

3 Deference or governance?

A survival analysis of Russia's governors under presidential control

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On January 22, 2010, Mintimer Shaimiev, the leader of the Republic of Tatarstan (a constituent region of the Russian Federation), announced that he would step down from the Republic's presidency at the end of his term, in March. Shaimiev had been Tatarstan's leader since before the end of the USSR, becoming the Communist Party first secretary in 1988 and then president in 1991. A few days after Shaimiev's announcement, Russian President Dmitrii Medvedev, on Shaimiev's recommendation, nominated a close Shaimiev ally to become Tatarstan's next leader. When Shaimiev stepped down, he took over a newly created post of State Advisor, which gives him wide-ranging powers. He even kept his same office in the presidential building! (For details, see Pavlov 2010.)

On October 16, 2008, President Medvedev announced that he was dismissing the governor of Amur Oblast, Nikolai Kolesov. Kolesov had been appointed Amur's governor by then-president Vladimir Putin in May 2007. Kolesov was brought in from Shaimiev's region of Tatarstan, some 4,700 miles away, in the aftermath of a corruption scandal against the previous governor of Amur. He had no experience in Amur and no supporters among the regional elite (Petrov 2008). Kolesov promised to increase economic growth, reverse the trend of out-migration and improve trade ties with neighboring China. He was unable, however, to make good on any of these intentions. Beyond his outsider status, he alienated many in Amur with his lavish lifestyle financed by the regional budget (Ostrovskaja 2008). The redecoration of his office was said to have cost \$3–5 million. A large personal dacha was constructed in a protected sensitive forest area. Local politicians began lobbying the Kremlin against him, and corruption lawsuits were initiated. By the fall of 2008, Kolesov had become too much of a liability to the Kremlin. Less than a year and a half after having dispatched Kolesov to Amur, the Kremlin dismissed him.

Shaimiev's 22 years as regional leader contrasts sharply with Kolesov's 16 months. Indeed, Kolesov's term is dwarfed by the 62 months Shaimiev had governed since 2005, when the federal presidency began appointing and dismissing regional leaders, or governors. The tenures of Russia's appointed governors vary between the length of Shaimiev and the brevity of Kolesov. What do we learn about politics between Russia's federal center and its regions from examining governors' tenures during the period of Kremlin control? The 2005 rule change

reduced the federal nature of Russia's political system and, in formal terms, enhanced substantially the federal leadership's control over regional politics, strengthening what Putin had described as a "vertical of power." While formally the Russian president now enjoys the right to remove governors at will and to control their appointment,¹ the political realities are complex.

The switch from elected to appointed governors certainly gave the Russian president substantially more bargaining power vis-à-vis the governors. Yet it would be a mistake to interpret the situation as entirely under the Kremlin's control. The regions' performance in the economic, social and political spheres remains crucial to the federal leadership's goals for the country. Also, the governors are important players in national politics, especially due to their role in promoting United Russia's success in national presidential and legislative elections (on this, see Reuter 2010). We therefore treat the Kremlin's decision about the tenure of a governor as the result of an asymmetrical bargaining process. We use events-history analysis of data from all 83 Russian regions from 2005 to 2011 to estimate the factors influencing when a governor is replaced. These factors include the region's size and ethnic composition, the governor's age and aspects of the governor's administrative and political performance. Our analysis supports the view that relations between Russia's center and its regions remain highly politicized, varying cross-regionally depending on the relative balance of political resources between the Kremlin and the regional leadership.

The Kremlin and the regional leaderships

From soon after Russia's independence in 1991, its constituent regions have been led politically by chief executives, usually referred to as governors. Initially, for the non-republics, President Yeltsin designated these leaders; frequently, he tapped those who had been the first secretary of the region's Communist Party branch or who were the head of the elected legislature for the region. Republics had the right for their presidents to be chosen from within the region, either by the legislature or through a popular election. By 1996, however, Yeltsin conceded the right for all governors to be elected by the voters of the region (Kirkow 1998; Solnick 1998). Popular election gave governors a source of legitimacy that increased their power vis-à-vis the federal center and led to a period in which many observers saw centrifugal forces as excessive, even threatening to Russia's statehood (Alexseev 1999; Stoner-Weiss 1999; Sakwa 2002; Domrin 2006). Putin made it a central goal of his first presidency to establish greater Kremlin control over the regions. Returning the selection of governors to the Russian president was a key part of his strategy. In the aftermath of the Beslan tragedy of September 2004, Putin sought and received changes in federal law that ended gubernatorial elections.

From 2005 on, governors serve as long as they maintain the confidence of the Russian president (helpful discussions of the new practices include Turovskii 2009a; Ross 2010a; Slider 2010b).² That is, "losing the president's confidence" is an adequate reason for a governor to be dismissed prior to the end of his or her

formal term. Although the president need not provide any reason for declining to nominate a sitting governor for a new term, the functional difference between providing no explanation and stating that one has "lost the president's confidence" is small. Under these rules, any governor could be fired at any time depending on the will of the federal president. Whether a governor leaves office at the end or in the middle of a term does not alter the political basis for that departure: a decision by the Kremlin.³ Moreover, each additional week or month a governor remains in office also reflects a Kremlin decision, that is, the decision not to make a change.

What drives the pattern of gubernatorial tenures from 2005 on? Gubernatorial replacements, not counting those caused by an incumbent's death, occurred ten times in 2005, four in 2006, eight in 2007, eight in 2008, ten in 2009, 19 in 2010 and three during the first half of 2011.⁴ Although scholars have only begun to tackle this question, the Kremlin's continued reliance on national elections as a source of its legitimacy has made the electoral process a natural starting point for understanding appointments and dismissals. Turovskii (2010b, 67) even suggests that thinking of appointments as elections with a restricted set of voters (i.e., the president and his inner circle) is a useful analogy. With political actors in the center controlling the governors' fates, Turovskii submits that the primary determinants of replacement are the governors' abilities to provide electoral results favorable to the Kremlin and to consolidate the regional elite. Indeed, in the absence of any mechanisms for popular input, Turovskii (2010b, 69–70) contends that neither the personal popularity of a governor nor the socio-economic situation in a region matters much. Sharafutdinova (2010b) offers an account that resembles Turovskii's. While the appointment process, theoretically, provides the Kremlin greater control over regional executives, she doubts its effectiveness. From her perspective, the primary goals of the appointment process are "vote delivery" and "societal manageability," and it is these considerations that drive gubernatorial replacements (ibid, 682). Moreover, since governors are largely left alone as long as these two goals are met, Sharafutdinova argues that the Kremlin has missed an important opportunity to link accountability to the quality of governance.

Although electoral results and societal stability may be prevailing considerations for the Kremlin, the relative weight of these two considerations seems to have varied over time and probably varies from region to region. Turovskii (2010b), for example, examines the changing frequency of gubernatorial replacements and concludes that the appointment era so far has evolved in three stages: (1) inertia, when most incumbents were reappointed; (2) experimentation, when the president experimented with instilling some new blood into the regions in the form of outsiders; and, most recently, (3) replacement, as the center has become more confident in its ability to control the situation in the country. In a qualitative assessment of appointment dynamics across these three stages, Turovskii (2010b, 63) draws conclusions that are broad, sweeping and insightful. Among them are assertions that, early on, dismissals were largely confined to sparsely populated regions notorious for poor governance, public flogging was the

exception, and generating some public effect was not a motivation for replacements. Moreover, he contends that once the Kremlin moved out of the inertia phase and into the experimentation stage, the potential risks of change were initially offset by focusing on regions with passive populations and high public confidence in the center (ibid, 72). Turovskii's assertion that caution characterized the first two stages of the appointment process complements Shafutdinova's (2010b, 683) view that the appointment process was not solely driven by a desire to maximize power: if it had been, then Russia's most powerful regional barons would have been replaced first.

Previous studies, then, suggest that a governor and his or her allies at the regional level can influence both the president's desire for someone else and the cost to the president for making a change. As Gel'man and Ryzhenkov (2011, 453) note, "[D]espite the numerous cases of forced resignations of regional governors ... the hierarchy of the 'power vertical' is far from an army-like chain of command, and it operates according to a different logic." Both explicit and tacit bargaining occurs between the Kremlin and the governor.⁵ Understanding this bargaining requires attention not only to the formal institutional rules, which constrain the governors substantially and the president hardly at all, but also to informal power relations and other contextual constraints. Formal and informal influences do not simply coexist; they can be in tension. Chebankova (2010b, 2), for instance, sees a "growing rift between the erected institutional structures [of Russian federalism] and the functioning processes taking place within them." Meanwhile, the low supply of sufficiently qualified and trustworthy replacements not only represents the kind of contextual constraint that initially tied the president's hands (Turovskii 2010b, 66), but that also may keep the Kremlin from being able to hold governors accountable for the quality of governance in their regions (Sharafutdinova 2010b, 673).

As these comments suggest, our theoretical approach focuses on the relative power resources of different actors pertinent to a governor staying in office or being replaced. Although the research question is *when* the Russian president replaces a governor, we are assuming that presidential choices reflect a process of explicit or tacit (to them) bilateral bargaining and competition between the Kremlin and each regional governing team. If this assumption is correct, the pattern of gubernatorial change/retention ought to reflect cross-regional differences in the factors that affect decisionmaking. In Reisinger's (Chapter 1) five-way division of theoretical approaches, our assumptions are strategic, or resource-oriented. We are not investigating differences among the actors in their ideologies, personalities or propensity to take a certain kind of action, as a behavioral approach would. We do not examine the impact of shared cultural norms. Although formal institutions and the rules that generate them will always shape the distribution of power resources among actors, we do not examine the influence of any one formal institution or set of institutions. Indeed, what gives rise to our research question is the set of rules governing presidential control over gubernatorial retention and appointment. These rules provide the Russian president with tremendous power vis-à-vis each governor. However, they are the

same for each of the bilateral relationships between the Kremlin and a regional leader. For our purposes, they are not variables nor, therefore, constitute an explanatory factor in our approach. As we will discuss below, the factors we examine flow from thinking about the relationship of power resources and the resulting Kremlin strategy.

Why are the governors replaced when they are?

While previous work provides qualitative and impressionistic accounts of the considerations driving the gubernatorial appointment process in Russia, scholars have yet to apply methods that allow them to analyze the relative effects of rival explanations. The exception is Reuter and Robertson (2011), who undertake to assess the impact of the election motive relative to factors that one might associate with quality of governance. Yet their logistic regression analysis of annual data does not allow them to consider why a governor is replaced *when* he or she is replaced, a question at the crux of the matter. Although the law now gives the Russian president the authority to end a governorship at any time, whether to do so will usually be a sensitive political question. Medvedev's decision about Moscow's mayor, Yuri Luzhkov, for example, came after months of speculation about whether it would happen. The president's decision will naturally be influenced by numerous factors pertaining to the region, the situation in the country as a whole, the president's own political standing and, of course, the governor him- or herself. For insights into the politics of presidential control over gubernatorial power, one must examine the entire pattern in search of those factors that clearly promote or retard Kremlin action. This pattern comprises not simply whether a governor is fired or not reappointed in a particular year. It also includes the ongoing maintenance of governors in office. Because the president can oust a governor at any time, regardless of the incumbent's stated term length, electing to keep or remove someone from office is a continuous process. Survival, or event-history, analysis is the proper technique for examining a pattern of data having this over-time character (Box-Steffensmeier and Jones 2004; Mills 2011).

Thus, with information on the governors, the regions and the national situation, we use event-history analysis to see what factors influence the survival of a governorship. We examine the pattern of gubernatorial replacements and non-replacements, month-by-month, from 2005 through June of 2011. We then employ multivariate models incorporating factors that: (a) bear on the Kremlin's desire or lack of desire to replace the incumbent governor; (b) bear on the Kremlin's political readiness to make a replacement; and (c) provide important controls.

Before turning to the data analysis, we will review the initial expectations we have about regional characteristics, the incumbent governor's personal characteristics, his or her political performance from the Kremlin's perspective and his or her administrative strengths or weaknesses. The various factors in these categories ought to, all else being equal, give the Kremlin incentives for or against making a replacement.

Time

Over the six and a half years from which we draw our data, one would expect the frequency of replacements to increase from the third quarter of 2008 on, when the global economic crisis began to harm Russia's economy. As the economic pain grew, so did social discontent. Public dissatisfaction with poorly performing governors was rising, and having a regional governing team that could maintain social stability was of growing importance. Also, the Kremlin itself needed to show that it was responding to the economic downturn. Replacing governors, therefore, had particular value.⁶

Regional characteristics

One would expect the Kremlin to exhibit more care in making a leadership change in the more nationally important regions, since a poorly managed change could cause greater harm than doing nothing. We will measure national importance with a region's total population.⁷ The more populous regions, in other words, should see fewer gubernatorial changes.

One should also expect that the predominantly ethnically non-Russian regions will see fewer leadership changes than those with ethnically Russian populations. The former are of extra sensitivity to the Russian leadership, albeit in a different sense than are the economically vital regions. Replacing such a governor might lead to public outcry as an attack on the control of the region by that region's titular ethnicity, especially when an ethnic Russian is brought in to be the new governor. The regions with sizable non-Russian populations have the status of republics or autonomous regions. Within that subset of the regions, though, there are variations in the proportion of the population that is non-Russian. We will use the percent of ethnically non-Russian residents in a region rather than variables distinguishing regional status.

Characteristics of the incumbent governor

Several characteristics of the governor and his or her past experiences will be relevant. Those who came into office prior to 2005, especially those whose control of the regional machine is evidenced by strong electoral victories, owe their loyalty less exclusively to Putin and his team in the Kremlin than do those appointed later. Also, longer-serving governors should have more ways to resist a Kremlin move against them. Countering these possibilities, however, is the very fact that the Kremlin will see its own appointees as inherently more trustworthy and right-thinking. Moreover, quite a few of the governors who took office prior to 2005 actually began serving, like Shaimiev, well before then, going back to the early 1990s or earlier. The very length of their tenure means their age is high and the likelihood of stagnation is also higher. For both of these two reasons, the pre-2005 group would be more of a target of the Kremlin. Older governors should be more vulnerable to replacement because they may appear to

the Kremlin as less dynamic or flexible. However, to the extent that higher age carries political experience in that region, we expect replacements to be fewer.

The incumbent governor's administrative record

As the Kremlin examines the merits of retaining or replacing a particular governor, it must give strong weight to the successful management of the region by the governor and his or her team. The president and other central leaders would like all the regions to exhibit social stability, economic growth and the absence of serious infighting among the elites (Gel'man and Ryzhenkov 2011, 454). The Kremlin's interest in replacing a governor, therefore, should rise in response to such indicators as economic decline, rising crime or worsening health statistics. Tracking the regions' economic, social and administrative success is the goal behind the Kremlin's effort since 2007 to gather systematic data on regional performance (Reuter and Robertson 2011).

The incumbent governor's political performance

As the observers cited above have noted, the Kremlin expects more from a region's leadership than just successful governance of the region. Governors are also expected to provide effective support for the vertical of power, that is, for the nationwide strength of the Kremlin's party, United Russia, and for the regime more generally. The success of United Russia candidates in both regional and federal legislative elections is a criterion by which governors are judged. So, too, of course is the success of Kremlin-backed candidates in the presidential elections. We therefore expect that, all else being equal, governors of regions in which the Kremlin's party or candidate fares well electorally will be safer from replacement.

Patterns of gubernatorial survival, 2005–2011

Our dependent variable is, for each governor, the number of months until he or she is removed from office. The beginning month is January 2005 for those who were governing at the time that the new system took effect or, for those appointed subsequently, their month of appointment. We have collected data through June 2011. Out of the 155 governorships analyzed, the 83 governors still in office at the end of June 2011 become "right-censored" cases. Although their eventual departure dates are unknown, the survival analyses draw information from the number of months they were in office through June 2011. We also code as right-censored three governors who died in office,⁸ one governor who resigned for health reasons and died within weeks⁹ and six governors who headed regions that merged with larger regions since these governors left office for reasons exogenous to the appointment process.¹⁰ The total number of other, not right-censored, cases is 62.

Overall trends

Figure 3.1 shows a histogram of the number of regions in each three-month period experiencing a changeover in governor. With regard to our expectation that replacements would be relatively more frequent from the third quarter of 2008 on, the pattern is indeed higher, although the variability in both periods is more striking than the difference between them. Because replacing a governor is a sensitive political issue with numerous specific considerations that the Kremlin must weigh, we might have expected to find no discernible trend in the frequency of changeovers. The highest bars in Figure 3.1 (when more than three replacements occurred) suggest that change has been a particular Kremlin priority during certain periods. The first three quarters of 2010 saw 17 changes, contributing to the higher average rate for the last three years of our data. The economic downturn no doubt increased the Kremlin's interest in seeing new blood among the regional leaders and also weakened the positions of many incumbents.

We turn now to describing the second kind of time pattern in our data: time in office, which forms the basis of survival analysis. Our initial description here of the overall trend and our subsequent analyses investigate time in office and what influences it. Figure 3.2 shows the slope of the survivor function, along with bands indicating the 95 percent confidence interval. Governors remaining in office for the entire period from January 2005 through June 2011 have tenures of 78 months, the maximum "survival" length. The probability of survival is 1, by definition, at the very start of a governorship. From there, that probability can

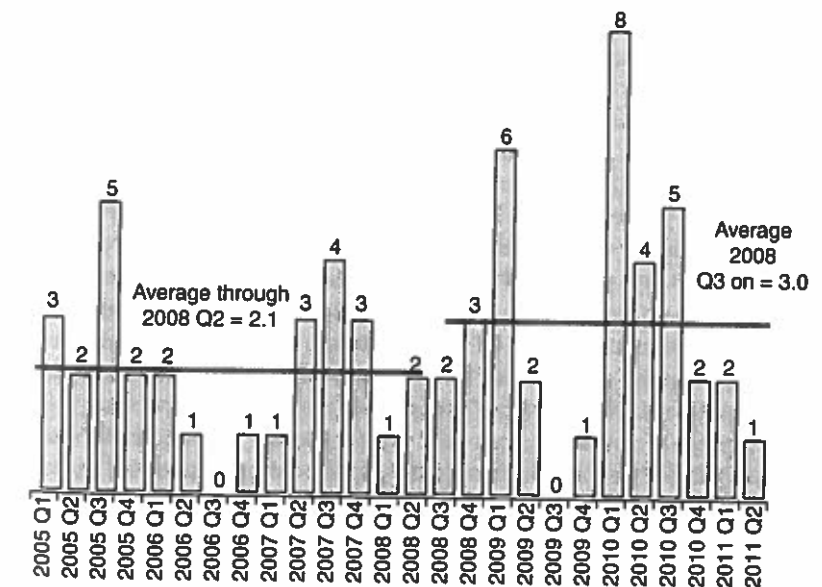


Figure 3.1 Gubernatorial changeovers by quarter, 2005 through mid-2011.

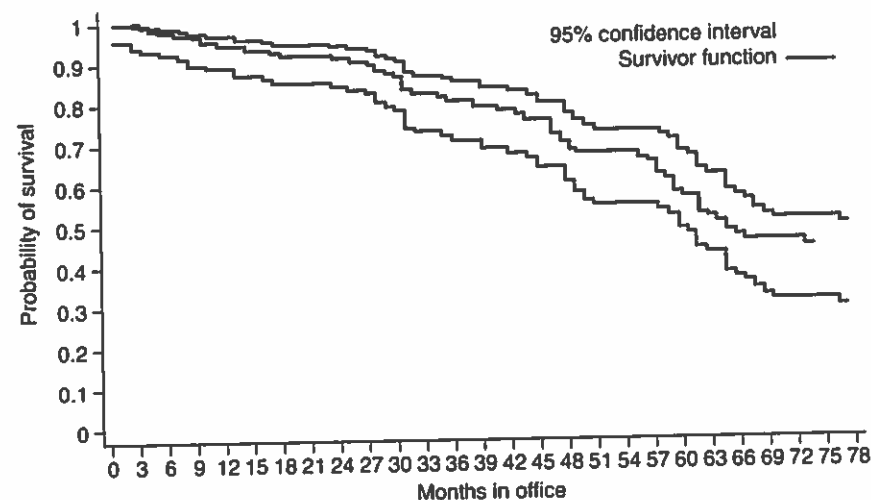


Figure 3.2 Survivor function for gubernatorial tenure, 2005–2011.

only decline. Thus, survivor functions slope downward. In other words, longevity in a governorship lowers the odds of continuing in office. Those in office for less than two years have a 90 percent or more likelihood of continuing in office. Those in office for over five years have less than a 57 percent likelihood. For those with the maximum tenure of 78 months, the likelihood is 40 percent. Among all governors during this period, their tenure lasts on average 42.8 months (median = 42). In other words, roughly three and a half years.¹¹

One can see from Figure 3.2 that the odds of a governor remaining in office decline (the slope of the survivor function declines) noticeably from about 32 months through 50 months and then again, more sharply, between 58 and 67 months. For those governors who had been in office in January 2005 and remained so, Medvedev takes over as Russian president in their 41st month and the economic crisis begins in their 44th month. To some extent, then, the downward slope from 30–50 months reflects an upsurge of replacements during the run-up to and the aftermath of the 2007–2008 election cycle. The 50th month is February 2009, when the governors of four regions – Orel, Pskov, and Voronezh Oblasts and the Nenets Autonomous Okrug – were replaced on the same day. For that same group of governors, their 58th month in office is October 2009 and their 67th is July 2010. Replacements picked up speed during this period. During this period 15 governors are replaced, 14 of whom began their tenure prior to the appointment period, including such powerhouses as Shaimiev of Tatarstan and Eduard Rossel of Sverdlovsk. As noted earlier, Turovskii (2010b) depicts this as a time of greater Kremlin confidence in its ability to successfully replace governors.

The same type of graphs can depict differences in governors' survival probability based on different values of key variables. For instance, do the governors in regions whose residents are predominantly non-Russian ethnically have higher rates of survival (i.e., lower turnover) because of the greater prospect of social resistance or political-machine resistance in those regions? To distinguish the two groups of regions, we use 30 percent of the regional populace being non-Russian as the cut-off point. (All regions above 30 percent have a constitutional status of republic or autonomous okrug.) Figure 3.3 shows the survivor functions for each group. The line for the predominantly Russian regions is higher at every number of months in office. From 60 months on, it remains substantially higher. In these charts, a lower line indicates a lower probability of survival in office. The bivariate pattern in Figure 3.3 does not suggest extra resources lay in the hands of the ethnic regions' governors. They were actually replaced at a higher rate than other governors. We will examine other patterns in the data before attempting to explain this.

What about the difference between governors who assumed office prior to the appointment era and those appointed from 2005 on? As explained above, one might expect turnover to be either lower or higher among those with pre-2005 experience. Figure 3.4 shows the survival estimates for the two groups; it indicates that the governors personally selected by Putin or Medvedev have faced less peril than those who took over the office by their own devices. And the gap is noteworthy, even in the very early months of their tenure. The Kremlin has clearly had less patience with them than with those appointed from 2005 on. Figure 3.4 also illustrates how, by 2010 (60th month in office), the longest-serving governors were being removed at an accelerated rate.

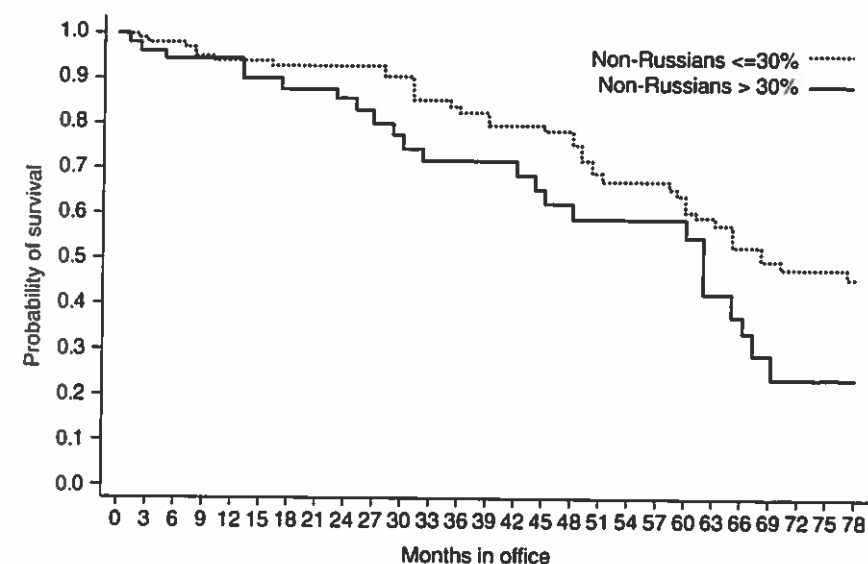


Figure 3.3 Survivor function for gubernatorial tenure, by ethnic composition of region.

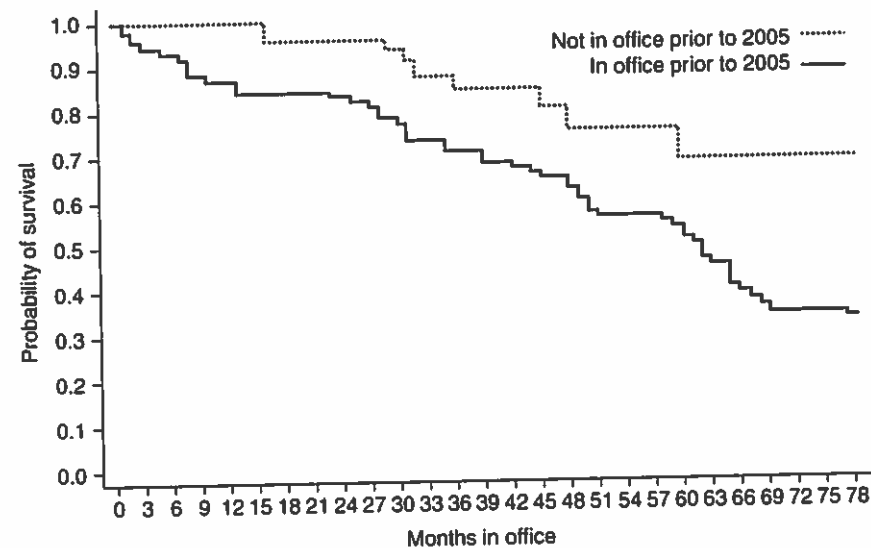


Figure 3.4 Survivor function for gubernatorial tenure, by whether governor served prior to 2005.

As a third illustration, we examine the governor's *political* performance. We measure this based on how the Kremlin's candidate for president (Putin in 2004 or Medvedev in 2008) fared in a given region in the most recent federal election prior to the governor being replaced. During these elections, politically loyal governors and their teams worked hard to provide both a high regional voter turnout and a large share of the votes cast for Putin or Medvedev. To capture how well the governors did this, we calculate the votes for Putin or Medvedev as percent of all eligible voters in the region (see also Reisinger and Moraski 2009). Using all eligible voters as the denominator rather than all those who actually voted incorporates how successfully turnout was enhanced. The Appendix explains this indicator in greater detail.

Figure 3.5 shows the survival estimates for two sets of governors: those heading regions where the votes for the Kremlin candidate in the presidential election preceding the end of their tenure fell below 60 percent of all eligible voters versus those heading regions that delivered 60 percent or above. Sixty percent of all *eligible* voters is a phenomenally high proportion to turn out and vote for the same candidate. The average across all the regions is just below 50 percent in both elections. In 2004, 13 regions exceeded the 60 percent level, and in 2008, 20 did. Figure 3.5 indicates that governors who had "delivered" very high levels of pro-Kremlin votes in the most recent presidential elections have a higher survival rate.

Do these bivariate patterns hold up when other variables are factored in? Answering this requires a multivariate analysis. Events-history techniques permit the estimation of multivariate models, using partial likelihood methods such as

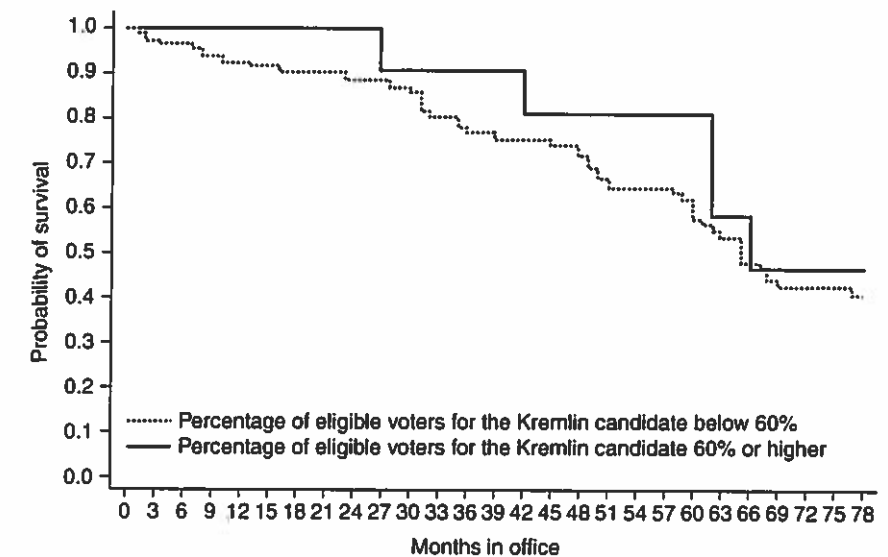


Figure 3.5 Survivor function for gubernatorial tenure, by regional voting for the Kremlin presidential candidate.

the Cox proportional hazards technique that we employ. We begin by examining the results of models that relate only to the Kremlin's interest in replacing a governor. We then introduce explanatory variables that indicate a governor's ability to resist being replaced, allowing us to contrast the relative influence of the two types of factors. Although observers of Russian politics have reason to be interested in whether the lengths of gubernatorial appointments under Presidents Medvedev and Putin have varied, we have noted that the observation of such an effect cannot be conclusive since the change in presidential leadership coincided with the onset of the global economic downturn. Thus, to the extent that one witnesses a different pattern in gubernatorial fates before and after May 2008, one cannot speak definitively about the precise cause of the variation. It may result either from different political personalities or different political incentives.

Still, it is clear that the onset of economic crisis *and* a new presidency initiated a new period in the appointment era and that the prospects for gubernatorial survival (i.e., staying in office) should differ across the two periods. An intuitive approach for capturing this variation would be to add a dichotomous variable to the multivariate analysis to distinguish governors who served after April 2008 from those who served only under Putin. The problem with such an approach, however, is that it distorts the effects of the new presidency and economic crisis on gubernatorial survival because we are interested in the *total* number of months that *all* of Russia's appointed governors have survived rather than how long a subset of governors – those in office during the Medvedev presidency and the economic crisis – have survived. A few specific examples illustrate the difference.

For the period under investigation, Governors Malakhov (from Sakhalin), Potapenko (Nenets) and Yevkurov (Ingushetia) served 31, 32 and 33 months, respectively. However, Malakhov's tenure was all during the Putin era – that is, he lasted for 31 months under Putin. Potapenko, on the other hand, survived 23 months under Putin, but lasted only nine months under Medvedev. Meanwhile, Yevkurov's entire tenure so far has been under Medvedev. A dummy variable distinguishing governors serving only under Putin from those serving under Medvedev could capture the contextual differences between when Malakhov and Yevkurov were in office. However, it would fail to adequately distinguish Potapenko's experience from Yevkurov's since both served, partially or entirely, under Medvedev and during the economic crisis. Worse yet, the dummy variable would take on undue explanatory power. By definition, it distinguishes Putin-appointed governors who failed to survive into the Medvedev era not only from Medvedev's appointees *but also* from Putin-appointed governors whose tenures continue beyond Putin's presidency. As a result, the variable gives Putin full credit for the governors he fired but no credit for those who "survived" him. Even worse, our focus on total time in office means that the Putin-era tenures of these governors are carried over into the Medvedev era, thus inflating the survival rates of Medvedev-era governors. Returning to our examples, although Potapenko survived longer under Putin than Medvedev, the dummy would treat Potapenko as a *Medvedev* survivor with 32 months in office, crediting Medvedev not only with Potapenko's nine months during his presidency but also with the 23 months Potapenko served under Putin!

Although future research may wish to examine the survival rates of governors from May 2008 on, we prefer to focus on all appointees since the beginning of the appointment era. Of course, we still need to distinguish between the fate of governors under President Putin and under President Medvedev. We just wish to do so without adding a biased explanatory variable to our multivariate model. Fortunately, survival analysis permits just such an option.

In a right-censored Cox proportional-hazard model, the left-hand side is the survival object and is created by a survival function that considers the length of time to the event in question with an observed event receiving the value of 1 and a censored observation receiving 0 (Fox 2002, 3). In our analysis, time is the total number of months in office until the governor is fired (1) or right-censored (0). The right-side of the equation of a Cox proportional hazard is the same as that of a linear model. Survival analysis also provides the option of adding a cluster function to this side of the equation. The cluster function allows one to capture a natural or artificial clustering of subjects that could likely result in non-independent observations, such as mice from the same litter (Gharibvand and Liu 2009, 1). Our multivariate analysis, then, uses a cluster that separates the governors into two categories: governors who were removed or right-censored under Putin and governors who were removed or right-censored under Medvedev. Doing so allows us to estimate the effects of the covariates that interest us while controlling for dependence among these observations.

Table 3.1 presents our multivariate analysis, which includes three reduced models and one full model. The three reduced models allow us to continue our

Table 3.1 Cox estimations clustering governors based on the president(s) they served

	Reduced model 1		Reduced model 2		Reduced model 3		Full model	
	Exp (coef)	Robust s.e.	Exp (coef)	Robust s.e.	Exp (coef)	Robust s.e.	Exp (coef)	Robust s.e.
<i>Regional characteristics</i>								
Population (standardized)	9.23E-01***	1.66E-02					8.99E-01***	1.95E-03
Percent non-Russian	1.010***	2.62E-03					9.80E-01*	8.97E-03
<i>Performance</i>								
Crime rate change			1.008	2.88E-02			1.042	8.24E-02
Life expectancy change			0.935	8.90E-02			9.90E-01*	5.47E-03
GRP per capita change			9.31E-01***	1.21E-02			9.81E-01	1.73E-02
Recent presidential POE			1.005*	2.80E-03			9.49E-01***	4.47E-03
<i>Enscenced</i>								
Prior tenure (months)					1.005***	1.01E-03	1.006**	2.13E-03
Governor's age					1.001	1.41E-02	1.010	8.70E-03
<i>Interaction term</i>								
Non-Russian × Pres. POE							1.001***	1.36E-04
N=	150							
Likelihood ratio test	5.02	153						149
P=	0.08	1.19						17.3
Score (logrank) test	5.62	0.88						0.04
P=	0.06	1.23						18.82
		0.87						0.03

Notes

*, **, *** and **** indicate significance at the 0.10, 0.05, 0.01 and 0.001 levels, respectively, for two-tailed tests. POE = The percent of a region's eligible voters having voted for the Kremlin's candidate, either Putin or Medvedev, in the most recent presidential election.

step-by-step assessment of the effects of regional characteristics, gubernatorial performance and the governors' ability to resist replacement on the governors' survival rates. For each model, we present, in separate columns, the exponentiated coefficients and robust standard errors for each independent variable. The exponentiated coefficient, or hazard ratio, represents the multiplicative effects on the hazard. It is the central statistic when interpreting the Cox model (Mills 2011, 94). Estimated hazard ratios greater than 1 are associated with an increased hazard of having the event (i.e., gubernatorial replacement). Estimated hazards less than 1 indicate a decreased hazard. Hazard ratios of 1 indicate no association between the covariate and hazard. Alongside the hazard ratios, we indicate its significance level for two-tailed tests. The final four rows of Table 3.1 present two common goodness-of-fit estimates for Cox proportional hazard models – the likelihood ratio test and the score (logrank) test – as well as their significance levels.

As the first equation in Table 3.1 suggests, the standardized population size of a region has a significant effect on gubernatorial survival. The hazard ratio is appreciably lower than 1.0 and is statistically significant at the .001 level. Using the exponentiated coefficient (eb) and the formula of $(eb-1)*100$ (Mills 2011, 95), we learn that, holding other factors constant, one unit increase in the standardized population size results in an almost 8 percent decrease in the hazard: $(.923-1)*100 = -7.7$. The percentage of non-Russians in a region also proves statistically significant in this reduced model, reaching the .001 level. According to the exponentiated coefficient, a one percent increase in the percentage of non-Russians results in a one percent increase in the hazard, other factors held constant. The first reduced model, then, confirms the bivariate pattern presented in Figure 3.3.

The second reduced model in Table 3.1 presents the results when only gubernatorial performance variables are included in the model. At this point we present these equations separately, rather than in an additive fashion, due to high collinearity between the percentage of non-Russians in a region and the percentage of eligible voters from a region tallied as supporting the Kremlin-backed candidate in the most recent presidential election: the Pearson correlation between the two is 0.771 (significant at the .001 level). Since we are greatly interested in how electoral performance (i.e., producing electoral support for the Kremlin) affects gubernatorial survival, it seems best to start with a model that directly taps that dynamic and that would cut closest to home for the Kremlin, presidential elections.¹²

To capture the governors' administrative performance, we calculate the percent change in several measures of regional standard of living from 2004 until the year in which the governor is dismissed, when possible. We use the change between 2008 and 2009 for cases serving in 2009 and after. Because the data are annual, we use the previous full year's number as the numerator, if the governor's departure occurs prior to July 1, and the year of the departure, if it occurs in the second half of the year. The numbers are indicators of public perceptions of the quality of life declining, and this calculation reflects our desire to capture that. We use three indicators of quality of life change: overall crime rate, life expectancy and gross regional product per capita (GRP).¹³ We expect annual

increases in the crime rate to increase the hazard of replacement, and increases in life expectancy and gross regional product per capita to lower the hazard.

Our second reduced model provides some support for the expectation that a governor's performance in office influences his or her survival. Although neither changes in the relative crime rate or relative life expectancy prove statistically significant in this model, both changes in GRP per capita relative to the national average rate of change and demonstrations of support for the Kremlin's candidate in the most recent presidential election are significant at the .001 level and .10 level, respectively. GRP per capita functions as expected. A one percentage point improvement above the national average lowers the hazard of removal by 6.9 percent $[(.931-1)*100=-6.9]$. Notice, however, that a 1 percent jump in the number of eligible voters supporting the Kremlin's presidential candidate yields 0.5 percent *increase* in the hazard. While one might expect this outcome given the high correlation between this variable and the percentage of non-Russians, the result defies expectations drawn from the literature. It suggests that governors from more deferential regions are *more at risk* than those where the Kremlin's candidate enjoyed less support. We return to this issue when discussing the full model.

The third reduced model estimates the ability of more ensconced governors to resist replacement. As previously discussed, governors who served prior to 2005 did so by winning a popular election, which suggests that they possessed their own basis of legitimacy (either among the population, among regional elites, or both). While this autonomous source of power may be sufficient cause for removal, we also assert that the longer the tenure (i.e., lasting not only into Yeltsin's presidency but for some predating the official collapse of the Soviet Union) could further motivate the Kremlin to instill new blood in the region as a way to avoid, if not overcome, stagnation. While age and prior tenure are certainly correlated (Pearson $r=0.512$), we include age of the governor in the model because those serving in office prior to the appointment era were not necessarily so old as to justify removal on the basis of age-related factors. Including age in the model, then, allows us to differentiate more carefully among the governors and to attain a more accurate estimate of the impact of prior tenure. Still, as Table 3.1 illustrates, age fails to influence, at a statistically significant level, gubernatorial survival independent of prior tenure. As expected, prior tenure has a strong and statistically significant impact on removal. For every month a governor held office prior to January 2005, the hazard rate increases by 0.5 percent, and this effect is significant at the .001 level.

The final equation in Table 3.1 presents the full model. Simultaneously including indicators for the regional characteristics, gubernatorial performance and the degree to which governors are ensconced in their regions produces a model with the best goodness-of-fit measures so far. Both the likelihood ratio test and the score (logrank) test attain significance at the .05 level.

Besides including all of the variables examined previously, the full model adds an interaction term: the percent of the region's residents who are ethnically non-Russian multiplied by the percent of the region's eligible voters having voted for the Kremlin candidate in the most recent presidential election. Including the interaction term and its components in the model allows us to determine

whether a synergistic relationship might exist between the percentage of non-Russians from a region and the level of support from the region for Kremlin-backed presidential candidates. Remember, our expectations were that the Kremlin would move more cautiously in regions with more non-Russians and would more likely reward governors overseeing high levels of pro-Kremlin electoral support. While the reduced models depict the opposite relationships, based on previous research on the spatial dynamics of regional deference to the Kremlin in national elections (Reisinger and Moraski 2010), we know that many of Russia's most electorally deferential regions have been ethnic republics located in the North Caucasus, a region which has faced violence and social disruptions not experienced elsewhere in Russia. With this in mind, we suspect that these regions are driving the results in the reduced models. Figure 3.6 supports this view.

This figure shows that the governors in the North Caucasus regions were at significantly greater risk of being fired than governors elsewhere during almost every period of gubernatorial tenure. The dashed line showing the survival probability for North Caucasus governors is clearly and, for certain lengths of tenure, dramatically lower than both of the other lines. The dashed line is horizontal from the 48th month on because none in the region lasted more than four years in office during the appointment period. For regions outside the North Caucasus, the difference between predominantly Russian and non-Russian regions is small until the 65th month. With this information at our disposal, then, we included the interaction term in the full model as a way to capture the relationship between these regions and the Kremlin, while the components of the interaction term estimate the effects

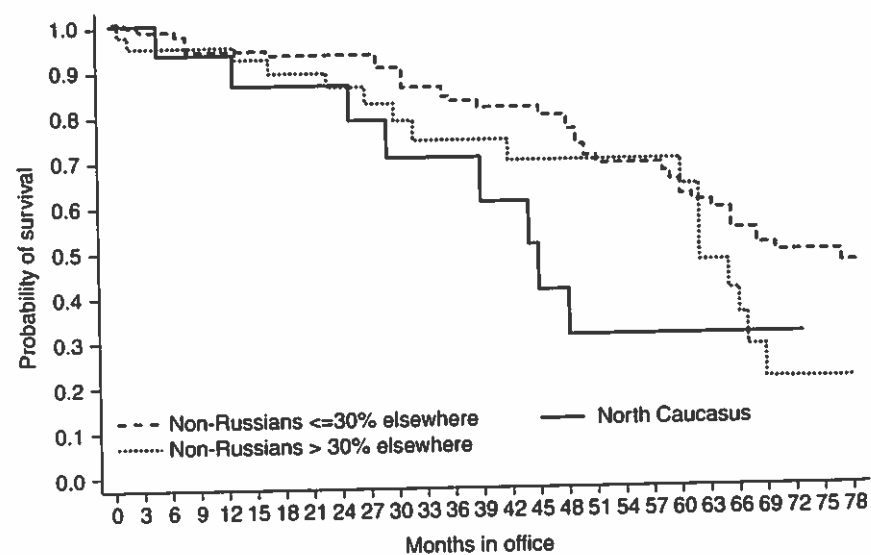


Figure 3.6 Survivor function for gubernatorial tenure, by regional location and ethnic composition.

of non-Russian ethnicity and electoral deference once the Kremlin's relationship with highly deferential and highly non-Russian regions is controlled for.

The results of the full model appear to justify the inclusion of the interaction term. Its hazard ratio is statistically significant with governors from regions producing highly deferential election results and with higher percentages of non-Russians more likely to be removed from office. Interpreting the fixed effects for the interaction term is less straightforward than for the other variables in the analysis. With all other covariates held constant, the *product* of a 1 percent increase in the percentage of eligible voters for the Kremlin-backed candidate and a 1 percent increase in the percentage of non-Russians yields a 0.1 percent $[(1.001 - 1) * 100]$ increase in the likelihood of gubernatorial removal. While the increase initially may seem trivial, since increases in the components of the interaction effect have a multiplicative effect on the term itself, they also have a multiplicative effect on the hazard ratio. In this case, the function for converting the interaction effect into the hazard ratio involves multiplying the product of the two components' increases by a factor of ten $[x * (.01) * (.01) = .001 \text{ where } x = 10]$. So, for example, a 10 percent increase in both components should yield a 10 percent increase in the hazard $[10 * (.1) * (.1) = .1]$.

Once we control for the interactive effect between highly deferential and highly non-Russian regions, the results conform to our original expectations. A 1 percent increase in the number of non-Russians in a region significantly lowers the hazard of removal, doing so by 2 percent $[(.980 - 1) * 100]$. Meanwhile, a 1 percent increase in the percentage of eligible voters going toward the Kremlin's presidential candidate lowers the hazard by 5.1 percent $[(.949 - 1) * 100]$. In the full model, greater population size continues to significantly lower the hazard. Annual change in GRP per capita, however, is insignificant in the full model, although it had proven powerful in the reduced model. In its place, improvements in life expectancy become statistically significant, but only at the .10 level. Ultimately, then, administrative performance, even the economic component, does not appear to have been a determining factor in the removal of incumbent governors. Prior tenure, on the other hand, continues to be determinative. As in the reduced model, every month a governor held office prior to January 2005 increases the hazard by a little more than 0.5 percent, and the effect is significant at the .01 level.

Despite the collinearity between non-Russian ethnicity and our measure of electoral deference, we believe that using the interaction term alongside its components is a reasonable approach for assessing the influences of regional ethnicity and electoral performance on gubernatorial survival in the appointment era. All three variables – the interaction term and its components – have statistically significant coefficients and signs in the expected directions. Still, another way to learn about the effect of electoral performance and gubernatorial survival, while controlling for the percentage of non-Russians from a region, is to use a measure of electoral performance that is not as highly correlated with the percentage of non-Russians. One specific option is to use the percentage of eligible voters supporting the party of power, United Russia, in the most recent national legislative elections. Of course, the two variables are still related, but the relationship is not

Table 3.2 Cox estimations clustering governors based on the president(s) they served and replacing presidential POE with United Russia POE

	Reduced model 1		Full model 1		Full model 2	
	Exp (coef)	Robust s.e.	Exp (coef)	Robust s.e.	Exp (coef)	Robust s.e.
<i>Regional characteristics</i>						
Population (standardized)			8.53E-01*	8.40E-02	8.08E-01*	8.61E-02
Percent non-Russian			1.031***	7.04E-03	9.83E-01*	8.11E-03
<i>Performance</i>						
Crime rate change	1.012	3.10E-02	1.037	5.98E-02	1.022	2.38E-02
Life expectancy change	7.51E-01***	1.40E-02	7.67E-01***	4.44E-02	8.61E-01***	7.55E-04
GRP per capita change	9.80E-01	6.20E-02	9.57E-01	8.54E-02	9.39E-01***	1.56E-02
Recent United Russia POE	9.70E-01	3.60E-02	9.40E-01*	3.67E-02	8.77E-01***	3.00E-02
<i>Enisconed</i>						
Prior tenure (months)			1.004**	1.53E-03	1.005	3.59E-03
Governor's age			1.020	1.27E-02	1.022***	5.83E-03
<i>Interaction term</i>						
Non-Russian × UR POE					1.001***	7.08E-05
N=			149		149	
Likelihood ratio test			38.4		51.49	
p=			6.36E-06		5.65E-08	
Score (logrank) test			42.67		48.58	
p=			1.02E-06		1.99E-07	

Notes

*, **, and *** indicate significance at the 0.10, 0.05, 0.01 and 0.001 levels, respectively, for two-tailed tests. POE = The percent of a region's eligible voters having voted for the Kremlin's candidate, either Putin or Medvedev, in the most recent presidential election.

as strong: the Pearson correlation between non-Russian ethnicity and support for United Russia is 0.649 (significant at the .001 level).

Table 3.2 presents the results of an alternate reduced performance model and two alternative full models where the pro-United Russia percentage of eligible voters in legislative elections replaces the percentage supporting the Kremlin's candidate in presidential elections. Given the failure of the regional percentage of eligible voters for United Russia to attain significance in the new reduced model, we present a specification of the full model with an interaction term and one without it.

As the likelihood ratio and score (logrank) tests reveal, using the percentage of eligible voters supporting United Russia in recent national legislative election produces better fitting models than using the percentage of eligible voters supporting the Kremlin's presidential candidate. Even though the electoral performance variable based on United Russia fails to attain significance in the reduced performance model in Table 3.2, the goodness-of-fit estimates are significant at about the .10 level for a two-tailed test. These same estimates are nowhere close to significant in Table 3.1 for the performance-only model. It is also notable that in this estimation, improvements in relative life expectancy significantly reduce the likelihood of removal: a 1 percent improvement in life expectancy relative to the national average yields a 24.9 percent drop in the hazard.

The second equation in Table 3.2 represents our first alternative estimation of the full model. This version uses the percentage of eligible voters supporting United Russia in the most recent national legislative election and the percentage of non-Russians in the regions without an interaction between them. Not only do the goodness-of-fit estimates emerge as extremely significant, but many of the explanatory variables behave as expected. Once again, governors in regions with improvements in life expectancy rates experience significantly lower hazard rates. Also as expected, governors in regions with higher electoral support for United Russia in the most recent national election enjoy lower hazards. Although the relationship is significant only at the .10 level for a two-tailed test, a one-point increase in the percentage of eligible voters backing United Russia reduces the hazard of removal by 6 percent. Meanwhile, governors with longer prior tenures continue to experience higher hazard rates, as do governors of regions with larger non-Russian percentages. Given the reversal of the latter relationship in the full model presented in Table 3.1, our final model tests for the possibility of an interaction effect between highly non-Russian and highly deferential regions.

The final model in Table 3.2 not only performs better than any previous model, it also supports the finding from Table 3.1 that governors of largely non-Russian and highly deferential regions are at greater risk than governors where only one of these characteristics is at play. Again, since our previous work has shown that Russia's more electorally deferential regions are in the North Caucasus, one could interpret this finding as indicating that the Kremlin has used gubernatorial appointments to assert its control over this traditionally troublesome territory. Finally, it is important to note that while both prior tenure and

age appear to increase the hazard of removal, it is age rather than prior tenure that proves statistically significant in this last estimation. A one-year increase in a governor's age is associated with a 2.2 percent increase in the hazard.

Conclusion

Why are the governors replaced when they are? We have tackled this question using data on all governors of Russian regions who were in office during the period from January 2005 through June 2011. Using statistical techniques known as survival or event-history analysis, we examined the tenures of those who left the governorship during this period as well as those for whom we do not know when their tenure will end, because they remain in office at the end of the period we study. Although the Russian president changes from Putin to Medvedev during this period, the two are closely allied and represent a single presidential administration. Thus, the patterns we find over the six and a half years shed light on the Kremlin's strategies and its relations with regional leaders.

We find that when governors are replaced stems from a combination of factors: the region's size and ethnic composition, the governor's age and aspects of the governor's administrative and political performance. Advancing age makes replacement more likely. Governors of populous regions face a lower hazard of being replaced, *ceteris paribus*, as do governors of regions with higher proportions of ethnically non-Russian residents. Regions experiencing relatively good performance in terms of life expectancy and economic growth give their governors a degree of protection from removal. Governors able to provide the Kremlin with strong support for the ruling party in federal legislative elections also face a reduced hazard of losing office.

These findings provide support for an image of Russia's gubernatorial replacement process as a political process. Federal law gives the Russian president the upper hand but not political *carte blanche*. Power plays and some form of bargaining must underlie these patterns, with some governors finding themselves closer to the enviable position of Shaimiev while others receive some version of Kolesov's treatment.

Appendix 3.1: Data sources and variable construction

Our information on the names and tenures of the regional leaders comes from Rulers.org (2011), modified and augmented by media reports from a variety of sources. The governors' birthdates are taken, when possible, from the official website of the governor or the regional executive branch, augmented as necessary from other sources. Data on regional population size, gross regional product, crime rates and life expectancy all come from *Regiony Rossii* (Russian Federal State Statistics Agency various years). Data on the ethnic make-up of the regions come from the 2002 census (Russian Federal State Statistics Agency 2005).

Our measure of the governor's political performance is based on federal election results. We calculate the votes received by the Kremlin's candidate or party

as a percentage of the total *eligible* voters in that region. Data on regional voting and number of eligible voters come from Golosov (2008a). The Kremlin's candidates were Putin in 2004 and Medvedev in 2008. The pro-Kremlin party was United Russia in 2003 and 2007.

Using the percent of all eligible voters is a way to incorporate both high vote totals and high levels of turnout. Regions that produced high turnout were doing the Kremlin a favor both because some of Russia's federal elections required certain turnout levels to be valid and to enhance the legitimacy of a victory. From 2003–2008, achieving high levels of turnout was a stated aim of the Kremlin. In some elections in the 2000s, quite a few regions produced turnout above 80 percent and, among those voters, pro-Kremlin totals also above 80 percent. Ingushetia, for instance, reported 98 percent voting for Putin in 2004 with 96 percent of the republic's eligible voters turning out. Clearly, totals of this sort cannot reflect public choice, whatever the level of Putin's popularity. By contrast, take Orenburg Oblast. Its turnout of 62 percent was at the median for the regions. It gave Putin 59 percent of the votes, a dominant victory in most settings but well below the mean. Calculating the votes for the Kremlin candidate or party as a percent of all eligible voters in the region is an arithmetically simple way to allow both voting and turnout to influence the region's score. Ingushetia's score on the measure of pro-Kremlin votes as a percent of all eligible voters in that election was 94.4. Of all eligible voters in Orenburg, by contrast, Putin received 37 percent. For all the regions in 2004, pro-Putin votes as a percent of eligible voters ranged from 30.5 percent to Ingushetia's 94.4 percent. The mean was 47.8, and the median 42.9. (The median is much lower because a few regions have very high scores.)

Our measures of the pro-Kremlin percent of eligible voters, calculated from published election results, correlate well with experts' ratings of the different regions' degree or absence of democracy. The Carnegie Moscow Center gathered both quantitative measures and expert evaluations of each region's democratic characteristics on numerous dimensions (Petrov and Titkov 2008). The percentage of eligible voters is strongly correlated in the expected direction with all three Carnegie measures in every election from 2003 to 2008.

Acknowledgments

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Notes

- 1 Following large-scale protests against fraud in the December 2011 legislative elections, the Kremlin announced that gubernatorial elections would be brought back.
- 2 Those in office in January 2005 continued in office until the end of their term, when they needed a presidential nomination to be reappointed. They also had the option of requesting an expression of confidence from President Putin prior to their term expiring. Those who sought and received it began a new four-year term immediately.

- 3 Future research may wish to consider whether the means of dismissals are correlated with their timing. Turovskii (2010b, 61), for example, distinguishes between "gentle" and "harsh" procedures for removing a governor.
- 4 Information on the sources of all our data is in the Appendix.
- 5 On such bargaining in the Yeltsin period, see Solnick 1996; Filippov and Shvetsova 1999; Treisman 1999; Alexseev 2001; Söderlund 2003.
- 6 The onset of the economic crisis falls too close in time to the start of the Medvedev presidency to be able to treat his tenure in office as a time-related factor. Medvedev began his presidency in early May of 2008, and only a few months later the economic downturn began. Although we derive our expectation of more frequent replacements over the last three years from the country's economic problems, Medvedev occupying the presidency might also be relevant. We cannot, though, disentangle the two.
- 7 A different way of measuring regional importance to the Kremlin would stress contribution to the national economy. Regions' population sizes are highly correlated with their gross regional product (Kendall's tau-b=.62). We opt to employ population because a few resource-rich regions such as Khanti-Mansiisk rank very high in gross regional product despite their small population size. Other than their resources, there is little to suggest that such regions are of high importance to the national leadership.
- 8 The three governors who died in office are Mikhail Yevdokimov of Altai Krai, Viktor Shershunov of Kostroma and Igor Yesipovsky of Irkutsk.
- 9 Valerii Kokov of Kabardino-Balkaria.
- 10 These governors are Gennady Savel'yev (Komi-Permyak), Boris Zolotarev (Evensk), Oleg Budargin, (Taimyr), Valery Maleyev (Ust-Orda), Bair Zhamsuyev (Agin-Buryat) and Oleg Kozhemyako (Koryak).
- 11 This neglects a governor's time in office prior to the appointment era. The hazard of being fired by the president only begins in 2005, and that is what we seek to explain. We do, however, use length of time in office prior to 2005 as an explanatory variable below.
- 12 We also have data on the percentage of eligible voters in a region tallied as supporting United Russia in the most recent national legislative election preceding each governor's dismissal (or June 2011). The results of the analysis with that variable are presented in Table 3.2.
- 13 For cases where data are missing for the governor's last year in office, we use data from the most recent year available during the governor's tenure.

4 Why do political systems become party systems?

Addressing a cross-national puzzle through subnational survey data

Henry E. Hale and Timothy J. Colton

There is a massive literature – and a whole section of the American Political Science Association – devoted to the study of political party systems. It explains why parties and systems of parties take different forms under different conditions and explores the implications for everything from economic performance to the quality of representation. This literature tends to concur that party systems are very important, both for the working of democracy and the stability of autocracy (Schattschneider 1942; Huntington 1968; Geddes 1999). Yet the fundamental question of why we have party systems at all is rarely posed. In democracies, the existence of *some* kind of party system is usually taken for granted, while in autocracies, research has focused mostly on the effects of ruling parties on regime stability.¹

Micro-level research utilizing subnational variation has much to offer in answering the "why parties" macro-question. We illustrate here how this is the case through a focused comparison of survey results targeting district-level parliamentary contests in two Russian regions during 2003, the last year such elections were held in that country. We take advantage of Russia's emergence from the Soviet Union's single-party rule and an electoral landscape pitting party-affiliated candidates against nonparty candidates as well as against one another. This affords the rare opportunity to compare how partisan and nonpartisan candidates connect with the electorate during a crucial period of regime transition when it was not yet clear whether or how parties would ultimately dominate the emerging system. This comparison further allows us to test the widespread assumption that the reason party systems emerge is that parties better join voters to candidates for office. By comparing results across regions, we can gain leverage on the generality of the findings while holding constant other potentially confounding factors. We conclude that nonpartisan candidates were perfectly capable of doing what partisan candidates could, but that parties do appear to have helped candidates do some things slightly better, supporting the idea that a partisan advantage can explain why political systems so often become party systems.