

Post-Soviet Developmentalism and the Political Economy of Russia's Electricity Sector Liberalization

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Abstract Observers of Russian state market relations typically consider the state as an entity engaged in creating rent-seeking opportunities for bureaucrats or powerful economic interests. The trajectory and outcomes of electricity sector reforms demonstrate the limits of this perspective and serve to highlight a developmental strand in Russian economic policy, which I call post-Soviet developmentalism. I found that post-Soviet developmentalism is key to understanding the patterns of market institutions that have emerged in the newly liberalized electricity sector and that they cannot be adequately explained if the state is largely seen as a predator or as captured by oligarchic interests. A close analysis of the institutional underpinnings of new electricity markets suggests that they were shaped in political bargains, in which the government sought to enlist Russia's oligarchic conglomerates for its modernization agenda and developmental priorities. The paper links this discussion to three sets of theoretical literatures: It speaks to the debates on the post-Soviet transition, more broadly to the political economy of market reform, and finally, it addresses the developmental state literature.

Keywords Market reforms · Post-Soviet transitions · Market institutions · Developmental state · Electricity liberalization · Industrial geography

Introduction

After a period of relative neglect during the zenith of the liberal development paradigm, theories about economic development again recognize the central role of the state, institutions, and developmental policies.¹ Markets cannot function without institutions and liberalization in the context of globalized markets entails “more

¹Sometimes called the modified or “augmented Washington consensus” (Rodrik 2006; p. 978).

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rules” and effectively amounts to re-regulation, rather than deregulation (Vogel 1996; Snyder 1999, 2001).² What, then, is our understanding of the political dynamics that underpin the emergence of institutions during liberalization generally and in the post-Soviet context in particular?

While the liberal development paradigm elevated a set of universally applicable recipes as essential for economic development, more recent political economy literature has returned to national and regional traditions of explaining the formation of institutions during liberalization. It is increasingly accepted that one model does not fit all and that historically rooted political dynamics shape institutional outcomes.³ For the analysis of the politics of market reform, this has meant that regionally specific dynamics dominate the political economy literature: Parties and partisan politics are emphasized in the institutional transformation in Latin America, for example, and Western and Eastern European research focuses on the interplay between EU directives and national political dynamics.

In Russia, however, parties and international organizations have seen their influence dwindle during the Putin years, just as the pace of institutional reforms has picked up. What are the relevant political dynamics that have shaped institutional reforms? For two related reasons, this question remains curiously unaddressed. Firstly, the political economy literature on Russia still tends to compare “real life” institutions with a stylized version of institutional best practice in established capitalist economies. As a result, Russia watchers end up underemphasizing structural changes; Russia’s institutions are still generally seen as underdeveloped (Gurieiev and Zhuravskaya 2010). Secondly, statist policies are often discounted as distorting economic incentives and thereby preventing the emergence of efficient market institutions. President Vladimir Putin’s economic policy is usually interpreted along these lines, and the Russian government is seen either as a predator or as captured by oligarchic interests.

The core theoretical argument of this paper is that these views neglect an important aspect of Russian economic policy, which in turn hinders our understanding of the process by which institutions were created during market reforms. Closer attention to the Russian state’s modernization agenda, its economic development strategies and priorities, and finally the developmental bargains struck with large conglomerates are indispensable to understanding the patterns of emerging market institutions in Russia.

I focus on the politics of institutional creation in Russia’s newly liberalized electricity sector—“power politics.” The question the paper specifically addresses is the following: How does the political context of post-Soviet Russia explain the emergence of a particular set of institutions in newly created electricity markets? The main goal is to identify the relevant political bargains that have shaped the institutions of the electricity sector during recent infrastructure reforms. To presage the conclusion, I found that institutional outcomes rest on a particular type of bargain between the government and Russia’s powerful economic conglomerates. The paper demonstrates that new market institutions were the result of the Russian state enlisting conglomerates for its developmental agenda, which I call post-Soviet developmentalism.

² The experience of post-Soviet countries has done much to confirm the axiom that economic development is essentially an institutional transformation, first formulated by Douglass North (1981, 1990).

³ See Rodrik (2007, 2008) for example.

Post-Soviet developmentalism is a form of economic planning that charts a region's integration into domestic and international markets. At different levels of government, these strategies varied greatly, relying on a wide variety of policy tools: industrial policy, measures intended to stimulate high-tech sector growth, as well as seminars designed to instruct citizens on how market economies function.⁴ Infrastructure and energy subsidies have been among the most important tools of post-Soviet government planning.⁵ During the liberalization of the electricity sector, this strategy led Putin to selectively accommodate the demands of different oligarchic conglomerates, in return for their contribution to specific goals for regional development. Because these developmental bargains were region specific, they shaped the emerging institutions of the electricity sector differently across Russia.⁶ A focus on the government's developmental agenda can explain situations that remain puzzling to dominant views of market reforms in Russia, such as complicated combinations of liberal and illiberal elements that have appeared during the post-Soviet economic transformation. If the state is seen as a predator or an entity captured by oligarchic interests, these combinations make little sense and observers tend to overemphasize illiberal elements and lack of reform.

In addition to challenging prevailing views about the Russian state, my analysis of market institutions in the electricity sector contributes to the broader developmental state literature by drawing attention to inherited industrial geographies and their influence on spatially patterned development strategies. A core element of Putin's developmental agenda was to designate a few large companies as "national champions," making them the beneficiaries of various forms of state support and equipping them to compete internationally while creating jobs domestically. This strategy preserved elements of Soviet-era industrial geography and relationships, which in turn meant that they became an important part of the state-oligarch bargains in post-Soviet Russia. They influenced what could be called "pre-contractual" elements of state-oligarch bargains (Lie 1997, p. 349): who sat at the bargaining table in the first place, what were they asking for, and what did they provide in return? We will see, for example, that depending on the industrial geography of a region, conglomerates with different interests vis-à-vis the electricity sector (energy versus industrial conglomerates) shaped the institutional underpinnings of electricity markets. The literature on the new or "flexible" developmental state has updated the developmental state model in the context of globalized knowledge economies but tends to draw on evidence from "new" sectors and industries, such as IT and biotechnology. While confirming their modifications of the original developmental

⁴ The latter might be a particularly Russian strategy; for a reference to it, see "О рынке расскажут бесплатно," *Vostochno Sibirskaiia Pravda*, September 2, 1992.

⁵ I am relying on a strategy document by the Ministry of Regional Development, "Концепция совершенствования региональной политики в Российской Федерации" [*Kontseptsia*]. The *Kontseptsia* is a document that lays out the principles of regional development in general and for each of the seven Federal Okrugs, approved annually by Presidential Decree. These documents are available on the Ministry's website, <http://www.minregion.ru>. For a reference to the importance of infrastructure, see *Kontseptsia 2008*, p. 4.

⁶ Of course, the argument stops short of claiming developmental considerations were overarching concerns in all government–business interactions. The notorious proceedings against Mikhail Khodorkovsky during Putin era and the infamous loans-for-shares deals, for example, plainly had very different aims, well documented elsewhere.

state model on the whole, the evidence from the Russian electricity sector also prompts us to keep in mind “old” industries and infrastructure sectors, which continue to matter in most economies even in the age of globalization and post-fordist production.⁷

The paper proceeds as follows: In the first section, I outline the outcome of electricity sector reforms and the sector’s new institutions, which present a puzzle for the dominant approaches to post-Soviet political economy. New institutions broadly form a triptych, with European Russia, Siberia, and the Far East, each emerging with characteristic institutional structures that underpin electricity production and distribution.⁸ I then go on to show that neither the dominant paradigms of the literature on market reforms in Latin America and Western Europe nor the approaches to post-Soviet political economy can account for the cross-regional variation in institutional outcomes. They also fail to explain the distinctive combinations of liberal and statist elements in each of the three sub-national regulatory regimes. Finally, I detail how an understanding of post-Soviet developmentalism and the developmental bargains the state made with leading conglomerates can illuminate the distinctive institutional patterns in the newly created electricity markets. The concluding section discusses the broader relevance of my argument, for other sectors of the Russian economy and, more broadly, for recent work on the developmental state.

The argument put forth here is based on over 65 interviews with experts in the Russian electricity sector conducted between 2006 and 2008 in three Russian cities (Moscow, Irkutsk, and Vladivostok),⁹ in-depth research of Russian regional and national news media dating back to the early 1990s, an unpublished data set on electricity tariffs, and an original compilation of data on ownership of electricity assets after the most recent round of privatizations.¹⁰ On the whole, the paper focuses on the transformation of the electricity sector up to 2008 (when the state-owned electricity monopoly ceased to exist); if the situation has changed in relevant ways since then, this is mentioned in the text.

Outcomes

Initially, renewed attention to the role of market institutions tended to compare developing countries’ institutions with “best-practice” models based on stylized

⁷ Herrigel (2010, p. 4) points out that the “old” economy not remains important, but what used to be “old” sectors in fact routinely rely on new technologies and are tightly linked to “new” sectors.

⁸ This broad division into three different, geographically situated categories of reform trajectories and outcomes was first brought to my attention by a veteran electricity sector insider (interview #39 with electrical engineer/electricity sector expert, Vladivostok, 20071004). Within each of these sub-national, but supra-national zones, there are further differences that could be explored in a more fine-grain analysis. I conducted fieldwork in Moscow, Irkutsk oblast, and Primorsky Krai; these regions are representative of the larger geographical regions they are situated.

⁹ Interviews are semi-structured conversations, typically lasting between 45 and 90 min. See “Appendix 1” for a list of interviews.

¹⁰ I rely on a data set on electricity tariffs obtained from the UES Strategy Committee for Reforms in December 2006; it contains the tariffs set by all Regional Energy Commissions between the years 1995 and 2005, broken down by household, rural, and industrial prices. As far as I know, these data are not publicly available. I refer to it as “UES Tariff Data” in what follows.

version of institutions in established capitalist economies.¹¹ Mounting evidence suggests that this approach may be less useful than attention to institutional constellations that grow out of a particular political and historical context; the argument that there may be several and diverse state strategies to the problem of “development” is becoming more widely accepted (Rodrik 2007 and 2008, p. 3). Gerschenkron is once again fashionable and heterodox approaches have successfully challenged, if not triumphed over orthodox development economics. Much of this literature is interested in how institutions shape growth and development outcomes, mostly because institutions are presumed to be relatively stable.¹² In the post-Soviet context, however, institutions have been changing dramatically over the last 15 years.¹³ What are the relevant political dynamics that have shaped market institutions?

While a number of excellent studies trace the emergence of important market institutions in Russia,¹⁴ the assessment that these institutions suffer from “unusually low institutional development” has also often impeded the analysis of how they emerged (Guriev and Zhuravskaya 2010). The point of this study is to look at a set of market institutions as outcomes, rather than assessing their divergence from market institutions elsewhere.¹⁵ I focus on the institutions of the newly liberalized electricity markets and the politics that shaped them. Every narrative of Russia’s electricity sector starts with “UES” (United Energy Systems, or *Единые Энергетические Системы*), the state-owned electricity monopoly. UES had been the guarantor of heat and power since the early days of Soviet Union and was also at the heart of Russia’s electricity sector transformation. In early 1999, an analyst remarked that UES still looked more like a ministry than a company (Semenenko 1999).¹⁶ Electricity production was a vertically integrated, predominantly state-owned monopoly, centrally orchestrated by a ministry that regulated and administered production and investment decisions. Despite powerful political opposition, barely 10 years later, by 2008, liberal reformers led by Anatoly Chubais largely succeeded in realizing their vision of change: an electricity industry with private actors competing for profits with a set of new regulatory institutions in place.

Before turning to the particularities of “power politics,” I want to briefly place the liberal reforms in the context of Putin’s agenda for Russia, who is better known for undercutting democratic institutions and centralizing political power than for the economic transformations that took place during his time as president. A key aspect of Putin’s agenda was to break the autonomy of regional governors and eliminate their influence on federal level economic strategies. In the Yeltsin-era regional governors and oligarchs were the main challenges to the authority of the state,

¹¹ See, for example, World Bank (1997).

¹² Differences in institutional outcomes are often the explanatory variables, accounting for variation in growth rates and innovation across regions. John Zysman’s (2007) work is one among many examples.

¹³ Barnes and Markus note this, for example Barnes (2006) and Markus (2007).

¹⁴ See, for example, Woodruff (1999), Barnes (2006), and Markus (2007).

¹⁵ While economists tend to compare Russian market institutions with a best-practice models, political economy approaches in a sociological tradition have been interested in tracing their emergence. Barnes identified studies of institutions a priority (Barnes 2006). Hanson (2003) also points out that the post-Soviet context is a unique opportunity to study the origin of institutional arrangements.

¹⁶ A similar statement was made to describe Dal’energo, the regional electricity company in Primorsky Krai—“it looked more like a government agency than a company for most of the 1990s.” Interview #33 with journalist covering electricity sector, Vladivostok, 20070921.

limiting its ability to regulate the economy and control the use of natural resources. In the electricity sector, alliances between regional governors and oligarchs challenged federal directives and federal level monopoly regulation.¹⁷ I have shown elsewhere that the political centralization under Putin and the elimination of regional governors' influence on the electricity sector were in fact a key prerequisite for the implementation of liberal reforms (Wengle 2007, *forthcoming*).¹⁸ In order to create and regulate new markets, the Putin government had to undercut sub-national challengers. In other words, Putin's strategy in the electricity sector might be summarized as "centralize to liberalize." Liberalization was initially tightly linked to the centralization of political authority. President Putin and the liberal reformers in his government both declared that they wanted to create *one* market, with *one* set of rules. What is important for the purpose of this paper is that in the electricity sector, centralization did *not* lead to the creation of one set of rules for new markets but to the diversity of institutional outcomes evident today. Why do we see cross-regional variation, despite the strengthening of the central government and its ability to force oligarchs to comply, amply demonstrated during the state's crusade against Yukos?

I found that oligarchs continued to influence electricity sector reforms but that the site of the bargaining shifted from the regional to the federal level after the centralization of political power. As regional governors had previously done, the federal government under Putin continued to enlist conglomerate's assistance for broader social and developmental aims, rather than for the narrow goal of creating rent-seeking opportunities. It was this type of state-oligarch bargain that shaped electricity sector reforms and institutional outcomes. "Failure of existing accounts to explain new institutional patterns" section below will elaborate the bargains forged by the Putin administration with different types of oligarchs in different regions. I focus on the bargains between the federal government and the oligarchic conglomerates; the dynamic relationship both these parties had with regional authorities receive less attention.¹⁹

The remainder of this section identifies the cross-regional differences in the institutional architecture of the electricity that have emerged over the course of liberal reforms. I examine two parameters of the electricity sector's institutional infrastructure in detail: patterns of public–private ownership and energy subsidies, which I call ownership and subsidy regimes. In a country with long, cold, and dark winters and energy inefficient industries, the reorganization of these two elements of the sector affected everyone via the cost of living and the cost of producing.²⁰ These

¹⁷ Rutland and Woodruff have drawn attention to the electricity sector as an arena for the center-region conflicts in the 1990s (Woodruff 1999; Rutland 2005a).

¹⁸ An over-time comparison of two reform attempts supports this argument: the first attempt to reform the sector, in 1997, largely failed to effect change, while a second attempt, beginning in 2002/2003, marked the beginning of the current far-reaching transformation in the sector (Wengle 2007 and *forthcoming*).

¹⁹ This is entirely a result of the paper's focus on the reforms that were implemented between 2004 and 2008. Regional authorities were key actors in shaping earlier attempts to reform the sector.

²⁰ For a study on the energy inefficiency of Russian industries, see Carbajo and Fries (1997). For a survey on how household consumers are affected by rising electricity tariffs, see a survey by FOM (Фонд Общественное мнение) conducted in 2005. Almost two thirds (57%) of respondents in a 2005 survey reported that rising electricity tariffs "negatively affect their lives." Of this group, 39% reported that they adjusted spending habits as a result of rising utility prices. Available on the FOM website, http://bd.english.fom.ru/report/cat/humdrum/zhilicshno-komunalnoe_hozyaistvo/ed053823.

aspects of reform have been particularly contested in Russia's electricity sector, but they also stand in for two big issues that are at stake in infrastructure liberalization everywhere—price and ownership. Ownership and subsidy regimes each consist of multiple types of subsidies and ownership, which will be detailed further in the pages that follow.

In a short preview, cross-regional differences in Russia's new electricity sector follow these broad patterns: (1) In European Russia, most generation assets have been privatized and newly liberalized pricing mechanisms enable owners to profit from investments in technological upgrades. The energy behemoth Gazprom sought these ownership and subsidy regimes; it allows the fuel provider control over income streams from domestic electricity production that is based on subsidized fuel inputs. (2) In Siberian regions, by contrast, where industrial oligarchs dominate, ownership is only partly private and pricing mechanisms allow for electricity to be sold below national market prices to industrial customers. Electricity intensive industries, aluminum companies in particular, sought this outcome because it effectively maintains a separate low-cost zone that helps keep their production costs low, enhancing their international competitiveness. (3) In Far Eastern regions, where interests of electricity companies have outweighed both upstream fuel providers and downstream industries, generation assets have not been privatized and electricity prices remain regulated. This outcome protects Far Eastern electricity companies from low-cost Siberian competition and allows for the continuation of direct government subsidies that these companies have relied on for years (Table 1). Before turning to European Russia, Siberian, and Far Eastern reform outcomes, I will briefly introduce the trajectory of change in the ownership and subsidy regimes in general terms.

Ownership Regimes

It is well-known that privatization in Eastern Europe and the former Soviet Union has been vastly more complex than anticipated: Weakly established property rights and the lack of institutions to value assets were only the most visible complications of privatization.²¹ The privatization of electricity assets in post-Soviet Russia was no exception. Instead of a simple transfer of property rights from the state to private companies, it involved a long process of shifting, overlapping, and conflicting ownership claims. What is more, privatization outcomes in Russia have been highly political, in the sense that the winning bidder's political connections were decisive for the award of ownership rights.²² The privatization of electricity sector assets was also often “non-transparent, much like other privatizations” and “marred by numerous examples of unfair, illegal or non-transparent privatization deals.”²³

²¹ Landmark studies on privatization are Solnick (1999), Verdery (2003), and Barnes (2006). An example from Irkutsk to illustrate the scale of privatization: in Irkutsk oblast 1608 enterprises had been privatized by January 1, 1994, “Иркутская область: шаги приватизации.” *Vostochno Sibirskaja Pravda*, January 25, 1994.

²² This remained a relatively constant feature of property and privatization battles, even as other aspects of ownership struggles changed over time, documented by Barnes (2006). For an example of a post-Soviet case outside of Russia, see Spector (2008).

²³ First quote: interview #1 with electricity sector expert, international financial institution, Moscow, 20060721. Second quote, Burgansky (2005).

Table 1 Ownership and subsidy regimes

	Ownership and subsidy regimes*	Development bargains
European Russia	Power plants privatized Subsidies generally decrease	Government and Gazprom (upstream energy conglomerate)
Siberia	Power plants privatized Industrial subsidies continue	Government and Rusal (downstream industrial conglomerate)
Russian Far East	No privatization Subsidies continue	Government and electricity companies

*The types of subsidies that decreased or continued varied across European Russia, Siberia, and the Far East

The story of the electricity sector's privatization begins in the early 1990s. Deeming electricity a strategically important infrastructure sector, the Yeltsin government initially tried to keep control of the bulk of power plants and grids—with varying levels of success across regions. While a presidential decree passed in 1991 reserved majority stakes in most regional electricity companies (the so-called *Energos*) for the federal government, minority stakes have been sold and resold since the mid-1990s.²⁴ Over several rounds of property redistribution, starting with the “spontaneous privatizations” in 1990/1991 and later during the 1994/1995 “voucher privatization,”²⁵ conglomerates were often especially interested in select electricity assets—the “missing links” in their vertically integrated production chains.²⁶ During the most recent round of privatizations, between 2005 and 2008, the federal government sold off most of the majority stakes in power plants it had reserved since the 1990s. Modeled on the US electricity market, liberal reformers initially wanted to create “thousands” of new private electricity companies to optimize competition between generators.²⁷ Instead of thousands, a mere 20 new private generation companies were created. We will see that most of the new owners are Russia's oligarchic conglomerates.²⁸ The liberal logic of creating bustling competition among private power generators was apparently subordinated to another logic of asset redistribution—that of selectively awarding ownership to different conglomerates with large shares in valuable power plants.

²⁴ Presidential Decree No. 922. A few important regions defied this Decree, and the central government was unable to retain a majority stake in a number of *Energos*: Irkutskenergo, Tatenergo, Bashenergo, and Novosibirskenergo became independently owned.

²⁵ Contrary to its stated intent, however, voucher privatization actually facilitated the concentration of ownership. The voucher privatization of 1993–1994 and how it failed is extensively documented (Freeland 2000; Hoffman 2003; Barnes 2006). Privatization battles were also a recurring theme in my interviews: Interviews #54 with businessman, Irkutsk, 20071120 and interview # 47 with businessman in Vladivostok, 20071017.

²⁶ This tendency to build vertically integrated conglomerates has been widely observed, for example, Rutland (2009) and Volkov (2008). According to Volkov “target selection for hostile takeovers was governed by the logic of vertical integration.” This applies to the electricity sector as well, according to interview #9 with electricity sector analyst at financial institution, Moscow, 20061008. For a reference to this strategy, see also “Кто правее, Есапов или Чубайс?” *Komsomol'skaia Pravda*, November 13, 2002.

²⁷ Chubais, interview in Mellow (2003).

²⁸ While I focus on Russian conglomerates, a number of other actors have at times successfully secured ownership, including regional governments and foreign investors.

Subsidy Regimes

A second contentious aspect of electricity sector reforms was tariffs, what sector insiders polemically refer to as the “price of power.” The question “who has to pay how much” for various energy resources—gas, oil, electricity—and the mechanisms to determine price are highly political.²⁹ “Tariffs are the most controversial part of reforms,” determined one sector insider.³⁰ Just as with ownership struggles, multiple political interests were embroiled in conflicts over subsidies.³¹ For the liberal reformers, the introduction of wholesale markets and price liberalization were the ultimate aims of reforms, a *sine qua non* for the functioning of new markets. Reformers were adamant that allowing price signals to determine allocation, or “letting prices speak” was crucial.³² Reformers wanted to introduce the discipline of the market to the electricity sector, by teaching customers the right behavior of markets—“teach how to pay” and “teach how to economize.”³³ In contrast, opponents of UES reforms, including advocates of regional autonomy, industrialists, and a broad coalition of other opponents, wanted to keep more control of tariffs, to be able to use electricity subsidies as a policy tool.³⁴ During the 1990s, the most important opponents of price liberalization were regional governors, who used electricity tariffs as a tool to subsidize both household and industrial electricity consumers.³⁵

Over the course of Russia’s reform, both proponents and opponents of price liberalization have shaped the emergence of what I call subsidy regimes. Three different types of subsidies constitute subsidy regimes: cross-subsidies benefitting households, industrial subsidies, and direct budgetary transfers. Household consumers were beneficiaries of the so-called cross-subsidies: Industrial consumers are charged more than household consumers, even though the cost of providing electricity to households is higher.³⁶ As wages lost their real value during inflation, while the cost of living increased, households were particularly sensitive to increases in utility charges.³⁷ Not

²⁹ The price at which energy is sold to consumers is at the core of the Kremlin’s energy politics—domestically and internationally. According to a study by the OECD in 2002, estimates range from 5% of GDP to 30% of GDP if energy prices are compared with OECD market prices (Litwack and Thompson 2002; Tarr and Thomson 2004). More references to subsidies in various energy sectors, see Solanko (2011) and Sidorenko (2011) and a reference on Gazprom website (<http://gazpromquestions.ru/?id=35#c251>). For household subsidies in the electricity sector in particular, see Yudashkina and Pobochoy (2007).

³⁰ Interview #1 with electricity sector expert, international financial institution, Moscow, 20060721.

³¹ I focus here on three broad types of subsidies—cross-subsidies, industrial subsidies, and budgetary transfers—that play a role in the political bargains in the electricity sector, although far more subsidy categories exist.

³² According to Khlebnikov (2005).

³³ First quote in “Надо научиться платить,” *Utro Rossii*, February 10, 1994. That people should be “taught how to pay,” was a remark by the Minister of Energy, Yuri Shafranik. Second quote in “Экономить тепло и свет,” *Utro Rossii*, January 19, 1994.

³⁴ Opponents in low cost regions also resisted the “equalization” of prices across Russia, as we will see below.

³⁵ See, for example, Litwack and Thompson (2002), Rutland (2005a), and Woodruff (1999).

³⁶ One observer calls cross-subsidies a “terrible disease,” interview #39 with electrical engineer and electricity sector expert, Vladivostok, 20071004.

³⁷ Electricity bills are paid as part of a consolidated bill for a number of housing related charges—gas, heat, water, and repair services (the so-called *kvarplata*). It is not uncommon for low-income households to spend a high proportion, sometimes more than half of their income on the *kvarplata*; references to this are common in regional newspaper, for example, “Почем литр воды? О кварплатах и тарифах на коммунальные услуги,” *Vostochno Sibirskaiia Pravda*, September 14, 1995 and interview #40 with pensioner, Vladivostok, 20071004.

surprisingly, the promise to keep the utility prices stable or even to lower payments ahead of elections was a popular strategy for politicians. Governors would decrease tariffs before gubernatorial elections, just to increase them after they had been reelected.³⁸ “Cheap electricity was an effective slogan,” noted one observer from the Far East.³⁹ As governors lost their ability to control household tariffs, rates for households have generally increased across Russia.

The governors’ ability to set prices for industrial enterprises was as important as their control of household tariffs. Industry consumes just over half of Russia’s electricity.⁴⁰ During the 1990s, governors kept lists of industrial customers that were eligible for reduced electricity tariffs—what are usually called industrial subsidies.⁴¹ A place on the list was usually reserved for companies with many employees, but sometimes this privilege was also granted to companies owned by friends and family of the governor.⁴² While governors had regional employment in mind, preferential tariffs were probably also part of the arsenal of favors they could dispense to loyal economic elites. We will see, however, that even after the governors’ hold on the electricity sector declined and tariff liberalization commenced, special tariff regimes for industrial consumers continued to matter in post-reform electricity system.⁴³ A third form of subsidies is referred to as direct budget transfers, which involve cash transfers from the federal government either to regional governments or directly to electricity companies. Even though liberal reformers wanted to abolish subsidies, they persisted in various forms and created different price zones across Russia.

Electricity Sector Outcomes in European Russia

What are the subsidy and ownership regimes that emerged in European Russia? Power plants have been largely privatized, and an energy conglomerate, Gazprom,

³⁸ Yudashkina and Pobochoy (2007) analyze regional tariffs during years of governor elections and find that between 1998 and 2001, regional governors decrease prices in the quarter ahead of elections. As reforms at the center tightened control over regional regulators, this practice became less common. Apparently the governor of Primorsky Krai made a noisy announcement in 2003 that he was lowering electricity prices, but this turned out to be only a temporary measure. Interview #33 with journalist covering electricity sector, Vladivostok, 20070921.

³⁹ Interview #32 with electricity sector economist, Vladivostok, 20070918.

⁴⁰ According to UES’ website, in 2006, the main consumer groups were the following: industrial 53%, residential 23%, transport 11%, service sector 11%, and agriculture 4%, http://www.raoecs.ru/en/info/about/main_facts/show.cgi?str_potreb.htm.

⁴¹ These “lists” come up in conversations and in media coverage. Interviewees tended to mention one or two companies that are certainly on the list; for example, the companies BOR (chemicals) and SPASK (cement) in Primorsky Krai were mentioned as being on the list by several interviewees. Interview #32 with electricity sector economist, Vladivostok, 20070918; interview #33 with journalist covering electricity sector, Vladivostok, 20070921; interview #34 with academic and employee of an electricity company, Vladivostok, 20070923; and interview #41 with journalist covering electricity sector, Vladivostok, 20071005.

⁴² Interview #32 with electricity sector economist, Vladivostok, 20070918 and interview #46 with academic, Khabarovsk, 20071011.

⁴³ Industrial tariffs are often difficult to ascertain, since they are based on informal negotiations, first in the regions and now increasingly at the level of the central government. The special deals for select industrial enterprises are concealed in the average industrial tariff data that are publicly available. As a proxy for likely occurrence of favorable prices, I compare industrial in different *oblasts* with the average prices in the larger supra-regions. If a region has much lower industrial tariff averages than neighboring regions, I take this as a sign that industrial subsidies may play a role (see Table 5 in “Appendix 2”). I confirm this with interview and newspaper data.

emerged as the dominant owner of power plants. Gazprom is overall the largest single owner of power plants and has gained control of the sector's most profitable assets, owning at least 30% of European Russia's power generation companies (see Table 3 in "Appendix 2").⁴⁴ According to recent news reports, Gazprom is merging its holdings with the European Russia's second largest owner of power plants, thus increasing its role in the power sector even further.⁴⁵ Gazprom owns European Russia's most valuable and most profitable power plants and generation companies in Moscow and St. Petersburg, by far Russia's most prosperous regions.⁴⁶

Liberal reformers had long opposed Gazprom's prominence as a new owner. Chubais would have preferred to award ownership to foreign investors who he hoped would bring know-how, capital, and transparency. At least in one case, it came to an open conflict between Gazprom and a foreign company that had been primed for ownership by the liberal architects of reform. The St. Petersburg's generation company (now known as *TGK-1*) was widely expected to be sold to a Finnish company, Fortum, who had been promised a majority stake in the company. Accordingly, it was widely expected that Fortum should receive the large block of shares sold by UES in 2007. Yet it was Gazprom who eventually "won" this auction, having convinced the government that the asset is of "strategic importance."⁴⁷ While Gazprom is undoubtedly Russia's most powerful company, its relationship to the government is one of mutual dependence. It is also probably the clearest example of the blurred boundaries between the state's and the conglomerate's interests. Gazprom has always maintained that it is a profit-maximizing company.⁴⁸ But the company is also often seen as an arm of the Kremlin, rather than an independent actor, mostly notably because of its role in domestic economic policy and international politics and because high-level government officials staff the energy company's board of directors. So, even though most power plants in European Russia were "privatized," in the sense that the government's stake was sold, the ambiguity that characterizes the public/private status of the energy behemoth Gazprom now characterizes the new ownership regime of European Russia's electricity sector. Regardless of Gazprom's status as a semi-statal or a state-owned enterprise, the outcome that I want to stress

⁴⁴ For ownership data, see Table 2 in "Appendix 2". Note that European Russia has a more diverse set of new owners, more so than Siberia and the Far East, because it is more a diverse and larger space. Also informative is a statement by Alexey Miller, Chief Executive of Gazprom, who announced in 2006 "We have acquired assets in the electric power industry. (...) We are receiving already the dividends from these investments, and plan to increase our presence in this sector of the energy business." Statement by Miller, at the *23rd World Gas Conference*, Amsterdam, June 6, 2006. <http://www.gazprom.ru/eng/articles/article19731.shtml>.

⁴⁵ KES holding by Viktor Vekselberg, see Nadia Popova and Jacob Groholt-Pederson (2011). This deal has been discussed since at least 2007, but has been opposed by the more liberal faction of the Putin government as well as by the Russian anti-monopoly commission.

⁴⁶ Gazprom does not own a majority of power plants, but it owns key assets. The reforms created regional and supra-regional wholesale companies; the former are the so-called territorial generation companies (TGKs), and the latter are called OGGs (wholesale generation companies). Gazprom acquired majority stakes in OGG-2 and OGG-6, RFE/RL Newline, September 12, 2007.

⁴⁷ An 18% stake was for sale in 2007. Through a number of assets purchases, Gazprom today controls TGK-1 via a 46% stake (see TGK-1s website, <http://tgc1.ru/>).

⁴⁸ Gazprom's status as a "private" company has changed over the years; the government's stake was around 30% for much of the 1990s but has increased to just over 50% during the re-nationalization of the oil and gas sectors beginning in 2004.

here is that the new dominant owner of electricity assets in European Russia is an energy conglomerate.

Subsidy regimes in European Russia are moving in the direction envisaged by liberal reformers. The number of transactions conducted on the wholesale market has steadily increased, and wholesale electricity tariffs have gradually been liberalized; only 15% of the wholesale market remained regulated by December 2010—down from 95% in January 2007.⁴⁹ Tariffs for both industrial and household consumers have gone up. The most important category of subsidies in European Russia, cross-subsidies, have been reduced (see Table 5 in “Appendix 2”) and are expected to be phased out by 2015.⁵⁰ Comparing industrial tariff data across Russia’s region suggests that industrial subsidies remain concentrated in Tatarstan and Bashkortostan, two regions where Gazprom did *not* gain ownership.⁵¹ With one exception, European Russian regions have not been receiving subsidies in the form of direct federal transfers.⁵²

Electricity Sector Outcomes in Siberia

What is the dominant feature of Siberia’s ownership structure and subsidy regime? As in European Russia, power generation is largely privatized, and tariffs have in principle been liberalized. At the same time, large industrial consumers still enjoy a preferential tariff regime, and a large industrial conglomerate has emerged as the dominant new owners. After the most recent round of privatizations, the aluminum company Rusal controls 42% of Siberia’s electricity production and either a large or a controlling stake in all of the regions hydroelectric plants (see Table 4 in “Appendix 2”). Rusal is the centerpiece of an industrial conglomerate controlled by Oleg Deripaska, one of Russia’s most powerful oligarchs. The second biggest owner of Siberia’s electricity assets is the federal government, having consolidated its shares in Siberian hydroelectric dams in one company, called Hydro-OGK, which owns 20% of Siberia’s power plants.

Aluminum enterprises sought control of power plants because it allows them to control a key input in aluminum production. The consolidation of ownership in the aluminum sector during the 1990s—referred to as the aluminum wars—was exceptionally turbulent.⁵³ One observer noted that during these battles, “the

⁴⁹ See Sidorenko (2011, p. 355) for the reform schedule. The annual report of the Electricity System Administrator (ATS/Администратор торговой системы) gives details on the transactions conducted on the wholesale market, both at free and at regulated prices: *Administrator trgovoi sistemy: Godovoi otchet*, ATS, Moscow, 2010; p. 48 on the increase in transactions at liberalized prices, p. 40 on the decrease in transactions at regulated prices.

⁵⁰ UES Tariff Data. Household consumers still remain protected from price fluctuations on the wholesale market, as they are supplied by so-called guaranteeing suppliers that can purchase power at regulated prices (Sidorenko 2011).

⁵¹ Prices have remained lower in these two regions than in the regional average, and it is also likely that they retain industrial subsidies. These two regions have remained generally more independent than other regions in European Russia. Tatenergo and Bashenergo remained independent of UES and have avoided integration into the new OGKs and TGKs.

⁵² Federal Tariff Service (2004). Arkhangelsk is the region in European Russia that has received subsidies in the form of direct transfers, but these have decreased over the years: from 283 mln R Rub in 2004 compared to 500 mln rub in 2003 and 2002. I have not been able to find data beyond 2004.

⁵³ See, for example, Barnes (2006) and Kramer (2006).

aluminshchiki [aluminum interests] realized that they couldn't exist without cheap electricity."⁵⁴ Indeed, keeping prices low for Siberia's industrial conglomerates became a constant feature of the Siberian subsidy regime. A unique aspect of the Siberian subsidy regime is that prices can be kept low by policies that separate Siberian consumers from other markets. Electricity in Siberia is cheap because it is produced in the region's huge hydroelectric power plants, where the marginal cost of a kilowatt is very low. If prices are low in the region because costs are low, why is this a subsidy? It is an implicit subsidy because low prices depend on intentionally *reserving* Siberian electricity for the large Siberian industrial consumers and not exporting it to the Russian Far East, European Russia, or China, where consumers would pay far more.⁵⁵

UES and liberal reformers had been trying to equalize prices across Russia since the 1990s by creating a national wholesale market, which would lead to higher prices for Siberians. A competitive nationwide wholesale market could allocate electricity to the highest bidder, which would move electricity from energy-abundant to energy-deficient regions and would level out prices. In the 1990s, Siberian governors and Siberian power plants prevented this from happening. They believed that Siberian consumers should benefit from the region's low-cost electricity. The prevailing opinion of Siberian politicians, academics, and electricity sector professionals was that the price level in Siberia should be kept low, by reserving cheap energy for local industries.⁵⁶ In addition to preventing a unified market, Siberian politicians and power plants have selectively granted privileges to a number of large employers. An Irkutskenergo executive describes their relationship to industrial consumers: "we began to reduce tariffs for select consumers in specific ways and under specific circumstances."⁵⁷ In Krasnoyarsk, similar agreements lowered tariffs for the main consumers of electricity in the region—the Krasnoyarsk Aluminum Plants. "Tariffs for them [the aluminum industry] were lowered from the get-go," confirmed one regional observer.⁵⁸

While a wholesale market has been created and prices are liberalized for a segment of transactions, recent reforms have *not* substantially challenged the privileges of industrial consumers. In Siberia, unlike in European Russia, the new

⁵⁴ Interview #60 with energy company executive, Irkutsk, 20071203.

⁵⁵ It may seem paradoxical that wholesale prices are liberalized, while industrial subsidies continue. By this I mean that prices are not directly regulated but that the government and the new owners agree to supply electricity below prices it could fetch on newly created markets—a discount that amounts to a subsidy.

⁵⁶ This position is detailed in *Материалы к энергетической стратегии Сибири*, Novosibirsk, РАН Сибирское отделение, July 1997, chapter 10, p. 102. This is also a recurring theme in regional newspapers, for example, "Дешевой энергии на всех не хватит," *Vostochno Sibirskaiia Pravda*, January 6, 1997.

⁵⁷ In Russian: "Мы начали практиковать снижение тарифов для определенных потребителей, в определенных рамках и на определенных условиях." Sergei Kuimov, *Ekspert*, No.14, April 13, 1998, p. 35. That these agreements were supported by regional administrations is implied and confirmed in interview #60 with energy company executive, Irkutsk, 20071203.

⁵⁸ In Russian: "Тарифы для них [предприятий алюминиевой промышленности] были занижены изначально." "Красноярск пошел по приморскому пути," *Segodnia*, September 12, 1997. The observer also notes that this increased prices for all the other industrial consumers. About two thirds of Krasnoyarskenergo's electricity is produced in the Krasnoyarsk hydro-electric power plant; Krasnoyarsk Aluminum Plant uses all of Krasnoyarskenergo's high-voltage output; *Вестник региональной энергокомиссии Красноярского Края*, January, 2005, p.27.

institutional infrastructure continues to protect large industrial consumers, especially Rusal and industries that the government wants to subsidize. Decisions to subsidize downstream consumers are up to the new owners of hydroelectric plants, Rusal, and the government, due to a feature of the rules of wholesale trading that allows contracts between buyers and sellers outside the wholesale market. As a result, much of the region's power is actually sold below "market" prices (i.e., the price it would get if it were sold to other consumers) to the industrial plants owned by Rusal or to government owned companies (see Table 5 in "Appendix 2").⁵⁹ In 2006, Rusal was reportedly able to "buy electric power at \$0.012 per 1 kW/hr, which [was] so cheap because some of them bought out power stations."⁶⁰ Since then electricity prices for aluminum companies have increased somewhat but remain far below prices in European Russia and below prices paid by aluminum companies internationally.⁶¹ While "the way tariffs are determined for hydro-electric power is not very transparent,"⁶² insiders reported "much of Irkutsk's hydro electric power goes straight to aluminum companies and other big clients, that get a special rate."⁶³ Almost all of Siberia's electricity is sold in the Siberian market and prices remain lower than anywhere in Russia.⁶⁴ Finally, as for cross-subsidies, Siberian regions have not generally had significant levels of cross-subsidization, i.e., industrial consumers were not paying for households. Those regions that did have cross-subsidies tended to reduce them, similar to European regions.

Electricity Sector Outcomes in the Far East

In the Russian Far East, the government maintained ownership and control of power plants and subsidized the sector via direct budget transfers. Unlike the valuable Energos in European Russia and Siberia, Far Eastern electricity companies did not become the target of oligarch's expansion strategy. Despite initial plans to privatize the largest of these companies like any other Energo,⁶⁵ the federal government ultimately retained majority stakes in all of the region's power sector companies. Even though Chubais conceded to the opponents of privatization, he did not want to

⁵⁹ Interview #49 with academic, 20071114; interview #50 with businessman, 20071115; and interview #55 with employee of electricity company, 20071120, all three in Irkutsk. The Russian government has been heavily subsidizing the Siberian railways with discounted electricity rates for years.

⁶⁰ Compared to its global competitors, Rusal pays little for electricity; see, for example, in "Норвежская компания построит завод в России; Если договорится о цене на электроэнергию," *Kommersant*, January 12, 2006. A recent company statement by Rusal notes that electricity prices have gone up due to sector liberalization, but that Rusal's energy costs are small compared to industry average (25% of Rusal's cost, compared to 36% industry average (Deripaska 2011)). Other sources quote even lower tariffs for Rusal. Deripaska's quest to secure low-cost electricity is also often reported in regional and national news; see, for example, "Русский алюминий ищет дешевую энергию," *Kommersant*, November 30, 2001.

⁶¹ Rusal is embroiled in lawsuits, as it challenges Hydro-OGK, the government owned hydroelectric power company's decision to increase prices. These suits and their status are listed on the website of the commercial court, searchable with the case numbers A40-41138/2011 for a case concerning Bratsk Aluminum plant, and A40-41137/2011 for a case concerning Krasnoyarsk Aluminum plant (<http://kad.arbitr.ru/>).

⁶² Interview #43 with electricity sector economist, Khabarovsk, 20071010.

⁶³ Interview #50 with businessman, Irkutsk, 20071115.

⁶⁴ About 95% according to interview #61 with employee of electricity company, Irkutsk, 20071205.

⁶⁵ Interview #43 with electricity sector economist, Khabarovsk, 20071010.

leave the Far Eastern Energos structure unchanged, which would have meant leaving them to be controlled by regional administrations. The Energos of Primorsky Krai and of neighboring Khabarovsk Krai were “de-politicized” by merging them with other Far Eastern Energos, to form one big holding company, EES Vostoka, which is majority owned and controlled by the federal government.⁶⁶

Subsidies in the Far East took the form of direct payments to regional administrations and fuel deliveries for the regional Energos. Unlike in Siberia, where struggles over tariffs and ownership were due to the abundance of resources and the valuable, low-cost hydroelectric generators, electricity in the Far East was scarce for much of the 1990s. It is also the most expensive power in all of Russia, as the technology of Far Eastern power plants was particularly dated and losses were high.⁶⁷ The Far East was also the epicenter of blackouts in the Russian electricity sector. Many Far Eastern Energos lacked sufficient coal supplies to get through winters for much of the 1990s.⁶⁸ This led to widespread electricity outages, which remain fixed in residents’ memory as “dark times.”⁶⁹ Since the early 1990s, the federal government has stepped in with direct budget transfers to the Far Eastern regional governments and by organizing the delivery of diesel or coal shipments.⁷⁰ In a typical intervention from the federal government, a 1997 Presidential Decree promised the “allocation of financial means to be given to Primorsk Krai from the federal budget” as a means to achieve the “normalization of the situation in the heat and electricity sector of the Krai.”⁷¹ Federal budget funds went to Far Eastern Energos to pay off the electricity companies’ and coal mine’s debt.⁷² In addition to

⁶⁶ Far Eastern Energos first merged into a holding company, DEUK in 2001, which later became DVUEK (Дальневосточная энергетическая управляющая компания) and is now called EES Vostoka. The government owns a majority stake in EES Vostoka and controls the company via its board of directors. Russia’s largest coal company, SUEK eventually bought a large share of DEUK as part of its strategy to acquire downstream assets. However, its share in DEK is hardly SUEK’s key to great wealth: Primorsky Krai’s coal reserves are important for the local economy, but are small compared to Siberian reserves.

⁶⁷ UES tariff data. See also various references to the cost of electricity in the Far East in local media, for example, “Дальэнерго меняет партнеров?” *Utro Rossii*, January 14, 1997. Also interview #32 with electricity sector economist, Vladivostok, 20070918 and interview #34 with academic and employee of an electricity company. Technology of Far Eastern power plants was discussed in interview #39 with electrical engineer/electricity sector expert, Vladivostok, 20071004.

⁶⁸ Coal production was privatized early and many coal mines were closed when demand collapsed during the economic crisis and their remaining clients were unable to pay. For example “Острый сигнал: прошли выборы—отключили батареи,” *Utro Rossii*, January 15, 1994, and “Дефицит света...” *Utro Rossii*, March 12, 1996.

⁶⁹ Conversations with Primorsk residence repeatedly confirmed this point. Anthropologists have traced the breakdown of electricity with a jolt to pre-modern times, see Platz (2000).

⁷⁰ “Комиссия по чрезвычайным ситуациям предпринимает конкретные шаги по разрешению топливного кризиса,” *Utro Rossii*, January 14, 1997. Anti-crisis measures and subsidies/support from the central government include in-kind fuel deliveries—almost 20,000 tons of diesel fuel were allocated from the federal government’s resource committee. This is a recurring theme in local newspapers; for an earlier reference, see “Миллиарды на топливо,” *Utro Rossii*, January 20, 1994. Also several interviews, for example, interview #39 with electrical engineer/electricity sector expert, Vladivostok, 20071004, and interview #43 with electricity sector economist, Khabarovsk, 20071010.

⁷¹ “УКАЗ Президента Российской Федерации: О дополнительных правах и обязанностях полномочного представителя президента Российской Федерации в Приморском крае,” *Utro Rossii*, June 10, 1997.

⁷² “Energy Minister Yurii Shafranik (...) said that Moscow earmarked 4.6 trillion rubles for bailing out the region’s fuel and energy sector.” OMRI/DD, August 6, 1996. See also “Primoriye to receive federal funds” in OMRI/DD, September 23, 1996.

direct budget transfers and coal deliveries, cross-subsidies are relatively high in Far Eastern regions—i.e., households are subsidized by industrial consumers.⁷³

Direct budget transfers and cross-subsidies were the most important subsidies in the region. Even as the rest of the country was liberalizing prices during the most recent phase of reforms, tariffs in the Far East remained fully regulated and subsidies continue. The Far East was the largest recipient of direct budget transfers in electricity at the end of reforms and industry continued to cross-subsidize households.⁷⁴ An observer of the Far Eastern electricity sector pointed out that these cross-subsidies and the government's intention to retain them were one of the reasons why the region was not been included in the reform program for the rest of Russia.⁷⁵

To sum up the discussion of outcomes, even as the institutions of a competitive electricity market have been created and prices are gradually being liberalized, at least three “zones” exist in the new market.⁷⁶ At the end of reforms, these markets remained practically separate with marked differences in price levels (see Table 8 in “Appendix 2”); moreover, insiders have often noted that they are likely to remain separate.⁷⁷ Price differentials are an indicator of different cost structures of power generation across the regions. Importantly, they also reflect political considerations that have led to the preservation of distinct price zones throughout Russia, as the remainder of the paper will demonstrate.⁷⁸

Failure of Existing Accounts to Explain New Institutional Patterns

As introduced at the outset, the broader literature on the politics of market reforms tends to emphasize political dynamics of limited relevance to the institutional transformations taking place in post-Soviet countries. The literature on market reforms in Latin America often identifies parties, organized labor, and civil society

⁷³ UES tariff data and Anna Lobunec (2004a), which contains an analysis of cross-subsidies in the Far East, p. 108; confirmed in interview #34 with academic and employee of an electricity company.

⁷⁴ Federal Tariff Service (2004, p. 46). Interview #43 with electricity sector economist, Khabarovsk, 20071010.

⁷⁵ “Another reason [for why the Far East is undergoing a different reform trajectory] are the high levels of cross-subsidies in the Far East.” In Russian: “Еще один фактор—значительный объем перекрестного субсидирования, которое по-прежнему сохраняется на Дальнем Востоке,” according to Klimentko, in *Dal'nevostochnyi Kapital*, August 2005, 8/60, p.10. See also UES tariff data and interview #41 with journalist covering electricity sector, Vladivostok, 20071005.

⁷⁶ The wholesale market is divided into the European and Siberian “zone”; the European zone is called the first price zone, the Siberian is called the second price zone, and the Far East is the “un-priced” zone (*netsenovaia zona*). All price statistics by the system administrator of the Russian electricity grid (ATS) are divided into these three zones; see, for example, ATS website <http://www.np-ats.ru/>.

⁷⁷ That prices differ was also mentioned several times in interviews, for example, interview #52 with electricity sector economist, Irkutsk, 20071117. Another high-profile expert predicts that the three markets are likely to remain separate for the foreseeable future is Dmitry Ponomarev, ATS director. In Russian: “Объединение ценовых зон и неценовых не планируется,” *Vedomosti*, August 22, 2007.

⁷⁸ According to Chubais, price differentiation depends on many different factors, including the “development of regions, the development of sectors; (...) myriads of different interests are involved.” Remark by Chubais at a conference “Electricity: Locomotive or Brake on Economic Development?/ Энергетика: тормоз или локомотив развития экономики?” Moscow, February 13, 2007.

organizations as the key actors that have shaped the process of re-regulation; electoral competition and partisan politics are the decisive political dynamics.⁷⁹ While Russia's transition was initially accompanied by political democratization and key institutions of representative democracy were created in the early 1990s, they often proved weak and were subsequently undermined during the recentralization of political authority under Putin. Political parties are a case in point: In addition to the weakened communist successor party, two parties continue to exist as a kind of “shadow” opposition—the LDP and Just Russia. However, these parties essentially rubber stamped electricity sector legislation introduced by United Russia, the party loyal to President Putin. They played no significant role in shaping the outcome of electricity sector reforms. Similarly, no civil society organizations have arisen to mediate between the public and the government over tariff liberalization, despite frequent public protests against increasing electricity costs.

The literature on Western and Eastern European regulatory reform has centered on assessing the EU's ability to influence new regulatory institutions, in particular on the domestic political dynamics that mediate institutional adaptation.⁸⁰ The literature on China has also often emphasizes a supra-national authority in spurring regulatory reform—the WTO (Yang 2006). In Russia, the World Bank, IMF and EBRD did have some influence during the early phase of reforms in the 1990s and provided support for the reform team at UES.⁸¹ The WTO accession negotiations also repeatedly put pressure on the federal government to end subsidies and liberalize the sector.⁸² Yet the role of these international institutions declined substantially during the Putin period, when rising oil prices freed Russia from reliance on international lenders. Their influence also fails to account for cross-regional variation, as they backed the liberal faction of the Putin government that advocated “one set of rules” to govern all of Russia.

If parties, civil society, and international organizations have played negligible roles in Russia, who did? The political economy literature on Russia has on the whole been wedded to two narratives to explain the trajectory of post-Soviet change, regarding the federal government either as a predator or as captured by powerful oligarchic interests. In the early post-Soviet period, influenced by views of the

⁷⁹ Snyder's work on the different pathways of re-regulation of Mexico's coffee sector examines the conditions under which civil society actors can play a role (Snyder 1999). Murillo stresses the role of electoral competition and partisan politics as the determinants of the liberalization pathways of Latin America's electricity and telecom sectors (Murillo 2002, 2009). Etchemendy's work emphasized the Argentine government's coalitions with business and organized labor in Argentina (Etchemendy 2004).

⁸⁰ For a case study on Western Europe, see Humphreys and Padgett's study that explores how France and Germany differed in the adaptation of EU directives in the telecom and electricity sector; they find that the existing structure of the electricity sector and domestic political institutions were key mediating factors in the adaptation of the liberal EU directives in the electricity sector (Humphreys and Padgett 2006, pp. 398). For Eastern Europe, see Jacoby (2006).

⁸¹ In fact, a later influential advisory committee to the board on reform matters was initially established as a condition for an EBRD loan, interview #1 with electricity sector expert at an international financial institution, Moscow, 20060721. That the EBRD reform committee ended up being an “important organ,” was mentioned in interview #11, electricity sector expert, Moscow, 20061018. Foreign consultancies also played a role; interview #16 with electricity sector consultant, Moscow/phone, 20061030; consultancies were also mentioned in interview #57, academic/electricity sector expert, Irkutsk, 20071122.

⁸² This was mentioned, for example, by an electricity sector economist, interview #43, Khabarovsk, 20071010.

Soviet government, the Russian state was seen as a predatory Leviathan.⁸³ This characterization was soon revised in view of the weakness, or dependence of the Yeltsin government on the new class of oligarchs. For assessments of the state under Putin, predatory state approaches have again gained prominence. Recent assessments interpret the state's strength vis-à-vis economic actors, together with increasingly authoritarian, illiberal, and chauvinistic tendencies, as a return to a Soviet-type of overbearing paternalism (Fish 2005; McFaul and Stoner-Weiss 2008).⁸⁴ Interpretations of economic policy that rely on a model of the state as a predator predict that institutions are created to maximize rent seeking. The evidence from the electricity sector contradicts these predictions. Putin actively supported the liberal reformers led by Chubais, allowing him to radically transform the Soviet-era electricity monopoly. Vertically integrated monopolies were unbundled, new managerially trained executives were appointed to modernize the sector in accordance with market principles, the state's majority stake in many of Russia's most valuable electricity companies was sold, and wholesale prices are being liberalized, to mention just a few elements of the liberal reforms that were implemented. None of these steps would have made sense for a predatory state.⁸⁵

A second important view of the Russian state regards it as captured by powerful business interests.⁸⁶ Economic actors have always played an important role in explaining post-Soviet Russia's history. Whether old Soviet enterprise directors turned owners, nomenklatura youths turned oligarchs, or state-owned industrial complexes turned global conglomerates, such actors have arguably exercised more power than parties, social movements, and unions. The evidence from the electricity sector not only confirms the influence of oligarchs who won important victories over liberal reformers but it also suggests a revision of the focus of this literature.

The literature on the influence of economic actors on institution building has mostly treated firms as actors that rig domestic legislation to maximize rents.⁸⁷ Private influence on reforms is almost always treated as an obstacle to the creation of markets. Operating in the reform framework, these scholars assume that rent-seeking "inevitably creates distortions" (Shleifer and Treisman 2000, p. 19). The most influential account of the influence of economic actors is Joel Hellman's work on state capture (Hellman 1998, p. 50). Hellman argues that the collusion between corrupt officials and powerful oligarchs resulted in failed or incomplete reforms. He showed that the "winners" of the early transition phase, benefitting from "partial reform equilibrium," prevented the implementation of structural changes that would have brought Russia closer to a market economy.⁸⁸ His account was a useful corrective to earlier conceptualizations of an

⁸³ For the predatory state argument, see, for example, Aslund (2002) and Frye and Shleifer (1997).

⁸⁴ Also a very common chorus in the news media, see, for example, Bovt (2008).

⁸⁵ Markus has argued that private firms adopt corporate government mechanisms as an insurance mechanism against the infringement on property rights by a predatory state. The causal mechanism of this argument relies on foreign investors acting as allies of private companies, defending them and lobbying on their behalf with the Russian government (Markus 2008). While these kinds of alliances were important in the electricity sector at times, the role of foreign investors was ultimately limited, and they were only successful in obtaining a controlling stake, if the government permitted this.

⁸⁶ For arguments about a weak and captured state, see McFaul and Perlmutter (1995), Hellman (1998, 2003), Shleifer and Treisman (2000), and Ericson (2001).

⁸⁷ Exceptions to this trend are Woodruff (1999) and Barnes (2006).

⁸⁸ A group that includes enterprise managers, local officials, and Mafiosi, according to Hellman (1998, p. 204).

overbearing state, whose “grabbing hand” prevented entrepreneurs from reaching their potential.⁸⁹ Yet Hellman sought mainly to explain the absence of reforms and structural change. A few years later, Andrei Shleifer and Daniel Treisman provided a revision of the capture account, arguing that there have been failures and successes in implementing market reforms (Shleifer and Treisman 2000). They emphasized the ability of the government to buy off key stakeholders but still held on to a stylized view of economic interests as rent seekers whose influence invariably creates market distortions. Predictions based on the capture approach provide a one-sided picture of reform outcomes, concentrating on the concessions granted by the government while leaving aside the contributions to the government’s development agenda conglomerates made in return. They rarely examine what companies lobby for in different reform arenas and how this lobbying actually affected institutions formed during the reform process.⁹⁰ Finally, they also did not distinguish between reform as policy and reform as institution building. Partly as a result of this, they overestimated the importance of shrewd strategy by reform-minded politicians seeking to buy off opponents and underestimated the complexity of structural change and the variability of outcomes.⁹¹ Despite these shortcomings, the capture framework generally continues to be the dominant paradigm to understand the influence of Russian firms on post-Soviet market reforms among academics, policy analysts, and journalists.

An important correction to this literature is the research by Pauline Jones Luong and Erika Weinthal, who stressed that institutions in Russia are built through mutually beneficial contracts between the government and a set of powerful economic actors, rather than being imposed by a dominant actor (Jones Luong and Weinthal 2004, 2010, p. 140). Timothy Frye also found that the relation between business and the state is better characterized as “exchange” rather than “capture” (Frye 2002, pp. 1017 and 1021). Jones Luong and Weinthal’s findings in particular escape the tendency toward either the predatory and capture models: They argue that the creation of Russia’s fiscal institutions “represents a negotiated settlement between the Russian government and the most powerful set of domestic economic actors—the Russian oil companies.”⁹² Their most recent work explains different ownership structures in oil sectors across the Caspian basin with reference to, *inter alia*, the level of domestic political contestation.⁹³ In Russia, they argue that a decisive factor shaping ownership outcomes was the high level of political contestation: The Yeltsin government used the privatization of oil assets to buy off challengers to the central government’s power (Jones Luong and Weinthal 2010, p. 308). Although their research provides a richer account of state-oligarch bargains, it still relies on broad, stylized predictions of governments’ motivations: Variation is shaped by the central governments’ needs to consolidate political control, *i.e.*, neutralize challengers such as the communist

⁸⁹ “Grabbing hand,” see Frye and Shleifer (1997).

⁹⁰ This is partly due to the view of markets as either competitive or fraught by rent-seeking firms, partly a question of methodology that does not compare survey results with “real-world” institutional outcomes.

⁹¹ See critique by Hanson for a review of several assessments of reform attempts in the early 2000s (Hanson 2003).

⁹² Timothy Frye’s (2010, p. 171) more recent work has portrayed business state relations as the state buying off powerful incumbent actors with concessions that enable rent-seeking.

⁹³ More precisely, Jones Luong and Weinthal (2010, p. 300) identify firstly the “level of distributional conflicts” governments face and secondly “the degree to which they can access alternative revenue sources” as the key variables that shape ownership structure in the oil sector.

opposition or regional governors. My analysis confirms this point—eliminating the governor’s influence on the electricity sector was indeed key, but also provides a different interpretation of the government’s motives and thereby deepens our understanding of its interaction with oligarchs. Mutually beneficial agreements were not as much about one-off support buying, but about enlisting ongoing cooperation toward broader social and developmental goals that legitimate the government’s authority. The next section will detail how this approach adds to existing accounts of state-oligarch bargains.

Explaining the Institutional Underpinnings of Russia’s Electricity Sector: Post-Soviet Developmentalism

While my findings thus confirm a mainstay of political economy research on post-Soviet Russia—oligarchs were influential—the electricity sector restructuring also presents an interesting opportunity to challenge mainstream views of market reforms in post-Soviet economies. I found that the interaction between the government and Russia’s new private entrepreneurs during the transformation of the electricity sector followed a logic that flows from the state’s developmental ambitions: The government shaped the sector’s transformation by making concessions to opponents of full liberalization to *enlist* their assistance for broader social and developmental aims, rather than for the narrow goal of creating rent-seeking opportunities. The distinction between a “buying off” and an “enlisting” logic rests on a different understanding of the government’s primary aims. I am stressing that for most of the post-Soviet period—for regional administrations under Yeltsin and for the Putin administration—the integration of a stronger Russia into international markets and preventing de-industrialization were overarching political rationales. This has meant that concessions to conglomerates center around the conditions of their international competitiveness and on their ability to provide employment, rather being merely the rent-seeking opportunities.⁹⁴ Because of the developmental aspects of bargains, the government’s attempt to enlist new private actors also resulted in bargains that were shaped not only by the short-term political motivations, but by regional geographies. As we will see below, inherited industrial geography determined a number of highly relevant factors that could be grouped as “pre-contractual elements” of the bargains.⁹⁵ Who sat at the bargaining table, what concessions were they asking for, and what did they offer in return? Answers to these questions cannot be inferred from approaches relying on one-dimensional models of actors’ motivations, yet they are key to understanding sub-national variation in the institutional underpinnings of new markets. In what follows, I first highlight key characteristics of the post-Soviet developmental agenda. I then go on to juxtapose the concessions oligarchic conglomerates

⁹⁴ Etchemendy (2004) observed a similar logic in Spain. He argues that the country’s integration into the EU did not actually prioritize liberal reforms. The government combined liberal and “illiberal” policies, to strengthen “national champions.”

⁹⁵ John Lie (1997, p. 349) draws attention to these “pre-contractual elements” of market interactions in a discussion of the sociology of markets.

secured during sector reforms with their contributions to the state's developmental agenda for the region.⁹⁶

A first important element of post-Soviet developmentalism is its reliance on state cooperation with Russia's new oligarchs and conglomerates. Even the most statist faction of the Putin government has favored a combination of state control and market forces, rather than returning to full-fledged state ownership of the means of production. Conglomerates in turn rely on the state. This applies in particular to the period since the federal government under Putin has been strengthened, but "good relations" with regional governors were essential during the 1990s. In the electricity sector, this mutual dependence meant that oligarchic interests have shaped rather than impeded new market arrangements. Secondly, post-Soviet development strategies often aimed at keeping elements of the Soviet-era industrial structure intact. Especially in recent years, this included national strategies to counteract overdependence on natural resource. Under Putin, these aims were pursued by creating "national champions," i.e., using state resources to promote key sectoral players who could employ Russians domestically and compete internationally. Focusing on national champions entailed a commitment to instilling competitiveness and modernizing *existing* industrial structures. Interestingly, this meant that elements of Soviet-era industrial geography were at least partially maintained.

One implication of this strategy was that industrial geography became an important part of the state-oligarch bargains that shaped the institutional underpinning of electricity markets. Elements of industrial geography that mattered most for the transformation of the electricity sector were the physical ties and hence the business relationships that linked electricity to the gas sector in Europe, to industrial interests in Siberia, and to the coal sector in the Far East. Soviet planners bequeathed the post-Soviet electricity sector with different ties to adjacent upstream and downstream sectors across regions. Gazprom was particularly interested in European Russia's utilities because most power plants in this region are fuelled by gas. Rusal targeted Siberian hydroelectric power plants because its aluminum plants are located in close proximity and rely on the cheap electricity provided by the huge hydroelectric dams. Far Eastern electricity companies depend on regional coal mines, as the region's electricity is largely produced in coal-fired power plants. Depending on the industrial geography of a region then, upstream energy conglomerates, downstream industrial interests, or the electricity sector itself ended up shaping post-Soviet reform outcomes. Note that I am not arguing that industrial geography structurally determined reform outcomes. It was the *political* dominance of a development strategy that preserved existing industrial structures that allowed

⁹⁶ I focus primarily on the most recent period of reforms, between 2002 and 2008, although many elements of these bargains have remained constant over the years and were initially negotiated between the conglomerates and regional and federal administrations during the 1990s. I am also relying primarily on evidence from the three regions I conducted fieldwork (Irkutsk oblast, for example, serves as a lens for the Siberian region more generally). The development strategies for the three regions are part of various documents with different geographical scope. In Siberia, the "Economic and Social Development of the Russian Far East and the Trans-Baikal Area until 2013" is an important document at the federal level. I am draw specifically on evidence from the "Program for the socio-economic development of the Irkutsk Oblast for the period 2006–2010 *Программа социально-экономического развития Иркутской области на 2006–2010 годы*," obtained from the Irkutsk oblast administration and available at www.govirk.ru.

energy and industrial conglomerates to capitalize on their physical connection and established relationships with the electricity sector.⁹⁷ Liberal reformers wanted to do away with physical boundaries by creating “one market” and to overcome the geographical proximity between the electricity sector and its upstream and downstream neighbors. As demonstrated above, however, this logic was subordinated to one that selectively accommodated oligarchs with established ties to the sector.

Finally, post-Soviet developmentalism has deep roots in the tradition of Soviet-era planning, even as it bears only faint resemblance to its Soviet predecessor.⁹⁸ It is similar to Soviet planning in that regional development strategies are often designed centrally—for the people and regions, rather than by the people and regions. Post-Soviet developmentalism also continues a long tradition of the Russian state’s impulse to push ahead economic development through ambitious modernization projects, including the Soviet Union’s modernization project, the reforms of Witte and Stolypin, and Peter the Great. As was the case for the Soviet Union’s modernization project, Putin’s developmentalism has been at the core of his political legitimacy and popularity, which are to a large extent based on his ability, or a credible commitment, to raise living standards.⁹⁹ In addition to their economic importance, infrastructure projects provide a tangible promise of future growth, thereby securing legitimacy for the exercise of political authority. Even if reforms ultimately end up falling short of realizing their aims, at the moment of their implementation they serve as a symbol of a state that builds the foundations for future well-being.

The key difference to Soviet-era planning is that Russia’s development agenda today embraces market forces. It is an agenda that wants to integrate domestic actors into market structures but also seeks to prevent de-industrialization, unemployment, and labor migration that might reduce provincial settlements to ghost towns. The state is dealing with private actors closely tied to multiple markets and has had to find strategies to align them with its agenda.¹⁰⁰ Finally, for post-Soviet development planning, cost and prices matter in a way they did not under Soviet planning; all actors are acutely aware of domestic and international prices, of competitiveness and arbitrage.

Developmental Bargains in European Russia

Ownership and subsidy regimes in European Russia’s electricity sector are part of a larger bargain between the government and the gas behemoth. The company was

⁹⁷ Conglomerates also relied on rhetorical strategies that emphasized the importance of keeping existing structures intact in political battles with liberal reformers. Stressing the “naturalness” of physical links helped conglomerates legitimize their political position and contributed to their victories over liberal reformers. Liberals were not usually in favor of preserving existing industrial structures and considered physical facts ultimately as malleable, given the right economic incentives.

⁹⁸ A remarkable case study that explores differences and continuities is an ethnography of modernization projects in Chukotka (Thompson 2008).

⁹⁹ This kind of legitimacy is common in post-Soviet countries, partly as a result of the traumatic crises of the 1990s, partly due to the lingering memories of Soviet-era political legitimacy. Huntington (1991) called this “performance legitimacy,” noted also in Aron (2009).

¹⁰⁰ Chaudhry (1993) on the difficulty of for new states to regulate private actors.

able to cherry-pick the most valuable assets in European Russia. Price reforms allowed the fuel provider to control income streams from domestic electricity production that is based on subsidized gas. Another highly lucrative agreement between the state and Gazprom is a long-established, state enforced monopoly on gas exports that designates Gazprom as the sole beneficiary of the international sales of the world's largest natural gas reserves.¹⁰¹ If Gazprom invests in fuel saving technologies in the electricity sector, this frees up gas for profitable exports. If these arrangements clearly reflect Gazprom's preferences, how then has Gazprom served the government's development strategies?

While the bargains between Gazprom and the government are complex and subject to shifting priorities, key features of Gazprom's contribution to the Russian developmental agenda have remained constant.¹⁰² Since the very beginning of the post-Soviet period, a crucial condition has been at the core of the government–Gazprom bargain: Gazprom has supplied gas to domestic industry and domestic consumers at heavily discounted prices, gas that it could sell for much more in Western Europe.¹⁰³ To this day, the Russian government's energy strategy assures that “guaranteeing the provision of affordable energy resources to the population, to socially and strategically important entities is one of the most important task of the state's energy policy”¹⁰⁴—a commitment that relies on Gazprom's ongoing cooperation. As only European Russia is “gasified,” i.e., only European Russian factories are connected via an extensive network of gas pipelines, these subsidies are most relevant for European Russia.

The concessions during electricity sector liberalization are part of Gazprom's rewards for its ongoing contribution to domestic economic development. At the core of the bargain in the electricity sector (that involve Gazprom, the government, UES, and now newly privatized electricity companies) have always been the price and volume of gas delivered to electricity companies.¹⁰⁵ Electricity companies have been by far Gazprom's biggest customers, and the price of gas supplied to power plants has been subject to enduring battles between the company, its downstream customers, and the government. For most of the 1990s, this conflict lingered. It came to a head in 2000 during the period of elite turnover between the Yeltsin and Putin administrations. In an example of how energy prices are the stuff of Russia's “real life politics,” the chairman of Gazprom, Rem Vyakhirev, threatened to cut gas deliveries to electricity companies in April 2000 unless the companies' debt was

¹⁰¹ This monopoly position seems very secure. Igor Sechin, one of the Kremlin's most powerful insiders, confirmed in 2010 “we will not cancel Gazprom's monopoly on exports,” in “Sechin says Gazprom must raise game” reported by Katya Golubkova and Polina Devitt for Reuters, June 21, 2010.

¹⁰² Gazprom is also Russia's largest tax payer. For an analysis of the shifting relations between GP and the government, see Stern (2005).

¹⁰³ According to Gazprom's website, average regulated gas price for industrial consumers in 2010 was 2,495 ruble/thousand m³ and 1,860 rubles/thousand m³ for gas that was to be resold to household; see <http://gazpromquestions.ru/?id=35#c251>.

¹⁰⁴ In Russian, “одной из важнейших задач государственной энергетической политики является гарантированное обеспечение энергетическими ресурсами населения, социально значимых и стратегических объектов по доступным ценам,” Energy Strategy of the Russian Federation, to the year 2020/Энергетическая Стратегия России на период до 2020 года, p. 45.

¹⁰⁵ Although other aspects of their relationship between gas and electricity companies were also at stake, see, for example, Stern (2005) and Solanko (2011).

paid in full and paid at prices that had previously been agreed to. After a few days of uncertainty, Putin resolved the UES–Gazprom standoff by supporting the electricity sector, ordering Gazprom to supply UES and the Energos with the required gas. Similarly, Gazprom’s demands for higher gas prices were denied.¹⁰⁶ Putin therefore sided with domestic industry and the electricity sector, continuing the policy that they should be entitled to subsidized energy. Soon after this “rebellion” by Vyakhirev, he lost the position of the board chairman, and Putin made sure the company’s board and managers were replaced with his loyalists.¹⁰⁷

Most analysts agree that under the new leadership, Gazprom has adhered to its side of the bargain and continues to play an important role in subsidizing Russian domestic industry, supplying gas cheaply, even sometimes below cost.¹⁰⁸ Although there are constant struggles between Gazprom and the government about how much gas prices are allowed to rise, Gazprom has supplied electricity companies with gas far below the prices it could fetch if exported internationally.¹⁰⁹ The cheapest gas is reserved for the power plants the company now controls directly. According to Viktor Vekselberg, the owner of European Russia’s second largest contingent of power plants, KES, the rationale for merging his energy assets with Gazprom is the low prices for gas thereby secured: “the deal would save hundreds of millions of dollars a year because [KES] would be able to buy gas more cheaply from Gazprom” (Popova and Groholt-Pederson 2011).

Developmental Bargains in Siberia

Aluminum oligarchs were successful in negotiating privileged access to Siberia’s cheap hydroelectric resources, gaining both ownership and access to subsidies. What did they provide in return, or why did the government grant these concessions? Concessions to Rusal were part of a regional development strategy that tries to support the conglomerates that employ large parts of the population in Siberian industrial towns. Since the late Tsarist period, successive Russian governments pushed the development of heavy industry in Siberia. During the economic collapse of 1990s, the threat of de-industrialization loomed large everywhere in Russia, but it

¹⁰⁶ Instead of the 26 billion m³, Gazprom threatened to provide only 22 for the second quarter of 2000. *Izvestiya*, April 12, 2001. See also *Kommersant*, April 11, 2000.

¹⁰⁷ To ensure that Gazprom would play the role the Kremlin devised for it, one of the first moves of Putin as president was to make sure that Gazprom’s board and managers were replaced with loyalists. Miller replaced Vyakhirev and the board was staffed with Putin’s loyalist from St. Petersburg in 2001.

¹⁰⁸ Most analysts agree that gas will be supplied to domestic consumers at relatively low prices (Litwack and Thompson 2002; Stern 2005). The Gazprom website documents that these price subsidies continue to exist: “regulated prices for gas are subsidized” (in Russian: директивно регулируемые цены на газ являются заниженными). The extent of the subsidy is not specified, but the website notes that “low regulated prices did not allow the company to cover cost [...], for many years, until 2009” (in Russian: Много лет, вплоть до 2009 года, этот фактор не позволял покрыть затраты на производство, транспортировку и реализацию газа; <http://gazpromquestions.ru/?id=35#c251>). For a Russian observer’s prediction that gas subsidies for residential consumer and other budget organizations are likely to continue because of their “social importance”; in Russian: “в связи с большой социальной нагрузкой.” Loginov, E.L., et al. in *Экономика региона*, 8/23, 2005, Либерализация национального рынка газа: проблемы реформирования российской экономики: p.35.

¹⁰⁹ RBK News Daily, Цены на газ в России всегда будут ниже, чем в Европе [Gazprom: Gas Tariffs in Russia will always be lower than in Europe], June 30, 2011.

was particularly acute in company towns in remote territories of Siberia and the Russian Far East. Liberal reformers argued that their remote location and the “cost of the cold”—the cost of maintaining populations centers in northern climes—made these areas unsuitable for market conditions. The logical conclusion of this argument was that they should be evacuated rather than sustained “artificially” with subsidies.¹¹⁰

Not surprisingly, Siberian regional leaders and industrialists vehemently opposed the liberal logic that threatened to de-populate Northern regions. Successive bargains between regional industrialists and the government centered on employment in Northern regions. In the 1990s, regional governors needed employment opportunities and tax revenues in cash, a scarce resource during the barter crisis, both of which Rusal could provide. Under Putin, in addition to employment and taxes, the federal government needed financing to update existing hydroelectric power plants and for the construction of new hydroelectric dams, which require huge upfront investments. In the last decades of the Soviet Union, a whole series of hydroelectric dam projects were planned or initiated. These capital-intensive projects were abandoned in the turmoil of the early 1990s, and no financing was available for the rest of the decade. “The government is in no state to finish these projects, there is no money,” lamented an electricity sector insider at the time.¹¹¹ After 2000, a number of these projects were revived, including the enormous Boguchansk hydroelectric dam. A representative of the government’s hydroelectricity company enthusiastically named it the “second wave of investment in hydro-capacity,” comparing it to the huge boom in dam building in the late 1960s and 1970s.¹¹²

Since the completion of these dams was under discussion again, co-financing by Rusal was debated.¹¹³ Boguchansk is the largest of these projects, and the conditions of financing its completion have been highly contested for years. Rusal only agreed to participate if UES and the federal government guaranteed a significant ownership stake and long-term agreements to sell electricity at reduced prices.¹¹⁴ Rusal and the Russian government eventually agreed to share ownership, each with a 50% stake. They also seemed to have agreed that the price of electricity for Rusal was to be tied

¹¹⁰ Gaddy and Hill (2003) elaborate this concept based on a discussion by Russian geographers. For a discussion of politics of the north, see Stammler-Grossman (2008).

¹¹¹ In Russian, “Государство не в состоянии ее достроить, денег нет.” Remark was made by Victor Borovsky about the Boguchansk project, in an interview in *Ekspert*, no.14, April 13, 1998, p. 35.

¹¹² Remark by a Hydro-OGK representative at a conference “Second annual conference on the functioning of electricity companies in a market context/Вторая ежегодная конференции—Работа электроэнергетических компаний в рыночных условиях,” Moscow, December 13, 2006. These projects generally came up often in the interviews in Siberia, for example, in interview #55 with employee of electricity company, Irkutsk, 20071120, who described these projects as “lining Siberia’s rivers like pearls on a necklace.”

¹¹³ An early agreement between Chubais and Sibal (precursor of Rusal) concerns financing for technological upgrades at Sayano-Shushenskaya hydroelectric power plant. “Чубайс договорился с металлургами,” *Kommersant*, July 27, 1999. See also “РАО ЕЭС возводит плотину,” *Kommersant*, November 3, 2000.

¹¹⁴ The Soviet Union had already invested large sums in the construction of this dam, but the Russian state needed private finance for the projected US \$1.7 billion to complete construction. Only the contours of the negotiations between Chubais and Deripaska and the political battles that accompanied them were public knowledge. As each side was trying to align support in the Kremlin on their side, some of the terms of their negotiations surfaced in the media over the years. See, for example, “РАО ЕЭС ищет партнера который мог бы достроить Богучанскую ГЭС,” *Vedomosti*, March 24, 2003.

to the London Metal Exchange Price for aluminum,¹¹⁵ although negotiations about how much capital Rusal had to provide in return for these concessions continue to this day.¹¹⁶ While the aluminum company contributed significantly to the construction cost of Boguchansk and technological updates of other major dams, the benefits from controlling hydro-assets and the ability to obtain low-cost electricity were likely to outweigh the cost. The government's plan for Siberia's re-industrialization, in turn, relied on increasing hydro-capacity and securing co-financing for large infrastructure projects from private companies. As with the relationship between Gazprom and the government, the alliance with Rusal is better characterized as a development bargain, based on shared interests and mutual dependence, rather than with a model of a captured or predatory state.

Developmental Bargains in the Far East

Finally, what were the relevant bargains in the Far Eastern region? Unlike in Siberia and European Russia, the government retained control of generation assets: Only minority stakes in the newly formed electricity companies were sold to private investors and prices remain fully regulated. Moreover, Far Eastern electricity companies have been compensated for low regulated tariffs through direct budget transfers. Subsidies and the deferment of price liberalization that protect Far Eastern electricity companies from low-cost Siberian electricity reflected the government's plans for the sector's role in the region as well as the interests of local power plants and electricity generators.

What role do electricity companies play in the larger development strategy for the Far East? While most of the government's responses to the Far Eastern crisis in the 1990s were ad hoc palliative measures—sending funds to allow Far Eastern governors to cover budget shortfalls—both regional and federal governments wanted to formulate a more sustainable solution to deal with the many problems the cash-starved, inefficient power plants faced. Under Putin, Far Eastern subsidy and ownership regimes became part of the federal government's strategy for integrating the region into the markets of East Asia.¹¹⁷

Far Eastern development strategies have had to deal with fact that the region was weakly industrialized, with much of its industry dedicated to defense.¹¹⁸ In addition, the Russian Far East remains relatively isolated from both Europe and Asia. In 1991, Vladivostok, only a few hundred miles away from South Korea and Japan, could not have been more distant from these booming sites of post-war capitalism. As the homeport of the Soviet Union's Pacific fleet, it was a "closed" city, sealed off not only from neighboring regions but also from other Russian cities as well. With the

¹¹⁵ "Конец большой дружбы," *Vedomosti*, June 1, 2000. The *aluminshchiki* attempts to link the price of electricity with the world market prices for aluminum is also mentioned in interview #60 with energy company executive, Irkutsk, 20071203.

¹¹⁶ Negotiations about how much finance Rusal has to provide continued for years. See Humber, Y. *Bloomberg*, April 21, 2009.

¹¹⁷ Federal government development strategy was mentioned by several interviewees in the Far East, including, interview #32 with electricity sector economist, Vladivostok, 20070918.

¹¹⁸ Besides defense related industries and services, the Far East's economy relied on light industry, fisheries, and forestry and raw material extraction.

end of the Soviet planned economy came a sharp contraction of defense budgets and a collapse in industrial production in the Far East.¹¹⁹ Integration with North East Asia, China, Japan, and Korea in particular became the Far East's promise to a better future, as well as the cornerstone of the government's regional development strategy.¹²⁰

What did this integration with neighboring countries entail for the electricity sector? The most important aspect of the Far East's integration has long been cross-border cooperation on energy-related issues (Kalashnikov and Gulidov 2003, p. 99; Kalashnikov, 2001, p. 49).¹²¹ The Russian Far East has relatively low demand for energy, while having abundant and relatively untapped resources. Adjacent countries have high demand for energy, but few of their own resources (Minakir 2007, p. 7). At the same time, Russian integration strategies aimed at moving away from exporting raw materials, toward value-adding production. Rather than exporting gas and coal, therefore, the government's regional development strategy focuses on processing energy resources domestically; the electricity sector is a potential value-adding node in the energy chain and thus a source of employment. One regional electricity sector professional stressed "it is worth it to export electricity. This is much more profitable than selling coal or gas. Electricity is a processed good, and thus more expensive than the underlying raw materials."¹²² The development strategy of one of the larger Far Eastern oblasts, Primorsky Krai, thus calls for investment in a series of infrastructural upgrades in the region's power plants.¹²³ Rather than creating one nationwide market, the government continues to protect the Far Eastern electricity sector (despite the high costs associated with the existing coal-fired plants and even if it meant subsidizing a high-cost zone) with the plan to update them in the future. Because of the deleterious effects of competition with Siberian plants, price liberalization was not in the interest of Far Eastern energy companies.

Electricity sector bargains in the Far East have been less contested than elsewhere, as the overarching goal of preserving and expanding Far Eastern electricity production was shared between the main actors. At the same time, the terms of the bargain were still continuously up for debate: the incremental increase in regulated prices, the size of direct subsidies, who should have control over operations and

¹¹⁹ In Primorsky Krai, for example, this meant that regional economic activity was reduced to fisheries and cross-border smuggling of used Japanese cars. A few exceptions were retooled defense companies, interview #41 with journalist covering electricity sector, Vladivostok, 20071005. For a rich account of the post-Soviet collapse in one Far Eastern region, Chukotka, see Thompson (2008).

¹²⁰ This is the premise of the texts on energy integration quoted below, including Minakir (2007) and was often mentioned in interviews, for example, interview #38 with academic, Vladivostok, 20071003.

¹²¹ Also interviews #43 and #44 with electricity sector economists, Khabarovsk, 20071010. See also Anna Lobunec (2004b, p. 19).

¹²² In Russian, "Электроэнергию стоит экспортировать. Это гораздо выгоднее, чем продавать за границу уголь или нефть. Энергия XX это конечный продукт, который дороже, чем исходное сырье," remark by Victor Minakov, director of Vostokenergo, as Dal'energo was called for a while, in an interview in *Dal'nevostochnyi Kapital*, October 2003, No. 10/38, p. 49. The dissertation of Anna Lobunec concludes practically with the same recommendation: "Мы считаем развитие экспорта электроэнергии и создание межгосударственных электроэнергетических связей (...) более перспективным и выгодным вариантом как для Дальнего Востока в целом, так и для Приморского края в частности." p. 20. Anna Lobunec, "Перспективы развития энергетики Приморского края."

¹²³ Development program for Primorsky Krai, "Стратегия социально-экономического развития Приморского Края на 2004–2010 гг."

investment projects, etc. These issues were negotiated as part of the region's international energy cooperation projects and, more broadly, its integration into North East Asia.

Broader Relevance

Russia's regional and federal governments have embraced the electricity sector as a valuable tool to shape the country's future. The sector's transformation from ministry to market was forged by officials at different tiers of the state administration, who were trying to achieve multiple goals: regulate regional economies at a time when authority structures were being challenged, to promote economic development when de-industrialization loomed large, and finally, to legitimize governance when the government was unable to provide many essential public goods. My narrative of the electricity sector's institutional transformation stresses the government's developmental motives in meeting these challenges and that it is these motives that crucially shaped political battles over power plants and subsidies.

There is no doubt that electricity is an "easy case" to demonstrate that developmental considerations are relevant to the political dynamics that underpin institution building. Placing the electricity system at the heart of economic planning has a long tradition in Russia: Since the early days of the Soviet Union's existence, planning went hand-in-hand with electrification.¹²⁴ Today, the Ministry of Regional Development has designated infrastructure development a "highly important tool for the socio-economic development of Russia's regions."¹²⁵ Given this close connection between electricity infrastructure and developmental strategies is the developmentalism argument relevant for other sectors of the Russian economy? The discussion of Gazprom's role illustrated that developmental considerations were key aspects of the gas sector's post-Soviet transformation. Although significant gas sector liberalization remains unlikely and the comparison is thus limited, the gas sector has been an important channel for government subsidies intended to support domestic industrial production. The Russian railway is another networked infrastructure that displays similarities with the electricity sector. Pittman found that the government introduced some competition among private actors, while retaining control of key aspects of the sector and subsidizing both rail cargo and passengers. As in the electricity sector, complex subsidy regimes shape the Russian rail system, including both freight-to-passenger and within-freight subsidies (Pittman 2004 and unpublished, p. 5). While the logic of subsidies is multi-layered, developmental considerations are clearly at play. Transport subsidies for coal provide the clearest evidence of post-Soviet developmentalism. Siberian coal is transported at very low cost to European and Far Eastern consumers, as well as to the booming Asian economies, a subsidy that both lowers production costs for Russian companies and

¹²⁴ The first electrification plan, *Plan-GOELRO*, was also the first of the Soviet Union's legendary Five-Year Plans, the pulse of planning for rest of the Soviet era. Soviet industrialization, and even more broadly the project of Soviet economic development, was intricately linked to electrification (Coopersmith 1992).

¹²⁵ "Важнейшим инструментом влияния на социально-экономическое развитие субъектов Российской Федерации (...) является размещение и развитие (...) инфраструктуры." Quoted in *Kontseptsia* (2008, p. 3).

improves sales for Siberian coals mines. Rail subsidies also benefit other export-oriented sectors located in remote territories (OECD 2004). As in the electricity sector, attempts to liberalize the railway system (although far less radical than in the electricity sector) had a “territorial” aspect and the pattern of the rail sector’s transformation has been shaped by economic geography.

Beyond networked infrastructure, are developmental considerations at play in other sectors? Rather than simply retreating from ownership and giving up control, regional and federal administrations have played an active role in the post-Soviet transformation in a host of different sectors, ranging from metals to machine building, from agriculture to financial services. Each of these sectors is in its own way the backbone of a particular regional economy partly because of Soviet planners’ preference for mono-industrial towns.¹²⁶ In the 1990s, governors were keen to steer regional economies and maintained relationships with industrial interests to this end. Under Putin, oligarchs were increasingly taken to task at the national level as well: As Rutland points out, they were “expected to play an active role in helping the Kremlin realize its political, economic and social agenda,” regardless of the core sector of their activities (Rutland 2005b). It is thus likely that developmental considerations are not confined to electricity or to infrastructure and that closer attention to the state’s developmental agenda can shed light on the institutional structures that have emerged in other sectors. The broader analytical point that is relevant across sectors is that attention to the developmental strategies of the government opens the possibility of regarding subsidies and politicized ownership transfers as concessions in ongoing and reciprocal bargains that also involve continuous and binding obligations by the beneficiaries.

Finally, what is the relevance of post-Soviet developmentalism beyond Russia? Arguments about the centrality of state development strategies in the political economy of “late developers” in East Asia and Latin America have been prevalent for decades.¹²⁷ Yet for a number of reasons, post-Soviet political economy has tended to neglect the state’s developmental agenda, either as irrelevant or as failed. A core aim of this paper was to demonstrate that attention to the Russian state’s developmentalism is key to understanding how market institutions evolved in post-Soviet Russia, whether or not such efforts effectively fostered diversified and sustainable development. What then can we learn from this “new” case, and what is its relevance for the broader developmental state literature? Post-Soviet developmentalism shares a number of characteristics with other developmental state models: It is a type of state-led economic planning that charts an economy’s integration into international markets. It also reaffirms multiple paths of economic development and historically contingent trajectories; Russian developmental strategies relied on a variety of policy tools intended to enhance domestic competitiveness at a particular time and in a particular geographical space. Despite these similarities, the Russian context also differs in significant ways from the Asian

¹²⁶ Soviet planners are famous for their preference of “company towns” and *gradoobrazuiushchie predpriiatiia*, literally translated, city-forming enterprises—where huge, integrated companies were the primary employer in a particular city. See, for example, Collier (2005, p. 373).

¹²⁷ The “developmental state” argument dates back to the 1980s, drawing, for example, on Gerschenkron’s account of development in England, Germany and Russia (Gerschenkron 1962).

and Latin American contexts in which developmental state theories were originally formulated and later modified.¹²⁸ First and foremost, post-Soviet developmentalism is devised in the context of large-scale *de*-industrialization, rather than as a strategy to industrialize a rural economy.¹²⁹ Moreover, the Russian state also had virtually no experience as a regulator of private actors, and market institutions were built during an exceptionally turbulent period, marked first by a severe economic crisis and the fragmentation of sovereignty, and later by attempts to strengthen state authority during an oil boom.

Even though these features set post-Soviet developmentalism apart from other cases, the case can contribute to recent literature on the developmental state and the modification this literature suggests to the original developmental state theories. Robert Wade and Alice Amsden, for example, added a dimension to the notion of embeddedness by emphasizing that reciprocity in state-business relationships was an important feature of the developmental models in East Asia; the bargains in Russia's electricity sector very much rest on reciprocal concessions and thus confirm this point (Amsden 2001, p. 8; Wade 2010, p. 155). Post-Soviet developmentalism also speaks to a set of studies on the new or "flexible" developmental state (O'Riain 2000; Block 2008, for example). These approaches emerged to describe new kind of developmental states that fosters "post-fordist networks of production and innovation" that are increasingly seen as the drivers for growth in post-industrial knowledge economies (O'Riain 2000, p. 165). These studies demonstrate that even in the age of highly globalized markets statist policies are the norm rather the exception. They update core tenets of the developmental paradigm to explain a new situation in which states continuously mediate the dynamic interaction of domestic actors with global markets and are embedded in multiple networks of state-society relations. They also re-affirm that the dichotomy between market/statist policies is flawed.¹³⁰ At the same time, the focus of this literature is on the state's role in nurturing new sectors and industries, such as IT and biotechnology, largely because of their focus on knowledge-based economies of Western Europe and the USA.

The case of post-Soviet developmentalism reminds us that even as states foster innovation, the "old" economy and infrastructure sectors remain relevant for many economies (see Herrigel 2010). While the Russian state promotes nanotechnology and seeks to create high-tech industrial clusters that imitate Silicon Valley,¹³¹ its development strategy cannot afford to lose track of infrastructure and other sectors that form the backbone of regional economies. The role of the state in the Russian electricity sector demonstrates how "old" sectors matter even in today's context aptly described by the literature mentioned above. Sean O'Riain points out that regional unevenness of integration can threaten a state's ability to maintain political support for a chosen developmental strategy. While this is an astute observation, it does not help us understand the origins of a state's differentiated response to spatially patterned

¹²⁸ Evans' notion of embedded autonomy emphasized ties of planning bureaucracies with local elites and local capital (Evans 1995).

¹²⁹ Because the original formulations of the developmental state model were about initial industrialization programs, existing industrial geographies remained outside the purview of these studies.

¹³⁰ See O'Riain (2000, p. 158) on "multiple embeddednesses of state agencies in professional-led networks of innovation and in international capital."

¹³¹ See, for example, Dubna's Tale, *The Economist*, July 31, 2008.

vulnerabilities. The paper makes the case that the industrial histories and relationships that underpin the variability in a state's response should be studied, precisely because they shape the ongoing, mediating, and reciprocal bargains that the developmental state literature has brought into focus.

The case study presented here demonstrates that the Soviet-era expansion of the gas and electricity grids and Soviet planners preference for building industrial plants adjacent to enormous hydroelectric dams shaped new markets in the post-Soviet electricity sector. Similar aspects of industrial histories and geographies are relevant in other countries: In the second half of the twentieth century the economy of the Pacific North-West in the USA has grown around a preferential electricity tariff regime anchored in large hydroelectric dams very similar to Siberia's. As in Siberia, important constituents in the Pacific North-West have fought against tariff liberalization that would equalize the price of power across the USA. Thus, much like in Russia, the type of generation technology preferred during a regions' industrialization shaped the politics of American electricity sector liberalization. Other aspects of economic geographies and histories will matter in other sectors. At its broadest, the point this paper emphasizes is that industrialization trajectories, congealed in different geographies and relationships, shape regionally specific developmental strategies, and the institutions that emerge as markets are liberalized.

Appendix 1: List of Interviews; Location and Dates

Table 2 Interviews conducted 2006/2007

Position	Place	Date	No.
Electricity sector expert at international financial institution	Moscow	20060721	1
Journalist covering electricity sector	Moscow	20060806	2
Employee of electricity company	Moscow/phone	20060904	3
Journalist	Moscow/phone	20060912	4
Electricity sector expert at international financial institution	London	20060920	5
Academic	London	20060920	6
Electricity sector analyst at financial institution	Moscow	20061005	7
Economist at financial institution	Moscow	20061006	8
Electricity sector analyst at financial institution	Moscow	20061008	9
Journalist covering electricity sector	Moscow/phone	20061009	10
Electricity sector expert	Moscow	20061018	11
Academic	Petersburg	20061023	12
Academic	Petersburg	20061023	13
Electricity sector expert	Moscow	20061026	14
Electricity sector analyst at financial institution	Moscow	20061027	15
Electricity sector expert/consultant	Moscow	20061030	16
Electricity sector expert	Moscow	20061101	17

Table 2 (continued)

Position	Place	Date	No.
Journalist covering electricity sector	Moscow	20061109	18
Academic/policy analyst	Moscow	20061122	19
Electricity sector analyst at financial institution	Moscow	20061126	20
Electricity sector economist/consultant	Moscow	20061214	21
Electricity sector expert at financial institution	Moscow	20070210	22
Electricity sector expert at international financial institution	Moscow	20070210	23
Regulator/Ministry for Economic Development	Moscow	20070214	24
Journalist	Moscow	20070217	25
Energy sector expert/policy analyst	Berkeley	20070613	26
Energy sector expert/policy analyst	Berkeley	20070613	27
Academic	Vladivostok	20070912	28
Academic	Vladivostok	20070913	29
Policy analyst	Vladivostok	20070914	30
Journalist covering electricity sector	Vladivostok	20070915	31
Electricity sector economist	Vladivostok	20070918 and 0925	32
Journalist covering electricity sector	Vladivostok	20070921	33
Academic/employee of electricity company	Vladivostok	20070923	34
Regulator	Vladivostok	20070924	35
Program officer at international organization	Vladivostok	20070924	36
Electricity sector executive	Vladivostok	20071002	37
Academic	Vladivostok	20071003	38
Electrical engineer/electricity sector expert	Vladivostok	20071004	39
Pensioner	Vladivostok	20071004	40
Journalist covering electricity sector	Vladivostok	20071005	41
Academic	Vladivostok	20071005	42
Electricity sector economist	Khabarovsk	20071010	43
Electricity sector economist	Khabarovsk	20071010	44
Employee of electricity company	Khabarovsk	20071011	45
Academic	Khabarovsk	20071011	46
Businessman	Vladivostok	20071017	47
Academic	Irkutsk	20071113	48
Academic	Irkutsk	20071114	49
Businessman	Irkutsk	20071115	50
Academic	Irkutsk	20071115	51
Electricity sector economist	Irkutsk	20071117	52
Employee of electricity company	Irkutsk	20071119	53
Businessman	Irkutsk	20071120	54
Employee of electricity company	Irkutsk	20071120	55
Journalist	Irkutsk	20071120	56
Electricity sector economist	Irkutsk	20071122	57
Academic	Irkutsk	20071124	58

Table 2 (continued)

Position	Place	Date	No.
Politician/former executive at electricity company	Irkutsk	20071130	59
Energy company executive	Irkutsk	20071203	60
Employee of electricity company	Irkutsk	20071205	61
Electricity sector expert	Moscow	20071210	62
Executive of electricity company	Moscow	20071212	63
Electricity sector expert at international financial institution	Moscow	20071212	64
Electricity sector expert at financial institution	Moscow	20071213	65
Journalist covering electricity sector	Moscow	20071213	66
Electricity sector expert/economist	Berkeley	20080414	67
Academic/employee of electricity company	Berkeley	20080417	68
Electricity sector expert at international organization	Paris/email	20070212	69
Regulator/electricity sector	Washington, DC/email	20090317	70

Interviews were conducted in person, with the exception of three cases in which conversations happened over the phone (#3, 4, and 10). Two extensive and ongoing email conversations are listed separately at the end (#69 and 70). Repeat interviews are listed separately only if substantially new information was obtained and significant time had passed between interviews; this happened in three cases (interviews #1, 23, and 64; interviews #17 and 62; and interviews #18 and 66, respectively, are with the same person)

Appendix 2: Ownership and Subsidy Data

Table 3 New owners in European Russia's power sector (2008)

New Owners	Installed capacity ^a (%)	Type of new owner
Gazprom	30	Energy conglomerate (Russian/government)
Hydro-OGK	13	Russian government's hydroelectric holdings
KES	12	Industrial conglomerate (Russian/private)
Enel	9	Energy conglomerate (foreign)
Inter-RAO	8	Electricity company (Russian/government)
E.On	6	Energy conglomerate (foreign)
Tatenergo	6	Energy company (regional government/private)
NorNickel	5	Industrial conglomerate (Russian/private) Russian/private
Lukoil	3	Energy conglomerate (Russian/private)
Others		

^a Installed capacity: 100%=all major power plants of European Russia, excluding nuclear power plants. Sources: combined press reports on ownership changes in 2007 and 2008; for installed capacity, see *Teplovyye Generiruyushie Kompanii RAO EES Rossii*, a publication by RAO/UES, 2006

Table 4 New owners of Siberia's electricity companies

New Owners	Installed capacity ^a (%)	Type of new owner
Rusal	42	Industrial conglomerate (Russian/private)
Hydro-OGK	20	Russian government's hydroelectric holdings (Russian/government)
SUEK	20	Energy conglomerate (Russian/private)
Novosibirskenergo	6	Electricity company (Russian/private)
Norilsk Nickel	5	Industrial conglomerate (Russian/private)
E.On	3	Electricity company (foreign)
Gazprom	3	Energy conglomerate (Russian/government)
Others: Mechel, Evras	3	Industrial conglomerates (Russian/private)

^a Installed capacity: 100%=all major power plants of European Russia, excluding nuclear power plants. Sources: combined press reports on ownership changes in 2007 and 2008; for installed capacity, see *Teplovyie Generiruyushie Kompanii RAO EES Rossii*, a publication by RAO/UES, 2006

Table 5 Cross-subsidies between 2000 and 2005 (as percentage of industrial tariffs)

Regions/oblasts		Cross-subsidies, %	Change
European Russia			
Moscow	2000	35.8	
	2005	4.7	-31.1
Sverdlovsk	2000	10.5	
	2004	-5.3	-15.8
Saratov	2000	50.9	
	2005	12.1	-38.8
Leningrad Oblast	2000	47.1	
	2005	21.9	-25.2
Kursk	2000	29.1	
	2004	23.2	-5.9
Perm	2000	29.5	
	2005	27.5	-2
Tver	2000	55.7	
	2005	52.1	-3.6
Samara	2000	40.7	
	2005	-5.2	-45.9
Rep. of Bashkortostan	2000	35.5	
	2005	29.8	-5.7
Tatarstan	2000	20.3	
	2005	11.1	-9.2
Moscow Region	2000	48.5	
	2005	15.2	-33.3
Smolensk	2000	35.5	
	2005	31.8	-2.6

Table 5 (continued)

Regions/oblasts		Cross-subsidies, %	Change
Siberia			
Irkutsk	2000	7.5	
	2005	3.6	-3.9
Krasnoyarsk	2000	39.4	
	2005	15.8	-23.6
Kuzbass	2000		
	2005	No cross subs	
Khakassia	2000		
	2005	No cross subs	
Novosibirsk	2000	29.1	
	2005	24.2	-4.9
Omsk	2000	50.1	
	2005	31.9	-18.2
Chita	2000	30.8	
	2005	9.2	-21.6
Tomsk	2000	30.2	
	2005	21.8	-8.4
Altaiskii Krai	2000		
	2005	No cross subs	
Buryatia	2000		
	2005	No cross subs	
Far East			
Primorsky Krai	2000	30.2	
	2005	44	13.8
Amurskii Krai	2000	17.5	
	2004	23	5.5
Khabarovsk	2000	44.5	
	2005	40.1	-4.4
Yakutia	2000	45.1	
	2005	52.9	7.8
Sakhalin	2000	15.1	
	2005	27.9	12.8
Magadan	2000	13.3	
	2002	12.6	-0.7
Kamchatka	2000	68.3	
	2003	No cross subs	
Chukotka	2000	3	
	2005	47.6	44.6

Source: Calculated based on UES tariff data. Cross-subsidies are calculated as the difference between household and industrial tariffs as a percentage of industrial tariffs. The third column shows whether cross subsidies increased or decreased during 2000–2005 (if 2005 is not available, I use the most recent available year)

Table 6 Industrial subsidies

Regions/oblasts	Evidence of industrial subsidies		
European Russia: regional average 107.6			
Moscow	Ind. tariff	113.4	
	Difference	5.8	
Sverdlovsk	IT	77.5	
	Difference	-30.1	Yes
Saratov	IT	106.4	
	Difference	-1.2	
Len. Oblast	Ind. tariff	105	
	Difference	-2.6	
Kursk	IT	114.1	
	Difference	6.5	
Perm	IT	95.1	
	Difference	-12.5	
Tver	IT	154.6	
	Difference	47	
Samara	IT	92.7	
	Difference	-14.9	
Rep. of Bashkortostan	IT	82.6	
	Difference	-25	Yes
Tatarstan	IT	83.3	
	Difference	-24.3	Yes
Moscow Reg.	IT	113.1	
	Difference	5.55	
Smolensk	IT	112.9	
	Difference	5.3	
Siberia: regional average 85.2			
Irkutsk	IT	28.2	
	Difference	-57	Yes
Krasnoyarsk	IT	54.7	
	Difference	-30.5	Yes
Kuzbass	IT	63.5	
	Difference	-21.7	Yes
Khakassia	IT	28.6	
	Difference	-56.6	Yes
Novosibirsk	IT	110.2	
	Difference	25	
Omsk	IT	120.35	
	Difference	35.15	
Chita	IT	104	
	Difference	18.8	
Tomsk	IT	89.5	
	Difference	4.3	
Altaiskii Krai	IT	137.3	
	Difference	52.1	
Buryatia	IT	115.8	
	Difference	30.6	

Table 6 (continued)

Regions/oblasts	Evidence of industrial subsidies		
Far East , regional average of PK, Amur and Khab. 138.9			
Primorsky Krai	IT	150	
	Difference	11.1	
Amurskii Krai	IT	100.7	Yes
	Difference	-38.2	
Khabarovsk	IT	166	
	Difference	27.1	

Source: Calculated based on UES tariff data. The second column compares an oblasts' industrial tariffs with the average industrial tariff in the respective supra-region. If there is a large difference, this serves as a proxy indicator for industrial subsidies, marked with a "yes" in column three. While data on industrial subsidies would be preferable, I doubt that such data exist. They have always been based on informal negotiations, and special deals for select industrial enterprises are concealed in the average industrial tariff data that are publicly available. In addition to price data, interviews and other sources confirm that industrial subsidies still matter

Table 7 Regions receiving direct budget transfers in 2004

Oblast	Million RRub (allocated by federal budget/actually allocated)	Supra-region
Primorsky Krai	460/283	RFE
Khabarovsk	460/283	RFE
Amurskaya Oblast	85/52	RFE
Kamchatka	680/418	RFE
Magadan Oblast	50/30	RFE
Chukotka	80/49	RFE
Sakhalin	225/138	RFE
Arkhangelsk	460/283	EUR
Yakutia	100/61	RFE

Source: Tarify v Elektroenergetike, (Federal Tariff Service 2004, p. 46)

Table 8 Three different price zones: regulated prices in 2005 and prices in the liberalized segment of the wholesale market, 2009

	RRub/kWh
Average price for all consumers ^a	
European Russia without Tat and Bash	0.93
Large Siberian hydro regions	0.37
Russian Far East	1.48
Average price wholesale market, July 2009 ^b	
European Russia	0.69
VSiberia	0.30
Russian Far East	Prices not liberalized

^a Source: Calculated based on UES tariff data (based on averages of the largest producing regions in each of these supra-regions; same regions as Tables 5 and 6)

^b ATS press release, "Итоги работы оптового рынка электроэнергии и мощности за 24.07.2009–30.07.2009," *ATS Moscow*, July 31, 2009

References

- Amsden A. *The rise of the rest: challenges to the west from late-industrializing economies*. Oxford: Oxford University Press; 2001.
- Aslund A. *Building capitalism: the transformation of the former Soviet bloc*. Cambridge: Cambridge University Press; 2002.
- Aron L. The merger of power and property. *J Democr*. 2009;20(2):66–8.
- Barnes A. *Owning Russia: the struggle over factories, farms and power*. Ithaca: Cornell University Press; 2006.
- Block F. Swimming against the current: the rise of a hidden developmental state in the United States. *Politics and Society*. 2008;36:169–206.
- Bovt G. King of the Hill. *Moscow Times*, July 31; 2008
- Burgansky A. *Hydro power. Super-profits or super-regulation?* Moscow: Renaissance Capital; 2005.
- Carbajo J, Fries S. *Restructuring infrastructure in transition economies. May 1997 contract no.: working paper no. 24*. London: EBRD Office of the Chief Economist; 1997.
- Chaudhry K. The myths of the market and the common history of late developers. *Polit Soc*. 1993;21:245–74.
- Collier S. Budgets and biopolitics. In: Ong A, Collier S, editors. *Global assemblages: technology, politics, and ethics as anthropological problems*. Malden: Blackwell; 2005.
- Coopersmith J. *The electrification of Russia*. Ithaca: Cornell University Press; 1992.
- Deripaska O. *United Company Rusal: annual results announcement for year ended 31 December 2010*. Moscow: Rusal; 2011.
- Ericson R. Does Russia have a “market economy”? *East European Politics and Societies*. 2001;15(2):291–319.
- Etchemendy S. *Models of economic liberalization: compensating the “losers” in Argentina, Spain, and Chile*. Dissertation, University of California, Berkeley; 2004
- Fish S. *Democracy derailed in Russia*. Cambridge: Cambridge University Press; 2005.
- Evans P. *Embedded autonomy: states and industrial transformation*. Princeton: Princeton University Press; 1995.
- Federal Tariff Service/Federalnaia Sluzhba Po Tarifam. *Informatizionno-analiticheskii Biulleten’: Tarify v Elektroenergetike*. Moscow: Akademiia Nardnogo Khoziaistva; 2004.
- Freland C. *Sale of the century: Russia’s wild ride from communism to capitalism*. New York: Crown Business; 2000.
- Frye T. *Building states and markets after communism*. New York: Cambridge University Press; 2010.
- Frye T. Capture or exchange? Business lobbying in Russia. *Europe-Asia Studies*. 2002;54(7):1017–36.
- Frye T, Shleifer A. The invisible hand and the grabbing hand. *American Economic Review Papers and Proceedings*. 1997;87:354–9.
- Gaddy C, Hill F. *The Siberian curse: how communist planners left Russia out in the cold*. Washington, DC: The Brookings Institutions; 2003.
- Gerschenkron A. *Economic backwardness in historical perspective*. Cambridge: Belknap; 1962.
- Guriev S, Zhuravskaya E. Why Russia is not South Korea. *J Int Aff*. 2010;63(2):125–39.
- Hanson P. The Russian economic recovery: do four years of growth tell us that the fundamentals have changed? *Europe-Asia Studies*. 2003;55(3):365–82.
- Hellman J. Seize the state, seize the day: state capture and influence in transition economies. *Journal of Comparative Economics*. 2003;31(4):751–73.
- Hellman J. Winners take all: the politics of partial reform in postcommunist transitions. *World Politics*. 1998;50:203–34.
- Herrigel G. *Manufacturing possibilities*. Oxford: Oxford University Press; 2010.
- Hoffman D. *The oligarchs: wealth and power in the new Russia*. New York: Public Affairs; 2003.
- Humphreys P, Padgett S. Globalization, the European Union, and domestic governance in telecoms and electricity governance. *Governance*. 2006;19(3):383–406.
- Huntington S. *The third wave: democratization in the late twentieth century*. Norman: University of Oklahoma Press; 1991.
- Jacoby W. Inspiration, coalition, and substitution: external influences on postcommunist transformations. *World Politics*. 2006;58(4):623–51.
- Jones Luong P, Weinthal E. Contra coercion: Russian tax reform, exogenous shocks, and negotiated institutional change. *Am Polit Sci Rev*. 2004;98(1):139–52.
- Jones Luong P, Weinthal E. *Oil is not a curse: Ownership structure and institutions in Soviet successor states*. Cambridge: Cambridge University Press; 2010.
- Kalashnikov VD. *Инфраструктура международного экономического сотрудничества в США. Перспективы развития российских регионов: Дальний Восток и Забайкалье*. Khabarovsk; 2001.

- Kalashnikov VD, Gulidov RV. Основные предпосылки в анализе развития ТЭК Дальнего Востока. Стратегия развития Дальнего Востока: возможности и перспективы, Том I. Khabarovsk; 2003.
- Khlebnikov VV. Rynok Elektroenergii v Rossii. Moscow: Gumanitarnyi isdatel'skii zentr Vlados; 2005.
- Kramer A. Deripaska's Climb from Farm to Empire. Moscow Times. 2006 August 22, 2006.
- Lie J. Sociology of markets. *Annu Rev Sociol.* 1997;23:341–60.
- Litwack J, Thompson W. OECD economic survey of the Russian Federation. Paris: OECD; 2002.
- Lobunec A. Перспективы Развития энергетики приморского края. Dissertation, Far Eastern State University; 2004a.
- Lobunec A. Перспективы развития энергетики Приморского края с учетом интеграционных процессов в Северо-Восточной Азии. Dissertation Abstract, Vladivostok, Far Eastern State University; 2004b.
- Markus S. Capitalists of all Russia, unite! Business mobilization under debilitated dirigisme. *Polity.* 2007;39(3):277–304.
- Markus S. Corporate governance as political insurance: firm-level institutional creation in emerging markets and beyond. *Socio-Economic Review.* 2008;6(1):69–98.
- McFaul M, Stoner-Weiss K. The myth of the authoritarian model: how Putin's crackdown holds Russia back. *Foreign Affairs.* 2008;87(1):68–84.
- McFaul M, Perlmutter T, editors. Privatization, conversion, and enterprise reform in Russia. Boulder: Westview; 1995.
- Mellow C. Is this a way to create capitalism? Maybe so. *Institutional Investor*, June 1, 2003;
- Minakir P, editor. Economic cooperation between the Russian Far East and Asia-Pacific Countries. Khabarovsk; 2007.
- Murillo V. Political bias in policy convergence: privatization choices in Latin America. *World Politics.* 2002;54(4):462–93.
- Murillo V. Political competition, partisanship, and policymaking in Latin American public utilities. New York: Cambridge University Press; 2009.
- North D. Institutions, institutional change and economic performance. Cambridge: Cambridge University Press; 1990.
- North D. Structure and change in economic history. New York: Norton; 1981.
- Organisation for Economic Co-operation and Development/European Conference of Ministers of Transport. Regulatory reform of railways in Russia. Paris: OECD; 2004.
- O'Riain S. The flexible developmental state: globalization, information technology and the “Celtic Tiger”. *Politics and Society.* 2000;28:157–93.
- Pittman R. Russian railways reform and the problem of non-discriminatory access to infrastructure. *Ann Publ Cooper Econ.* 2004;75(2):167–92.
- Platz S. The shape of national time: daily life, history and identity during Armenia's transition to independence 1991–1994. In: Berdahl D, editor. *Altering states: ethnographies of transition in Eastern Europe and the Former Soviet Union.* Ann Arbor: University of Michigan Press; 2000.
- Popova N, Groholt-Pederson J. Gazprom powers up. *The Wall Street Journal*, July 8, 2011.
- Rodrik D. Goodbye Washington Consensus, Hello Washington Confusion? *Journal of Economic Literature.* 2006;44(4):973–87.
- Rodrik D. One economics—many recipes. New Haven: Princeton University Press; 2007.
- Rodrik D. Second-Best Institutions. January 2008; working paper, available on author's website: <http://www.hks.harvard.edu/fs/drodrik/>.
- Rutland P. Power struggle: reforming the electricity industry. In: Orttung R, Reddaway P, editors. *The dynamics of Russian politics.* Lanham: Rowman and Littlefield; 2005a.
- Rutland P. Business-state relations in Russia. Paper presented at the at the World Congress of the International Council for Central and East European Studies, Berlin, July 2005b.
- Rutland P. The oligarchs and economic development. In: Wegren S, Herspring D, editors. *After Putin's Russia: past imperfect, future uncertain.* Lanham: Rowman & Littlefield; 2009.
- Semenenko I. Electric dreams, Moscow Times, March 2, 1999.
- Shleifer A, Treisman D. Without a map: political tactics and economic reform in Russia. Cambridge: Massachusetts Institute of Technology Press; 2000.
- Sidorenko, A. Electricity in Russia. In: APEC Policy Support Unit, *The impacts and benefits of structural reforms in transport, energy and telecommunications sectors* (report no. APEC 211-SE-01.1); January 2011.
- Snyder R. After neoliberalism: the politics of reregulation in Mexico. *World Politics.* 1999;51(2):173–204.
- Snyder R. Politics after neoliberalism reregulation in Mexico. Cambridge: Cambridge University Press; 2001.
- Solanko L. How to succeed with a thousand TWh reform? Restructuring the Russian Power Sector. The Finnish Institute for International Affairs Working Paper (no.68), January 2011.

- Solnick S. *Stealing the state: control and collapse in Soviet institutions*. New York: Columbia University Press; 1999.
- Spector R. Securing property in contemporary Kyrgyzstan. *Post-Soviet Affairs*. 2008;24(2):149.
- Stammler-Grossmann A. Reshaping the North of Russia: towards a conception of space. Paper prepared for the Northern Research Forum; September 24–27; Anchorage (2008).
- Stern J. *The future of Russian gas and Gazprom*. Oxford: Oxford University Press for the Oxford Institute of Energy Studies; 2005.
- Tarr D, Thomson P. The merits of dual pricing of Russian natural gas. *The World Economy*. 2004;27/8:1173–94.
- Thompson N. *Settlers on the edge: identity and modernization on Russia's arctic frontier*. Vancouver: UBC; 2008.
- Verdery K. *The vanishing hectare: property and value in postsocialist Transylvania*. Ithaca: Cornell University Press; 2003.
- Vogel S. *Freer markets, more rules: regulatory reform in advanced industrial countries*. Ithaca: Cornell University Press; 1996.
- Volkov V. Standard oil and Yukos in the context of early capitalism in the United States and Russia. *Demokratizatsiya Demokratizatsiya*. 2008;16(3):240–64.
- Wade R. After the crisis: industrial policy and the developmental state in low-income countries. *Global Policy*. 2010;1(2):150–61.
- Wengle S. Engineers versus managers; experts, market-making and state-building in Putin's Russia. *Economy and Society*. Forthcoming/2012; in press.
- Wengle S. Centralize to liberalize? Electricity sector liberalization in post-Soviet Russia. Paper presented at the American Political Science Association Annual Meeting, Chicago, August 30; 2007.
- Woodruff D. *Money unmade: barter and the fate of Russian capitalism*. Ithaca: Cornell University Press; 1999.
- World Bank. *World Development Report 1997: the state in a changing world*. Washington, DC: World Bank; 1997.
- Yang D. *Remaking the Chinese Leviathan: market transition and the politics of governance in China*. Stanford: Stanford University Press; 2006.
- Yudashkina G, Pobochoy S. Regulation of the electricity sector in Russia: regional aspects. *Quantile*. 2007;2:107–30.
- Zysman J. Building on the past, imagining the future: competency based growth strategies in a global digital age. Berkeley Roundtable on the International Economy Working Paper, October; 2007.

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