our data until 2007. Aside from technical instances such as this, there are also instances where new governors do not feel sufficiently sure of themselves to immediately replace the old governor's team of officials and therefore wait for some time before installing their own officials. To the extent that we are interested in capturing vice governor turnover that is induced by governor turnover, we make *Governor Turnover* equal to one in the two years after a change in governor. Results are similar if we use only the first year after a change of governor.

According to Hypothesis 7, turnover should be higher under governors with few ties to the region. That is, outsiders should dismiss vice governors at a higher rate. To measure a governor's links to the region, we construct a three point scale composed of three binary indicators: 1) was the governor born in the region, 2) did the governor go to university in the region, and 3) has the governor worked in the region for more than 5 years. These three indicators are added such that a governor who exhibits all these characteristics receives a score of 3 and has, by this metric, the most ties to the region. We call this variable *Governor Ties to Region*. A negative coefficient on this variable indicates that insider governors dismiss at a lower rate, while outsiders dismiss at a higher rate.

We also adopt a simpler proxy for regional ties and include a dummy variable equal to one if the governor is a new, appointed governor. This variable is called *Governor Never Elected*. Almost no elected governors were outsiders, and all outsider governors were newly appointed governors in the appointments era.

We also explore the effect of a governor's career background on his tendency to dismiss vice governors. We include a series of indicators that characterize the career history of governors. This coding is based on the following scheme. First, a governor's 'career' is deemed to include the 10 positions held by the governor prior to becoming governor, or the most recent

20 years of work experience if the most recent 10 positions do not span 20 years. We then calculate the number of years spent by the governor in each of the following 11 career spheres: *Private Sector, State Owned Enterprise, Elected Office, CPSU, Military/Police, Federal Gov't, Fed. Bureaucrat in Region, Regional Gov't (Same Region), Regional Gov't(Different Region), Local Govt(Same Region), Local Govt (Different Region)*. Each governor is categorized according to the field in which he spent the *plurality* of his career.

In all models we also include a basic series of controls. First, we control for gross regional product per capita (*GRP per capita*), a measure of total output per capita and, thus, development in the region. We also control for whether the region is an ethnic republic with a large non-Russian population, using a variable called *Percent Russian*, the percent of the region's population that is ethnically Russian.

Modeling Strategy

As described in the previous section, the dependent variable we use in this analysis is effectively a proportion ranging from 0 to 1, inclusive.¹⁷ There are a number of options available to analysts wishing to perform regression analysis on such proportional, or fractional, data. The use of OLS is problematic because it may lead to out-of-bounds predictions (less than 0 or greater than 1) and because the linear and unbounded nature of ordinary least squares regression assumes homoscedasticity which will certainly not be present (Ramalho et al. 2011). One prominent and simple solution proposed by Papke and Wooldridge (1996) is to perform fractional logistic regression. The analyst may instead choose beta regression, a technique rarely used in political science. However, neither fractional logistic nor beta regression allow the dependent variable to take values 0 or 1, so the analyst is forced to make ad hoc adjustments to the data. A final available option is to explicitly model the presence of zeros and ones in the dependent variable using something like a mixture of multinomial and beta regressions. Known as inflated beta regression, this modeling strategy may be preferred when there are a large number of zeros or ones in the data or when theory indicates that the zero or one values are substantively different from fractional values (Ospina and Ferrari 2010, Cook et al. 2008).

In the current draft of this paper we rely on OLS regression because it is simple and easily interpretable. We ran our models as fractional logistic regressions using Stata's GLS command and confirmed that the results remained virtually identical to those from OLS. A sampling of replicated models ran using fractional logistic regression are offered in the Appendix in Table 7.

¹⁷ Although we transform it to a 0-100 scale for all analyses.

Given that previous levels of vice governor turnover may affect current levels of vice governor turnover we include a lagged dependent variable in all models. All models also include the full set of year fixed effects. Robust standard errors are clustered on region.

Results

We first test for an association between regional electoral competition and performance-based appointment practices (H2). When electoral competition is high and the economy is performing poorly, we expect high levels of bureaucratic turnover, while the literature on administrative reform suggests the opposite. Table 1 presents the results.

Tab. 1. Electoral Competitiveness and Performance-Based Promotion

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Turnover	Turnover	Turnover	Turnover	Turnover	Turnover	Turnover
<i>Lagged turnover</i>	-0.03 (0.04)	0.01 (0.05)	0.01 (0.05)	-0.14 (0.11)	-0.12 (0.11)	-0.02 (0.05)	-0.03 (0.05)
<i>Governor turnover</i>	30.86*** (2.03)	32.90*** (2.47)	33.56*** (2.31)	27.84* (14.21)	24.10* (12.46)	34.54*** (2.96)	34.83*** (2.95)
<i>Lagged unemployment</i>	0.11 (0.15)	1.19** (0.48)	0.16 (0.12)	0.16 (1.11)	-0.48 (0.51)	0.19 (1.10)	0.25 (0.37)
<i>Lagged econ growth</i>	-0.13 (0.14)	0.07 (0.15)	0.17 (0.32)	-0.07 (0.59)	0.56 (1.02)	-0.12 (0.19)	0.34 (0.46)
<i>Percent Russian</i>	-0.04 (0.05)	0.02 (0.05)	0.01 (0.05)	-0.36* (0.19)	-0.36* (0.20)	-0.02 (0.06)	-0.03 (0.06)
<i>GRP per capita</i>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
<i>Legis elect competitiveness</i>		0.10 (0.07)	0.55 (1.00)				
<i>LEC * lag unempl</i>		-0.02** (0.01)					
<i>LEC * lag growth</i>			-0.01 (0.01)				
<i>Governor elect competitiveness</i>				0.01 (0.19)	1.46 (1.47)		
<i>GEC * lag unempl</i>				-0.01 (0.02)			
<i>GEC * lag growth</i>					-0.01 (0.01)		
<i>Govn popularity * lag unempl</i>						0.00 (0.02)	

<i>Governor popularity</i>						-0.17	1.09
						(0.15)	(1.08)
<i>Govn popularity *</i>							-0.01
<i>lag growth</i>							(0.01)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	31.65*	-2.40	-4.77	48.88	-11.04	41.00**	-5.88
	(16.18)	(19.52)	(34.90)	(64.03)	(113.12)	(20.31)	(44.72)
Observations	725	552	471	41	41	522	522
R-squared	0.37	0.39	0.40	0.30	0.32	0.45	0.45

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

As Model 1 shows, there is no statistically significant additive relationship between our economic performance measures and vice governor turnover. But this does not mean that performance based appointments do not occur under certain circumstances. In Models 2-7 we interact the economic performance measures with various measures of electoral competitiveness. As is well-known, it is usually very difficult and often impossible to evaluate conditional hypotheses using only the coefficients on interaction terms and their components presented in traditional results tables (Brambor, Clark and Golder 2006, Kam and Franzese 2007). It is possible that an independent variable is statistically significant across substantively significant values of the modifying variable even if the coefficient on the interaction term is insignificant. Conversely, it is possible that the effect of a variable is not statistically significant across substantively interesting values of the modifying variable if the interaction term is significant. Thus, where appropriate, we display conditional effects plots that show how the marginal effect of our economic performance measures change across values of the modifying variable.

The marginal effects plot presented in Figure 4 show that when United Russia wins elections by narrow margins, unemployment has a statistically and substantively significant effect on vice governor. When the ruling party is performing poorly, high unemployment increases the probability of vice governor turnover. This association is not observed when United Russia is in a secure position. In this case, as is visible on the right side of Figure 4, unemployment plays no role in turnover decisions. The fact that governors respond to electoral pressure in legislative elections under the appointment system, indicates that governors are

highly concerned about the performance of the ruling party in their region, a conclusion that is not surprising given that the reappointment chances of governors depended their ability to mobilize the vote for United Russia (Reuter and Robertson 2012). We do not find evidence of that competitiveness in gubernatorial elections affects the probability of performance based appointments. But we are reluctant to make much of this finding given the very small number of observations that are available for analysis in the pre-2005 era.

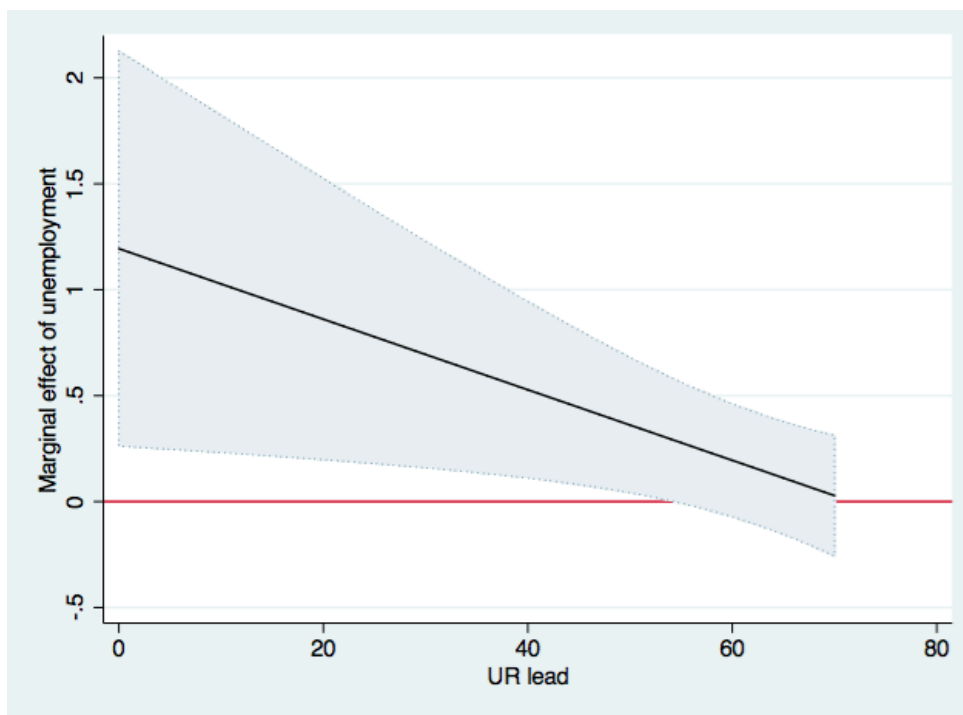


Fig. 3: Marginal effect of unemployment at varying levels of UR strength

We find no statistically-significant relationship between growth rates and the employment of performance-based appointment strategies. Examination of conditional coefficients from these models show that economic growth is not a statistically significant determinant of vice governor turnover at any level of electoral competitiveness. This may be due to the diffuseness of economic growth as an indicator of development. Unemployment is felt immediately and directly by voters, while overall levels of growth may or may not reflect the economic well-being of voters, especially in settings of high inequality. Moreover, regional governments can take specific measures to reduce unemployment, so voters may hold them specifically accountable for high unemployment.

Transparency, Information, and Performance-Based Promotions

We also predict that variation in performance-based appointments will also depend on the robustness of accountability mechanisms such as press freedom. If the populace is uninformed and disengaged, governors may be able to get away with cronyistic, purely political, or

patronage-based hiring and firing while ignoring the quality of his or her executive team. By examining the relationship between economic indicators and turnover under varying conditions of press freedom, we can see whether information plays a role in appointment strategies.

Tab.2. Electoral Competitiveness Mechanisms

VARIABLES	(1) Turnover	(2) Turnover	(3) Turnover
<i>Lagged turnover</i>	-0.03 (0.04)	-0.03 (0.04)	-0.01 (0.05)
<i>Governor turnover</i>	31.01*** (2.06)	30.96*** (2.04)	33.29*** (2.57)
<i>Lagged economic growth</i>	-0.17 (0.15)	-0.58* (0.31)	-0.15 (0.15)
<i>Percent Russian</i>	-0.05 (0.05)	-0.05 (0.05)	-0.01 (0.06)
<i>GRP per capita</i>	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
<i>Press freedom</i>	-2.04 (2.08)	-19.93 (15.49)	-4.70 (4.78)
<i>Press frdm * lag unempl</i>	0.45* (0.23)		0.77 (0.58)
<i>Governor ties to region</i>			-0.67 (0.90)
<i>UR electoral performance (2003)</i>			0.11 (0.08)
<i>Lagged unemployment</i>	-0.40* (0.24)	0.15 (0.15)	-0.50 (1.23)
<i>Legis elect competitiveness</i>			-0.17 (0.20)
<i>LEC * lag unempl</i>			0.01 (0.02)
<i>LEC * lag unempl * press frdm</i>			-0.01 (0.01)
<i>LEC * press frdm</i>			0.13 (0.11)
<i>Press freedom * lag growth</i>		0.21 (0.14)	

<i>Year fixed effects</i>	Yes	Yes	Yes
<i>Constant</i>	39.03** (17.08)	77.22** (33.93)	31.00 (22.72)
Observations	716	716	527
R-squared	0.38	0.37	0.41

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Model 1 in Table 2 tests this proposition by interacting press freedom and unemployment in a regression with turnover as the dependent variable. The interaction term is positive and statistically significant, suggesting support for our theory. As press freedom increases from 1, the lowest category on the scale, to 3, the highest, greater unemployment exhibits a stronger and stronger positive effect on turnover.. This result is confirmed by examining the marginal effects in Figure 5. The more informed is the populace and the more accountable is the executive, the more responsive the governor is to bad economic news. He is substantially more likely to replace his subordinates when unemployment is high and the public is well informed about the work of his administration Once again we find no effect using economic growth.

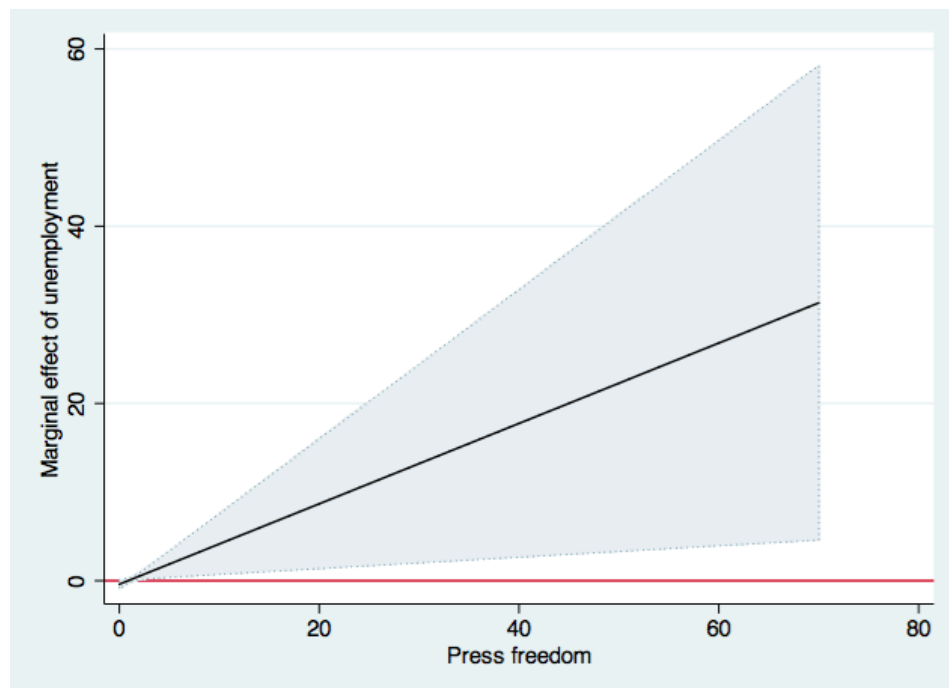


Fig. 4. Marginal effect of unemployment at varying levels of press freedom

Hypothesis 4 states that the effect of electoral competition on performance based appointments will be larger when levels of press freedom are higher To test this we build a triple interaction term consisting of legislative electoral competitiveness, press freedom, and unemployment. Model 3 in Table 2 displays the result of this regression. Examination of marginal effects plots shows that there are statistically significant relationships at important values of the constituent terms.

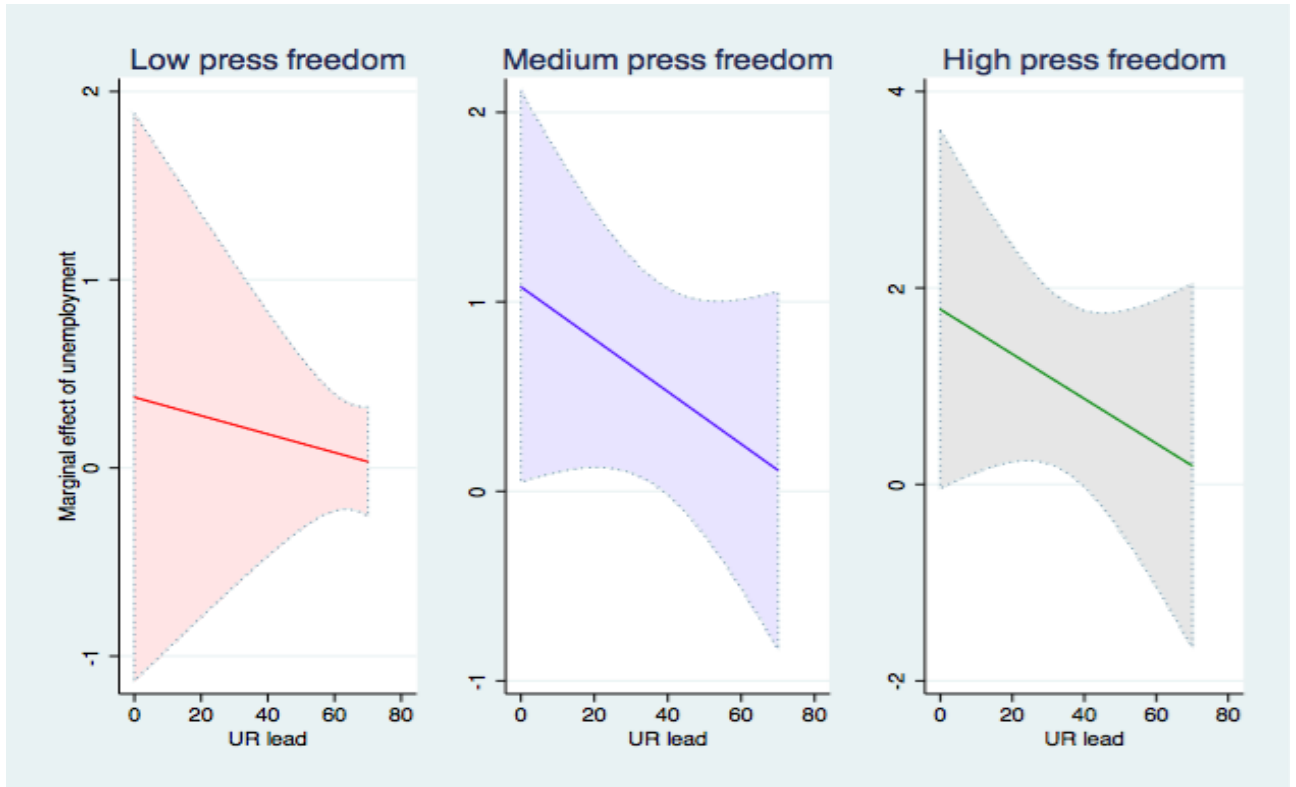


Fig. 5. Marginal effects of unemployment in triple interaction with UR strength and press freedom

Looking at Figure 6 we see that the effect of both press freedom and electoral competitiveness on performance based promotions is conditioned by the other. When press freedom is higher, the effect of electoral competitiveness on performance-based promotions is much higher. When both press freedom is high (the rightmost two panels) and electoral competition is high (i.e., United Russia is in a weak position, visible in the left portions of each panel) unemployment has its largest effect on vice governor turnover. Note that there are relatively few observations in the extremes of the distribution of press freedom, a fact that contributes to the larger confidence intervals in these areas

Competence, Loyalty, and Authoritarian Elections in a Power Vertical

Previous sections have examined the imposition of performance-based hiring and firing standards in response to economic stresses. We have shown conditions under which governors

will be responsive to poor economic conditions and fire subordinates as a result. But do political considerations also matter? As discussed earlier, loyalty and electoral performance are also of critical importance to competitive authoritarian regimes such as Russia's.

Tab.3. Meritocracy and Authoritarian Elections

VARIABLES	(1) Turnover	(2) Turnover	(3) Turnover	(4) Turnover
<i>Lagged turnover</i>	-0.05 (0.05)	-0.05 (0.06)	-0.08 (0.06)	-0.02 (0.05)
<i>Governor turnover</i>	33.30*** (2.82)	38.22*** (3.78)	31.03*** (2.95)	34.54*** (2.94)
<i>Lagged economic growth</i>	-0.14 (0.17)	-0.01 (0.22)	-0.16 (0.17)	-0.12 (0.19)
<i>Lagged unemployment</i>	-0.02 (0.11)	0.55 (0.47)	-0.11 (0.10)	0.29 (0.36)
<i>Percent Russian</i>	-0.00 (0.05)	0.10 (0.07)	0.01 (0.05)	-0.02 (0.06)
<i>GRP per capita</i>	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
<i>UR Duma Share (2003)</i>	0.17* (0.09)	0.09 (0.12)	0.22** (0.09)	
<i>UR electoral performance</i>	-0.19*** (0.07)	-0.04 (0.08)	-0.16** (0.06)	
<i>Governor popularity</i>		-0.10 (0.07)		-0.15** (0.06)
<i>Govn margin of victory</i>			-0.10*** (0.04)	
Year fixed effects	Yes	Yes	Yes	Yes
Constant	24.42 (19.15)	-0.64 (26.14)	27.67 (19.21)	40.31** (19.21)
Observations	442	348	439	522
R-squared	0.38	0.46	0.39	0.45

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Hypothesis 5 predicted that high-level bureaucrats would be held responsible for the electoral fortunes of the regime. Thus, we expect that turnover among vice governors will be higher when United Russia does poorly in elections. In Table 3, we find some support for this hypothesis: *UR electoral performance* enters negatively and statistically significantly. As United Russia performs worse, turnover increases. The effect size is not large (a 2 standard deviation decrease in UR performance is associated with an increase in turnover by approximately 6%) but still provides support for the idea that governors are sensitive to ruling party performance in making hiring and firing decisions.¹⁸

Model 2 shows that the inclusion of *Governor Popularity* greatly diminishes the magnitude of the coefficient on *UR Electoral Performance*. It may be that governor popularity is a strong driving factor behind United Russia's electoral performance, thus making this 'non-finding' spurious. In any case, the coefficient is in the expected direction. Indeed the increase in the size of the standard error on *UR Electoral Performance* in this model could be due to the decrease in sample size that is induced by using *Governor Popularity* as a measure.¹⁹ Interestingly, *UR Electoral Performance* returns to significance when the governor's margin of victory in his/her most recent election is used as a proxy for governor popularity (Model 3). Using this measure permits inclusion of more observations, including the North Caucasus.

Characteristics of the Principal

In Table 4 we examine patterns of turnover under governors with varying characteristics. Governors with local connections should be less likely to clean house by firing sitting officials. Appointed governors who never had to win regional elections and those who lack local ties will not feel beholden to local power brokers.

¹⁸ Reuter and Robertson (2012) argue that regional governors are held responsible not just for the share of the vote won by United Russia, but for its performance relative to its hypothetical potential. United Russia's electoral performance depends on factors aside from the skill and savvy of regional bureaucrats. Some regions are more disposed than others to voting for United Russia. They may have electorates that share United Russia's ideas or their electorates may be structurally predisposed toward dependence on the state. It is plausible to assume that the Russian leadership understands this. For example, a governor who generates low vote totals for United Russia may not be punished for that poor performance if the region is one where, for some structural or idiosyncratic reasons, the opposition is very popular. Meanwhile, if a governor secures an *average* vote total for United Russia in a region that historically been very supportive of the ruling party, the governor may receive sanction. Thus, *UR Duma Share (2003)*, *Pct Russian*, and year dummies are included in these models to control for United Russia's electoral potential in a region. See Reuter and Robertson (2012) for more on the technical details of this approach.

¹⁹ The surveys upon which this measure was based were only conducted in 68 regions.

Tabl. 4. Governor Characteristics and Turnover

VARIABLES	(1) Turnover	(2) Turnover	(3) Turnover	(4) Turnover	(5) Turnover	(6) Turnover	(7) Turnover
<i>Lagged turnover</i>	-0.04 (0.04)	-0.04 (0.04)	-0.03 (0.04)	-0.03 (0.04)	-0.04 (0.04)	-0.04 (0.04)	-0.04 (0.04)
<i>Governor turnover</i>	27.75*** (2.20)	29.33*** (3.42)	28.13*** (2.30)	33.68*** (3.31)	33.65*** (3.28)	27.64*** (2.31)	34.37*** (3.38)
<i>Lagged economic growth</i>	-0.16 (0.14)	-0.16 (0.14)	-0.19 (0.15)	-0.20 (0.15)	-0.20 (0.15)	-0.17 (0.15)	-0.19 (0.15)
<i>Lagged unemployment</i>	0.08 (0.15)	0.08 (0.14)	0.08 (0.14)	0.08 (0.14)	0.12 (0.14)	0.08 (0.14)	0.13 (0.14)
<i>Percent Russian</i>	-0.04 (0.05)	-0.04 (0.05)	-0.03 (0.05)	-0.03 (0.05)	-0.04 (0.05)	-0.03 (0.05)	-0.02 (0.04)
<i>GRP per capita</i>	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
<i>Governor ties to region</i>			-0.30 (0.74)	0.74 (0.78)	1.23 (0.76)	-0.08 (0.74)	1.35 (0.87)
<i>Governor never elected</i>	6.93*** (2.35)	7.98*** (2.64)	6.36*** (2.40)	6.40*** (2.37)	6.62*** (2.39)	6.60*** (2.38)	6.05** (2.36)
<i>Ties to region * governor turnover</i>				-4.26** (1.80)	-4.59** (1.79)		-4.74** (1.87)
<i>Never elected * governor turnover</i>		-3.11 (4.79)					
<i>Career: SOE</i>							-2.85 (2.51)
<i>Career: elected offc</i>							-0.98 (2.83)
<i>Career: CPSU</i>							-6.56*** (2.44)
<i>Career: security</i>							-4.68 (2.91)
<i>Career: federal govt</i>							-2.03 (3.27)
<i>Career: fed govt in reg</i>							9.50*** (2.27)
<i>Career: regional exec (same)</i>							-6.94*** (2.38)
<i>Career: regional exec (diff)</i>							-10.65* (6.31)
<i>Career: local govt (same)</i>							0.07

							(3.83)
<i>Career: local govt (diff)</i>							5.52
							(5.81)
<i>Regional exec experience</i>					-2.59***		
					(0.91)		
<i>Career yrs in private sector</i>						0.42*	
						(0.24)	
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	34.15**	34.05**	36.76**	36.70**	37.92**	34.42*	36.51**
	(16.70)	(16.65)	(17.97)	(17.54)	(17.77)	(18.07)	(17.17)
Observations	725	725	693	693	693	693	693
R-squared	0.37	0.37	0.38	0.39	0.40	0.38	0.41

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Governor Never Elected is positive and statistically significant in all specifications in Table 4, indicating that appointed governors are much more likely to fire subordinates than those with electoral mandates. But after examining the interaction between *Governor Never Elected* and *Governor Turnover*, we find that the effect of not having an electoral mandate shrinks from 8.0 (standard error: 2.6) to 4.9 (SE: 4.2) in years that immediately follow governor turnover. Thus while appointed governors are still more likely to dismiss high-level officials, they appear to be more cautious about making waves just after coming into office.

The relationship we find for insider governors is in the correct direction – insiders are less likely to produce turnover – but not statistically significant. However, when interacting the insider measure with *Governor Turnover*, we find that *new* outsiders are much more likely than *new* insiders to fire vice governors. The conditional coefficient on the insider scale measure is 0.7 (SE: 0.8) in years that do not follow governor turnover, and -3.5 (SE: 1.7) years that do follow governor turnover. This indicates that in the critical two years after taking office outsider governors do indeed fire subordinate officials at a higher rate. Conversely, insider governors are much less likely to hire and fire cadres just after they take office. This is consistent with lay accounts that stress how Russia's appointed governors have had difficulty finding accommodation with local elite groups.

Tab. 5. Descriptive Statistics for Career History

Sector (majority of career history)	Proportion in sample	Average turnover
Private sector	7.0	27.7
State-owned enterprise (SOE)	27.2	17.9
Elected office	10.5	23.0
CPSU	25.5	13.0
Security structures	8.0	23.6
Federal government	2.9	30.0
Federal gov't in regions	0.6	26.5
Regional executive (same region)	9.5	20.2
Regional executive (diff't region)	0.3	32.7
Local government (same region)	7.3	23.2
Local government (diff't region)	1.2	37.3

In the final three columns of Table 4 we examine the secular impact of a governor's career experience on vice gubernatorial turnover. See Table 5 for descriptive statistics on average turnover rates under each career category as well as a measure of their prevalence in our data. We employ a set of dummy variables indicating which 'sector' dominates the governor's career history prior to becoming governor in Model 7 along with a measure of how many years the governor spent in the private sector before becoming governor in Model 6. In Model 7 (the omitted category is majority of career experience in the private sector) the most notable findings are that federal officials who become governor are associated with much higher levels of turnover, befitting their 'outsider' status, and governors coming from within the regional executive are associated with much lower levels of turnover, also as expected.

Conclusion

Russian governors hire and fire high-level bureaucrats on the basis of both economic performance metrics and political loyalties. These regional heads of government are important links in a long principal-agent chain and so may be subject to a wide variety of pressures – e.g. popular approval, economic booms and busts, local patronage demands, and support of the central leaders. In this paper we have tried to distinguish when and how these pressures, separately or in combination, have an effect on the way leaders appoint high-level bureaucrats.

Our findings are several. First, we find that exposure to popular pressure—via electoral competition and free media—prompts governors to use economic performance as a criterion for

appointing subordinates. This is counter to many previous theories of bureaucratic reform that have held that politicians only initiate reform when they are shielded from electoral competition. Indeed, our study helps explain the ambiguous empirical relationship between democracy and bureaucratic quality, which are found to be only weakly correlated (Dixit 1999). Administrative reform comes with significant electoral costs to politicians, especially in competitive contexts. Moreover, this is a complex issue that does not animate most voters, so it is reasonable that fervent popular calls for administrative reform are rare. Thus, as the literature suggests, administrative reform may be hindered by democracy. On the other hand, politicians derive electoral benefits from heeding popular calls to unseat high-level bureaucrats when the economy is performing poorly. Voters need not be sophisticated to make this judgment. Hence, our argument and findings suggest that democracy may not only be compatible with bureaucratic quality, but may directly contribute to it, at least at the elite level.

Our findings also have implications for the study of authoritarian regimes. They demonstrate the significance of democratic institutions in a context – Russian regional politics – where many assume that clientelism and authoritarian politics dominate. The quality of bureaucracy depends critically on the decisions politicians make about how to promote cadres, and these decisions are determined by both political and economic considerations. When these conditions prompt politicians to value bureaucratic competence over bureaucratic loyalty, the improved governance that results can have significant effects on policy outcomes, economic performance, and public goods provision.

Since pressures to maintain a certain type of bureaucracy can come from both elites and the public, we identify both elite and popular pressures that act on governors. Under the gubernatorial appointment system governors faced constant pressure from the Kremlin to mobilize the vote for United Russia. In this setting, vice governors were held responsible for the electoral performance of the ruling party. Such pressures undermine economic development in the Russian regions because the same tactics used to build electoral machines—corruption, patronage spending, and political favoritism—are also inimical to economic development.

Characteristics of the governors themselves are also important. Vice gubernatorial turnover is much lower under governors with local ties. Insider governors are more likely to owe their positions to local elite networks and are wary of undermining their clientelist base by disrupting these networks. Turnover is also lower under appointed governors. Thus, the introduction of gubernatorial appointments in Russia did what was intended: break up the political machines of governors. However, this may or may not have been a good thing for economic development, since introducing gubernatorial appointments induced turnover significant turnover in the bureaucracy, which is in turn associated with diminished bureaucratic

capacity, policy instability, and lower private investment. The return of gubernatorial elections may mean more electoral accountability but could also spark further turnover in the gubernatorial corpus, which will trickle down into the bureaucracy. The uncertainty associated with these frequent shifts in policy and cadres is detrimental to economic development. Finally, governors who spent their careers in the CPSU or in regional administrations are much less likely to dismiss vice governors, whereas governors coming from federal bureaucracies – independent offices with very different roles in the power vertical – hire and fire subordinates at a higher rate.

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Appendix

In this table we combine many of the sets of covariates from Tables 1-3 in order to ensure that the results continue to hold once additional factors are controlled for. The substance of our findings and, to a large extent, statistical significance, are borne out when other factors that may affect turnover rates and the imposition of performance-based strategies are included.

VARIABLES	(1) Turnover	(2) Turnover	(3) Turnover	(4) Turnover
<i>Lagged turnover</i>	0.01 (0.05)	-0.03 (0.05)	-0.04 (0.04)	-0.01 (0.05)
<i>Governor turnover</i>	38.54*** (4.05)	40.14*** (4.22)	34.69*** (3.44)	40.35*** (4.23)
<i>Lagged unemployment</i>	1.03** (0.48)	0.30 (1.07)	-0.38* (0.23)	-0.30 (1.16)
<i>Lagged econ growth</i>	-0.07 (0.15)	-0.17 (0.19)	-0.26* (0.14)	-0.19 (0.15)
<i>Percent Russian</i>	0.00 (0.05)	-0.03 (0.07)	-0.04 (0.04)	-0.03 (0.06)
<i>GRP per capita</i>	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<i>Governor ties to region</i>	0.97 (0.91)	1.05 (0.94)	0.69 (0.78)	1.16 (0.94)
<i>Governor never elected</i>	4.89 (3.20)	5.09 (3.54)	5.28** (2.38)	3.24 (3.20)
<i>Ties to region * govn turnover</i>	-5.71*** (1.77)	-5.92*** (2.19)	-4.66** (1.84)	-6.75*** (1.83)
<i>Legis election competitiveness</i>	0.08 (0.08)			-0.08 (0.18)
<i>LEC * lag unempl</i>	-0.01** (0.01)			-0.00 (0.02)
<i>Govn popularity * lag unempl</i>		0.00 (0.02)		
<i>Governor popularity</i>		-0.13 (0.15)		
<i>Press freedom</i>			-1.70 (2.09)	-2.75 (4.74)
<i>Press frdm * lag unempl</i>			0.42* (0.23)	0.55 (0.55)
<i>LEC * lag unempl * press frdm</i>				-0.00 (0.01)
<i>LEC * press frdm</i>				0.06 (0.10)
Constant	16.79 (17.25)	38.17* (21.97)	43.71** (16.72)	29.39 (22.46)
Observations	534	508	686	527
R-squared	0.42	0.47	0.39	0.43

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7 below reproduces selected models from Tables 1-3 using GLS-based fractional logistic regression in place of OLS. The coefficients presented here are thus on the logit scale, but statistical significance and the directionality of our findings are universally upheld.

VARIABLES	(1) Turnover	(2) Turnover	(3) Turnover	(4) Turnover	(5) Turnover	(6) Turnover	(7) Turnover	(8) Turnover	(9) Turnover
<i>Lagged turnover</i>	-0.11 (0.22)	0.11 (0.30)	-0.18 (0.22)	-0.03 (0.31)	-0.26 (0.34)	-0.14 (0.23)	-0.19 (0.23)	-0.22 (0.23)	-0.02 (0.32)
<i>Governor turnover</i>	1.62*** (0.10)	1.76*** (0.13)	1.63*** (0.10)	1.77*** (0.14)	1.79*** (0.15)	1.69*** (0.17)	1.69*** (0.17)	1.74*** (0.18)	2.14*** (0.24)
<i>Lagged econ growth</i>	-0.01 (0.01)	0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
<i>Lagged unemployment</i>	0.01 (0.01)	0.09*** (0.03)	-0.02 (0.02)	-0.04 (0.08)	0.00 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	-0.02 (0.08)
<i>Percent Russian</i>	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
<i>GRP per capita</i>	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)
<i>Governor ties to region</i>				-0.05 (0.06)		0.06 (0.06)	0.09 (0.06)	0.10 (0.07)	0.11 (0.08)
<i>Governor never elected</i>						0.44*** (0.15)	0.46*** (0.15)	0.41*** (0.14)	0.25 (0.21)
<i>Ties to region * gov turnover</i>						-0.20** (0.09)	-0.22** (0.09)	-0.24** (0.10)	-0.36*** (0.10)
<i>Career: SOE</i>								-0.17 (0.17)	
<i>Career: elected offc</i>								-0.05 (0.18)	
<i>Career: CPSU</i>								-0.50*** (0.19)	
<i>Career: security</i>								-0.29 (0.20)	
<i>Career: federal govt</i>								-0.13 (0.20)	
<i>Career: fed govt in reg</i>								0.58*** (0.15)	
<i>Career: regional exec (same)</i>								-0.45*** (0.16)	
<i>Career: regional exec (diff)</i>								-0.59** (0.29)	
<i>Career: local govt (same)</i>								0.03 (0.22)	
<i>Career: local govt (diff)</i>								0.28 (0.27)	
<i>Press freedom</i>			-0.13 (0.16)	-0.41 (0.35)					-0.27 (0.37)
<i>Press frdm * lag unempl</i>			0.03* (0.02)	0.06 (0.04)					0.04 (0.04)
<i>UR electoral perf (2003)</i>				0.01 (0.01)	0.01 (0.01)				
<i>Legis electoral perfom</i>		0.01 (0.01)		-0.02 (0.01)					-0.01 (0.01)
<i>LEC * lag unempl</i>		-0.00** (0.00)		0.00 (0.00)					0.00 (0.00)
<i>LEC * lag unempl * press frdm</i>				-0.00 (0.00)					-0.00 (0.00)
<i>LEC * press frdm</i>				0.01 (0.01)					0.01 (0.01)
<i>UR electoral performance</i>					-0.01***				

<i>Regional executive experience</i>					(0.00)		-0.20***		
Constant	-0.20 (0.91)	-2.61** (1.25)	0.13 (0.93)	-0.40 (1.51)	-0.50 (1.15)	-0.17 (0.94)	(0.07) -0.06 (0.95)	-0.21 (0.86)	-0.28 (1.56)
Observations	725	552	716	527	442	693	693	693	527

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 8: Descriptive Statistics

Variable	N	Mean	S.D.	Minimum	Maximum	Source
<i>Turnover</i>	860	21.1	23.9	0	100	Authors' Database (Center for the Study of Institutions and Development, Higher School of Economics)
<i>Lagged Unemployment</i>	814	9.52	6.68	.8	66.9	Rosstat
<i>Lagged Economic Growth</i>	813	5.36	7.01	-28	78.7	Rosstat
<i>Gubernatorial Election Competitiveness</i>	89	29.5	37.68	-58.7	81.1	Authors' Database (Center for the Study of Institutions and Development, Higher School of Economics)
<i>Legislative Election Competitiveness</i>	735	30.73	18.98	-13.79	85.17	Authors' Database
<i>Press Freedom</i>	822	2	0.68	1	3	Glasnost Defense Foundation http://www.gdf.ru/
<i>UR Electoral Performance</i>	461	46.2	16.27	17.66	90.4	Authors' Database
<i>Governor Turnover</i>	868	0.21	0.41	0	1	Authors' Database (Center for the Study of Institutions and Development, Higher School of Economics)
<i>GRP per capita</i>	854	171149.6	278761	7750	3087661	Rosstat
<i>Percent Russian</i>	834	78.89	20.24	9.2	90	Rosstat
<i>Governor Ties to Region</i>	805	1.68	.03	0	3	Authors' Database (Center for the Study of Institutions and Development, Higher School of Economics)
<i>Governor Never Elected</i>	899	0.2	0.4	0	1	Authors' Database (Center for the Study of Institutions and Development, Higher School of Economics)
<i>Career History Dummies*</i>						Authors' Database (Center for the Study of Institutions and Development, Higher School of Economics)
<i>Governor Popularity</i>	530	4.86	16.8	0	88.25	Public Opinion Foundation Geo-Rating

*Note: See Table 5 for more information.

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