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The Role of Oligarchs in Russian Capitalism

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A relatively small number of Russian industrial tycoons, or "oligarchs," control a substantial share of Russia's economy. Are these oligarchs likely to be agents of economic and political change or opponents of such change?

Some consider the oligarchs to be the engine of Russia's economic recovery and institutional reform since 1999 (Boone and Rodionov, 2002; Aslund, 2004). As oligarchs are the only currently feasible counterweight to the predatory and corrupt Russian bureaucracy, they are a unique constituency that is both willing and able to lobby for development of market institutions. They are also the only Russian owners who can afford to invest and restructure Russian industries in a very hostile business environment. To others, the oligarchs have weakened Russia's economy by stripping assets from Russian firms and sending money abroad and also by bringing the ideas of private property and corporation into disrepute. In addition, the oligarchs have also arguably weakened Russia's democratic institutions, by causing tremendous inequality and through their capture of federal and state politics (Stiglitz, 2002; Goldman, 2004; Hoff and Stiglitz, 2004).

In this paper, we seek to understand the role of oligarchs in Russia's transition to capitalism. We use a unique data set to describe who Russia's oligarchs are, what assets they control and how well they manage their assets. We also discuss the implications of high concentration of wealth for Russia's reforms. To many readers, the term "oligarchs" may have a negative connotation. We do not use the term to

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imply a legal, economic or moral judgment on Russia's richest businessmen, but merely as the conventional and convenient term for referring to Russian industrial tycoons.

What We Know about Russian Oligarchs

Who are the Oligarchs?

An oligarchy, as discussed in Plato's *Republic* and Aristotle's *Politics*, is a form of government by a small group. In its current meaning in Russia, the term "oligarch" denotes a businessman (and the lists of oligarchs include only men) who controls sufficient resources to influence national politics. Table 1 presents a list of Russia's oligarchs based on the study of ownership concentration for the World Bank's Country Economic Memorandum for Russia, 2004 (Guriev and Rachinsky, 2004).

The World Bank project identified the structure of control for about 1,700 large firms in 45 sectors of Russian economy in the summer of 2003. The sectors were drawn from mining, manufacturing, construction and market services.[1] The sectors were selected based on their size in order for the survey to cover as large a portion of the economy as possible. The 45 sectors represent 40 percent of Russian employment; in industry (mining and manufacturing), the selected 32 sectors represent 50 percent of employment and 77 percent of sales. The next stage was to target the largest establishments and firms within the sectors. In industry, for example, our firms represented 35 percent of employment and 85 percent of sales of the selected sectors.[2] Finally, economists and business journalists interviewed investment banks, consultancies, business advisors, information agencies and other institutions. They identified the main controlling owners of each firm and the portion of the firm they owned and also any subsidiaries owned by the firms. This in turn generated new sets of firms to be investigated—subsidiaries and corporate owners. A chain would stop downward when a firm owned no subsidiaries and would stop upward when an "ultimate owner" or "controlling party" were identified. The data were checked and supplemented with publicly accessible information.

With these data, we have tracked the degree of control up the pyramidal structures to construct a list of ultimate owners. We went through more than 500 intermediate owners and eventually arrived at the list of almost 700 ultimate owners, which included foreign firms, individuals, federal government or regional governments. We merged individual owners into a group whenever they appeared

[1] The World Bank sample included the largest five-digit OKONKh (similar to four-digit ISIC) sectors that can be described as single "markets" or "sectors."

[2] This paper pays special attention to industry (defined as mining and manufacturing) for two reasons. First, industry plays a crucial role in Russian economy; after adjusting for transfer pricing, industry accounts for 65 percent of Russian GDP (World Bank, 2004). Second, in industry it is easier to build comparable measures of productivity.

Table 1
Russian Oligarchs as of Summer 2003

Senior partner(s)	*Holding company/firm, major sector(s)*	*Employment, in thousands (% of sample)*	*Sales, in billions of rubles (% of sample)*	*Wealth, in billions of U.S. dollars*
Oleg Deripaska	Base Element/RusAl, aluminum, auto	169 (3.9%)	65 (1.3%)	4.5
Roman Abramovich	Millhouse/Sibneft, oil	169 (3.9%)	203 (3.9%)	12.5
Vladimir Kadannikov	AutoVAZ, automotive	167 (3.9%)	112 (2.2%)	0.8
Sergei Popov, Andrei Melnichenko, Dmitry Pumpiansky	MDM, coal, pipes, chemical	143 (3.3%)	70 (1.4%)	2.9
Vagit Alekperov	Lukoil, oil	137 (3.2%)	475 (9.2%)	5.6
Alexei Mordashov	Severstal, steel, auto	122 (2.8%)	78 (1.5%)	4.5
Vladimir Potanin, Mikhail Prokhorov	Interros/Norilsk Nickel, nonferrous metals	112 (2.6%)	137 (2.6%)	10.8
Alexandr Abramov	Evrazholding, steel	101 (2.3%)	52 (1.0%)	2.4
Len Blavatnik, Victor Vekselberg	Access-Renova/TNK-BP, oil, aluminum	94 (2.2%)	121 (2.3%)	9.4
Mikhail Khodorkovsky	Menatep/Yukos, oil	93 (2.2%)	149 (2.9%)	24.4
Iskander Makhmudov	UGMK, nonferrous metals	75 (1.7%)	33 (0.6%)	2.1
Vladimir Bogdanov	Surgutneftegaz, oil	65 (1.5%)	163 (3.1%)	2.2
Victor Rashnikov	Magnitogorsk Steel, steel	57 (1.3%)	57 (1.1%)	1.3
Igor Zyuzin	Mechel, steel, coal	54 (1.3%)	31 (0.6%)	1.1
Vladimir Lisin	Novolipetsk Steel, steel	47 (1.1%)	39 (0.8%)	4.8
Zakhar Smushkin, Boris Zingarevich, Mikhail Zingarevich	IlimPulpEnterprises, pulp	42 (1.0%)	20 (0.4%)	1
Shafagat Tahaudinov	Tatneft, oil	41 (1.0%)	41 (0.8%)	2.9
Mikhail Fridman	Alfa/TNK-BP, oil	38 (0.9%)	107 (2.1%)	5.2
Boris Ivanishvili	Metalloinvest, ore	36 (0.8%)	15 (0.3%)	8.8
Kakha Bendukidze	United Machinery, engineering	35 (0.8%)	10 (0.2%)	0.3
Vladimir Yevtushenkov	Sistema/MTS, telecoms	20 (0.5%)	27 (0.5%)	2.1
David Yakobashvili, Mikhail Dubinin, Sergei Plastinin	WimmBillDann, dairy/juice	13 (0.3%)	20 (0.4%)	0.2
Total		1,831 (42.4%)	2,026 (39.1%)	

Sources: Employment and sales are from World Bank (2004) and Guriev and Rachinsky (2004). The percentages in parentheses are the share of employment/sales of the World Banks sample, that in turn covers a substantial share of the economy as discussed above. Wealth is the market value of the oligarchs' stakes in spring 2004 calculated by authors using Forbes (2004) and stock market data. Wealth includes stakes of all the partners identified by the survey. Each entry lists the leading shareholder(s) in a respective business group, the name of the holding company or the flagship asset and one or two major sectors. We report several individuals per group only when there is equal or near equal partnership. Ranking is based on employment in the sample and may therefore be different from actual, as the sample disproportionally covers assets of different oligarchs. Employment and sales are based on official firm-level data for 2001. The exchange rate was $1 = 29 rubles.

together as ultimate owners for every firm in which they had nontrivial ownership.[3] This approach has helped to establish the basis for stable business groups (usually direct investment companies, registered as partnerships offshore with 2–7 partners).

We ended up with 627 ultimate owners or groups of owners. To rank the owners by size, we calculated the total sales and employment controlled by each owner using a proportional rule. For example, if a group owns 60 percent of a certain firm, then we attributed 60 percent of the employment in that firm to that group. Since it would be reasonable to argue that someone with a 60 percent holding in a firm has practical control over 100 percent of its employment, and since most oligarchs hold majority or supermajority stakes in their firms, our use of this proportional rule provides a lower bound on concentration.

Table 1 includes the 22 largest private domestic owners in this data set. To make the list requires either total annual sales revenues controlled by a particular group of owners are above 20 billion rubles (that is, $700 million) or total employment controlled by the group is above 20,000 people. Table 1 is generally consistent with other oligarch rankings ("Moscow's Group of Seven," 1996; Freeland, 2000, pp. xv–xvii; Pappe, 2000; Boone and Rodionov, 2002; Dynkin and Sokolov, 2002; *Kommersant,* 2003; Hoffman, 2003; *Forbes,* 2004). The columns show total employment and sales that can be attributed to each ownership group. It also shows in parentheses the share of employment and sales in the sample that were controlled by each group—but in interpreting these percentages, remember that the sample is not the entire Russian economy, but rather the largest firms in the largest sectors. The final column shows estimates of personal wealth, which are from *Forbes* (2004). Nineteen individuals in Table 1 have personal wealth in excess of $1 billion in U.S. dollars; all but three groups have joint wealth of at least $1 billion. The sales and employment numbers are far more reliable than the wealth numbers, since most companies are not listed or not actively traded.

A few words of warning about this list are appropriate. First, some owners have interests in industries outside the sample. Our comparisons with other studies of oligarch empires (in particular, with PSI Foundation, 2003) suggest that on average, we cover about 70 percent of each group's sales; this finding is not surprising given that our sample covers only 60 percent of Russian industry. As a result of this partial coverage, our ranking overemphasizes the role of oligarchs who have stronger presence in the 45 sectors we cover and excludes a couple of owners whose

[3] The issue of whether and when individuals should be treated as a group acting together is a serious methodological challenge for every study of concentration of ownership and control (Barca and Becht, 2001, pp. 38–39). For example, consider the stakes controlled by Bill and Melinda Gates, Paul Allen and Steven Ballmer in Microsoft in 1996 (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1999). All four individuals disclose their stakes separately and report that they do not have any commitment to vote in an agreed way. However, La Porta, Lopez-de-Silanes, Shleifer and Vishny (1999) treat this group as a united block, while Becht (1999) assumes that Bill and Melinda Gates vote together, while Paul Allen and Steven Ballmer may be separate owners.

main assets are in industries outside our sample (like Alexander Lebedev of the National Reserve Corporation).

Our definition of oligarchs as large *private* owners excludes politicians, bureaucrats or executives of public companies even when they de facto control large firms. Thus, our list does not include Anatoly Chubais (CEO of the nationwide electricity monopoly), Rem Vyakhirev (former CEO of Gazprom, the world's largest producer of natural gas) or Yuri Luzhkov (Mayor of Moscow). Also, we have not merged regional governments with private owners who are related to regional officials. For example, construction tycoon Elena Baturina (the Moscow mayor's wife) is considered to be a separate private owner different from the Moscow city government, and so are Vice-Mayors of Moscow wherever they own firms individually.

Finally, we should emphasize that any list of Russia's oligarchs needs to be updated regularly, as there has been substantial vertical mobility among Russia's richest. For example, out of seven or eight business groups that dominated Yeltsin's Russia ("Moscow's Group of Seven," 1996; *Kommersant,* 2003), two were destroyed by the 1998 crisis (SBS and Inkombank), one took a hit but survived (Roskredit-cum-Metalloinvest), two have their leaders in exile (Berezovsky and Gusinsky) and one is in prison (Khodorkovsky).

Table 2 presents the breakdown of ownership of the firms in our sample. The oligarchs on our list control about 40 percent of the sample, measured by employment or sales. In extrapolating these percentages to state what share of the Russian economy as a whole is owned by oligarchs, it is wise to be cautious. Our sample is only a share of total Russian output, which suggests that the percentages may overstate the extent to which oligarchs control the economy, but the percentages are calculated using the proportional method, which tends to understate the influence of the oligarchs.[4] While we do not have firm-level value-added data, the World Bank (2004) estimated value added by sector and found that the sectors controlled by oligarchs add more value added per unit of output. Thus, the fact that oligarchs control 39 percent of sales probably implies that they control an even higher share of value added.

Oligarchs and Market Power

Each group in Table 1 controls assets in multiple provinces of Russia and even other countries, and in several industries. Mostly, the oligarchs' conglomerates are horizontally and vertically integrated.[5] Table 3 presents the share of sales controlled by oligarchs in each of the 32 industrial sectors. The oligarchs' shares in the second column are calculated relative to the entire industry, not just our particular sample. Table 3 suggests that oligarchs dominate the largest industrial sectors, in

[4] We have also recalculated the size of groups based on majority (rather than proportional) rule—that is, adding up total sales (employment) of firms where a given group has a majority stake. This would increase the oligarchs' share to 43 percent in terms of sales and 47 percent in employment.

[5] Only Abramovitch, Deripaska, MDM group and Potanin control major assets in unrelated industries, but even in their empires a single industry accounts for most of the conglomerate's value.

Table 2
Breakdown of the Sample by Ownership Categories
(total sales and employment of the firms in the sample controlled by each category of owners)

	Employment	*Annual sales*
Oligarchs	42%	39%
Other private domestic	22%	13%
Foreign owners	3%	8%
Regional governments	6%	6%
Russian federal government	15%	26%
No data	12%	8%

particular natural resources and automotive. The only large sectors not controlled by oligarchs are natural gas, energy and manufacture of machinery. The gas and energy sectors are dominated by federally owned monopolies Gazprom and Unified Energy Systems. Machinery production is a diverse sector that is populated by defense equipment suppliers (controlled by the federal government), oligarch firms and smaller firms controlled by nonoligarch private domestic owners.

Do oligarchs hold excessive market power in the sectors that they control? Table 3 presents the four-firm concentration ratio and Herfindahl-Hirschman Index for each sector; the concentration ratios are based on market shares of individual owners rather than market shares of establishments.[6] The sectors controlled by oligarchs are indeed the ones that are highly concentrated. However, these are also the tradable goods sectors that are subject to global competition. For example, consider the ten sectors where oligarchs control more than 20 percent of total sales. Except for ore and automotives, all these sectors sell to global market: they export 30 to 90 percent of their output; actually, these sectors account for half of total Russian exports. The first exception, ore production, is mostly owned by oligarchs' vertically integrated conglomerates, where ore is an input. The second exception, the automotive sector, is a classic example of interest groups politics as described in Grossman and Helpman (1994). Russian cars are not internationally competitive, and the industry has always relied on protection. Such protection was usually granted, especially in the period in 1990s when the largest carmaker's CEO, Vladimir Kadannikov, served as the first deputy prime minister in charge of economic policy. Yet even with high import duties and support of domestic producers via both generous tax write-offs and subsidies, import penetration was 25 percent and rising. As of 2000, Oleg Deripaska consolidated his control over the second largest carmaker and almost all of the bus and truck production, and the lobbying for stronger protection reached new heights. Indeed, one of the main

[6] The four-firm concentration ratio is the share of four largest owners in the sales of the sector and ranges from 0–100 percent. The Herfindahl-Hirschman Index (HHI) is calculated as the sum of squared shares of all owners in the industry and ranges from 0 to 10,000.

Table 3
Oligarchs' Control and Ownership Concentration by Sectors

Sector	*Sales 2001, billions of rubles*	*Oligarchs' share in sales*	*Four-firm concentration ratio*	*HHI*
Oil	1,256	72%	59%	1,347
Natural gas	579	1%	94%	8,655
Energy	499	8%	49%	1,736
Ferrous metals	275	78%	66%	1,180
Automotive	225	71%	71%	2,365
Machinery	209	12%	12%	51
Nonferrous metals (except aluminum)	154	92%	95%	6,250
Milk	100	18%	23%	215
Pulp and paper	93	30%	41%	646
Coal	89	48%	47%	691
Aluminum	84	80%	90%	2,274
Construction materials	82	6%	32%	385
Jewelry	74	0%	87%	2,666
Meat	69	16%	29%	299
Fertilizers	61	46%	66%	1,350
Beer	59	2%	57%	1,171
Tobacco	59	0%	91%	3,121
Bakery	58	0%	5%	11
Rubber	51	4%	65%	1,291
Confectionary	50	0%	59%	1,179
Timber	48	5%	8%	32
Vodka	45	14%	33%	384
Fish	42	0%	22%	202
Mill	40	5%	14%	95
Pipes	34	55%	85%	3,541
Ore	30	73%	59%	1,190
Tyre	28	10%	64%	1,338
Pharmaceutical	28	17%	37%	446
Cable	23	15%	34%	411
Poligraphy	22	2%	38%	659
Furniture	20	3%	23%	206
Nonalcoholic drinks	18	0%	62%	1,610
Total	4,500	39%		

Notes: The table presents the share of sales controlled by oligarchs in 32 industrial (that is, mining and manufacturing) sectors sorted by size. The last two columns present concentration ratios: the four-firm concentration ratio is the share of four largest owners in the sales of the sector and Herfindahl-Hirschman Index is the sum of squared shares of all owners in the industry). The four-firm concentration ratio ranges from 0 to 100 percent; the HHI index ranges from 0 to 10,000. The total output of the 32 sectors (R 4,500 billion) represented 76.5 percent of Russia's industrial output and 50 percent of GDP in 2001.

reasons that Russia is not yet a member of the World Trade Organization is that the WTO requires lowering import duties for cars, and Russia's automotive lobby launched an aggressive (and a very successful) anti-WTO campaign. The lobbyists managed to install prohibitive tariffs on imports of cars more than seven years old and high tariffs on 3–7 year-old cars (*Moscow Times,* 2003b). Russian cars are priced in the range of $4,000–8,000; the new barriers were equivalent to giving Russian carmakers a slack of $2,000–4,000 per car. Even though joining the WTO was declared by government and president to be a priority in economic policy back in 2000, Russia is still not a member of the WTO.

The large industries where oligarchs play a large role are also industries with substantial economies of scale. Indeed, these are exactly the sectors where large business empires originated in many countries in the late nineteenth century and the early twentieth century, including the United States (DeLong, 1998), Japan (Morikawa, 1992) and Sweden (Hogfeldt, 2004). But except for the automotive sector, there seems little reason for concern that Russia's oligarchs have excessive market power. Although their conglomerates are large by Russian standards, they are certainly not excessive by global standards. Some oligarchs are important global players in their industries (especially in oil and metals), but none is a dominant market leader. Russia therefore does not need antitrust policies aiming at breaking up oligarchs' companies. Instead, it is more important that Russian competition policy assure the level ground field for all owners without regard to their size and political influence—so-called "political antitrust" (Rajan and Zingales, 2003).

How Did the Oligarchs Gain Control?

A common belief is that the oligarchs owe their fortunes to the "loans-for-shares" auctions held in mid-1990s, which are widely regarded as the most scandalous episode of Russian privatization. In the classical loans-for-shares scenario, the government appointed a commercial banker to run an auction that would allocate a controlling stake of a large natural resource enterprise in exchange for a loan to the federal government that the latter never intended to repay. Not surprisingly, the auctioneer always awarded the stake to himself for a nominal bid (usually, slightly above a very low reserve price) by excluding all outside bidders. The scheme was designed to consolidate the bankers' support for Yeltzin's re-election campaign in 1996 (Freeland, 2000).

The conventional loans-for-shares story fits the cases of Abramovich (in 1995–1997, a junior partner of Berezovsky), Khodorkovsky and especially Potanin. The other two winners were the oil sector insiders Alekperov and Bogdanov, who obtained stakes in firms they already controlled. However, most of those listed in Table 1 did not become oligarchs through the loans-for-shares program. Some of the 22 largest owners tried to participate in the loans-for-shares and even offered more competitive bids, but were excluded by those in charge of respective auctions; some even raised their concerns in public (Freeland, 2000).

Most of the individuals listed in Table 1 are relatively young: nine of them are in their 30s, and 13 are in their 40s.[7] The older oligarchs have typically come from

[7] Both mean and median individuals in Table 1 are 44 years old. Russian oligarchs are much younger than their American counterparts. In the *Forbes* (2004) list, the average age of 25 richest Americans is 64 years; the average age of all 262 U.S. billionaires is the same.

Soviet-era nomenklatura. Prior to the transition, they were either managing the respective enterprises or working in government agencies supervising the enterprises, and when the Soviet-era firms were privatized, they converted their de facto control into ownership rights. The younger entrepreneurs started from scratch in the late 1980s building their initial wealth during Gorbachev's partial reforms when co-existence of regulated and quasi-market prices created huge opportunities for arbitrage. In 1992, as price liberalization and privatization began, most of them owned leading trading companies, banks and/or investment funds. Thus, when privatization of industrial enterprises occurred, they had financial capital available to purchase ownership in privatization auctions.

For example, in the early 1990s, Kakha Bendukidze consolidated a large number of privatization vouchers and then purchased controlling stake of his main industrial asset Uralmash in a voucher auction (at a fraction of its current price). In the course of 10 years, he then built a large engineering company that competes in global market, has modern corporate governance and shares listed in London. The Wimm-Bill-Dann shareholders David Yakobashvili, Sergei Plastinin and Mikhail Dubinin introduced a new product—Western-style juice—to the Russian market; in 1992, they took a $50,000 loan and leased a production line in a dairy plant in Moscow. They then took over the whole plant and other 13 dairy and juice plants around Russia. In 2002, they did an initial public offering at the New York Stock Exchange. In a sense, both Bendukidze and Wimm-Bill-Dann shareholders could qualify as success stories of Russian reform as envisioned by its authors (Boycko, Shleifer and Vishny, 1995). These entrepreneurs were neither industry nor government insiders and did not even try to bid in the loans-for-shares program, yet they converted Soviet manufacturing enterprises into successful modern capitalist firms. Of course, a cynic might note that both companies are near the bottom of the list in Table 1 in terms of size, while the loans-for-shares winners dominate the top of the list.

Russian Oligarchs in International Perspective

Cross-country comparisons of wealth concentration are usually based on the share of stock market capitalization controlled by a given number (often ten) of families. Certainly, this metric is not a perfect one—after all, it doesn't include firms not listed on stock markets and emerging markets are likely to provide at best an imperfect measure of value. But we are not aware of comparable data sets on nonlisted firms, so we rely on the data on the share of the stock market owned by the top 10 families. By that measure, ownership concentration in modern Russia is higher than in any other country for which the data are available.

The top 10 families or ownership groups (a subset of Table 1) owned 60.2 percent of Russia's stock market in June 2003. This percentage is much higher than in any country in continental Europe, where the share of 10 largest families is below 35 percent in small countries and below 30 percent in all large countries (Faccio and Lang, 2002). In the United States and the United Kingdom, this share is in single-digit percentages (Faccio and Lang, 2002, Claessens et al., 2002).[8] In east Asian countries before 1997 crisis, the highest shares of 10 largest families were in Indonesia (58 percent), Philippines (52 percent), Thailand (43 percent) and Korea (37 percent) (Claessens, Djankov and Lang, 2000). The numbers for Indonesia and Philippines include the holdings of Suharto and Marcos families, each controlling 17 percent of total market capitalization in the respective countries. In Russia, the personal wealth of Yeltsin and Putin is considered to be very modest.

But even these comparisons probably underestimate the extent of control of Russia's oligarchs. In Europe and east Asia, dispersed ownership allows the largest family to exercise control with a relative small ownership stake in the respective companies (both Faccio and Lang and Claessens use the threshold of 20 percent). In Russia, oligarchs typically hold majority and supermajority shares of both control and cash flow rights (Guriev and Rachinsky, 2004; Boone and Rodionov, 2002).

While ownership concentration in Russia is higher than in other countries today, it does not seem unprecedented in historical perspective. Owners of Korean chaebols (Graham, 2003), Japanese zaibatsu (Morikawa, 1992; Miwa and Ramseyer, 2003), Swedish and Italian largest family-controlled firms (Hogfeldt, 2003; Aganin and Volpin, 2004) and U.S. "robber barons" (DeLong, 1998) controlled a similar share of economic and political power. Also, in many of these countries, the oligarchs' wealth was accumulated with a substantial support from the state (in the form of direct subsidies, tax breaks, land grants, subsidized credit and the like) and was deemed illegitimate by a substantial share of the public at some points in history.

These examples also suggest that oligarchic economies can be successful for long periods of time. However, such economies can also be vulnerable to crises from a generational change in conglomerates' leadership or from inherent inflexibility (Acemoglu, 2003). Generational change has led the decline of many family-controlled businesses in Italy (Aganin and Volpin, 2004), Sweden (Hogfeldt, 2004), and Korea (Graham, 2003). At the time of retirement, the founders of family firms face a tough dilemma of either hiring a professional manager and, thus, separating ownership and control, or passing control to a less competent heir (Ekelund and Tollison, 1980; Burkart, Panunzi and Shleifer, 2003). Russian oligarchs are young, so this issue is hardly relevant in any foreseeable future. They face a rather different tradeoff. Because a large share Russian public deems their property rights illegitimate,[9] the oligarchs need an exit strategy. The obvious solution is to sell a large

[8] A less rigorous approach is to look at the lists of billionaires published in *Forbes* magazine. Even though Russian companies are significantly undervalued relative to their OECD counterparts, *Forbes* (2004) lists 26 billionaires in Russia; only the United States and Germany have more. The 26 Russian billionaires are worth $81 billion, or 19 percent of Russia's annual GDP. The 26 richest U.S. citizens are worth 4 percent of U.S. GDP; the total wealth of all U.S. billionaires is below 7 percent of U.S. GDP.

[9] In a July 2003 poll by ROMIR (an independent Russian research and polling agency), 88 percent responded that all large fortunes were amassed in an illegal way, 77 percent said that privatization results should be partially or fully reconsidered, and 57 percent agreed that government should launch criminal investigations against the wealthy (Fedyukin, 2003).

stake to a reputable foreign investor. Indeed, expropriating foreigners is harder for the state because they are more popular than oligarchs and because of pressures from foreign governments. However, the timing of the exit is a risky gamble. Selling too early would bring too little as the assets are initially undervalued. Delaying the sale in order to restructure the company and improve transparency would raise the price, but would also increase the risk of expropriation by the Russian government.

Economic Performance of the Oligarchs

Do oligarchs improve the performance of the firms they control or injure their performance? Theoretical arguments cut in both directions.

One argument that oligarch-owned firms should be less efficient is that many of these firms are conglomerates with many different lines of business. The "conglomerate discount" literature shows that large conglomerates should be less efficient than stand-alone firms, since they are likely to suffer from multilayered agency problems and to redistribute capital inefficiently (Scharfstein and Stein, 2000). Another reason is that if the oligarchs gain and sustain their position through political favoritism, they may care less about improving firm performance.

On the other side, several arguments suggest that Russia's oligarchs might improve firm performance. First, the oligarchs' performance might be superior because they have successfully overcome the separation of ownership and control (Boone and Rodionov, 2002). An oligarch who owns a very large majority share should have strong incentives for restructuring companies and seeking to improve the value of this asset, rather than for diverting cash flows and stripping the assets.[10] Second, vertical integration can mitigate the risk of hold-up problems, where in a situation of relatively few buyers and sellers, each party must be concerned that the other will attempt to renegotiate and seize a greater share of the joint surplus. Many oligarch empires have been built to overcome such hold-up problems: for example, all Russian major oil companies are vertically integrated; most steelmakers own sources of coal and ore; some companies own ports, fleets of railroad cars and even railroad track. Indeed, Blanchard and Kremer (1997) show that the hold-up problems due to Soviet industrial structure were one of the major factors behind

[10] Even if a firm was originally privatized to dispersed shareholders, its ownership structure was quickly consolidated through dilution and, in some cases, outright expropriation of outside investors including government and foreigners (Boone and Rodionov, 2002). The current champions of transparency Mikhail Khodorkovsky and Vladimir Potanin (now chairing Russia's National Council for Corporate Governance) kept expropriating outside investors until as recently as 1999 (Black, 2001; Dyck, 2003). In our sample, oligarchs do control large stakes in their firms. In an average firm where the largest owner is the oligarch, he controls 79 percent; in case of nonoligarch private domestic owners, this number is only 74 percent. The difference is statistically significant, but not necessarily economically important. The average degree of control by smaller owners over their companies is also very high. Poor protection of minority shareholders rights resulted in consolidation of control within most Russian companies (consistent with La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1998). As a result, smaller owners are not investors that hold small stakes in large companies; rather, they hold large stakes in small companies.

output collapse in early Russian transition. Third, in a situation with underdeveloped financial markets, the lack of finance will be a barrier to entry for smaller firms, and larger oligarch-run firms can benefit from their access to internal finance (Rajan and Zingales, 2003; Acemoglu, 2003). Fourth, Russia lacks a clear rule of law, and the larger conglomerates are certainly more effective than small firms in influencing judicial and political decisions and protecting their property from the predatory "grabbing hand" of federal and local governments (Olson, 1971; Grossman and Helpman, 1994; Sonin, 2003; Yakovlev and Zhuravskaya, 2003; Kumar, Rajan and Zingales, 2003).

Formulating a plausible empirical test of whether and how oligarchs affect the performance of their firms is a challenge. One simple starting point is that labor productivity in oligarch firms is about four times as high as the economywide average (PSI Foundation, 2003). However, comparing oligarch firms to all other Russian industrial enterprises without controlling for industry, region and firm size makes little sense. Indeed, oligarchs' assets are concentrated in a few sectors where average firm tends to be larger in size and more productive. Moreover, the interesting question isn't just oligarchs versus all other firms, but the performance of firms owned by oligarchs versus those of other domestic owners, foreign owners and the state.

In Guriev and Rachinsky (2004) and World Bank (2004), we use firm-level data on 1200 industrial firms from the Russian Industrial Enterprise Registry—the official census of Russian industrial firms. Our main equation estimates the effect of controlling owner's type on the total factor productivity growth:

$$\log(Y_{i,2002}/Y_{i,2001}) = \alpha + \beta \log(K_{i,2002}/K_{i,2001}) + \gamma \log(L_{i,2002}/L_{i,2001}) \\ + \lambda' \text{ control\_type}_i + \mu' \text{ sector}_i + \nu' \text{ region}_i + e_i.$$

The dependent variable is the output (annual sales revenue) of firm i in 2002 divided by its output in 2001, measured in logs. The explanatory variables are a constant term α; the ratio of the capital stock K of firm i in 2002 and 2001 (measured as the book value of fixed productive assets); the ratio of the employment level L of firm i in 2002 and 2001. Our main focus is on the control_type variable, which is a dummy variable for the type of controlling owner. We distinguish between "oligarchs," "foreign owners" (usually large multinationals), "federal government," "regional governments," "other private domestic owners" (omitted category) and "no controlling owner." Sector dummies for each of the 32 industrial sectors help to control for changes in relative prices, technological and other industry-specific shocks and to adjust for the fact that oligarchs tend to control firms in more attractive industries. Regional dummies $region_i$ are included to control for the province-specific factors, like differentials in price level and real wages across regions.

Because this regression compares the change in output holding constant the inputs of capital and labor, the coefficients λ can be interpreted as the effects of the different forms of ownership on the growth of total factor productivity. Table 4 presents the regression results.[11] In 2002, the oligarchs outperformed other private Russian owners by about 8 percent in terms of total factor productivity growth. For comparison, foreign owners outperformed other private Russian owners by 11 percent. The firms controlled by federal and especially regional governments lagged behind, although the difference from nonoligarch domestic private firms was not significant. The latter result may be due to the fact that we classified firms controlled by relatives of regional governors as private; a proper identification of all such firms would however be an effort beyond this paper's focus on oligarchs.

Does the productivity growth come from shedding excess labor force, selling less productive assets or from increasing output given the factors of production? We estimated a set of three regressions using, respectively, the change in the log output Y, the change in the log employment L, and the change in log capital K as the dependent variables. The explanatory variables included only the dummies for ownership control, for sector, for region and the constant term. These regressions show whether there are significant differences across ownership types in change of output, labor or capital. The results, appearing the last three columns of Table 4, show again that oligarchs and foreign owners are associated with greater output growth rather than a more dramatic decrease in employment. None of the owner types are statistically significant variables for explaining the change in employment or the change in capital stock. In private communications with authors, executives of several oligarchs' conglomerates acknowledged the need for cutting their employment by one-half or even two-thirds to become competitive with global leaders in their industry, but political constraints preclude drastic employment changes for the oligarchs as they do for state-owned and other firms. These findings confirm the results of the productivity regression in column 1, that the oligarchs have managed to produce more output holding constant the change in inputs.

The firms controlled by oligarchs have not always been more productive. In regressions for years prior to 2002 (Guriev and Rachinsky, 2004), the difference in productivity growth between oligarchs and other owners is not significant. Also, the productivity *levels* were lower in oligarch firms in 2001 and before and only in 2002 are the same as in firms controlled by other private domestic owners (foreign

[11] We only present the main results. See Guriev and Rachinsky (2004) for robustness checks and alternative specifications. We tried different definitions of "controlling owner" dummy—from the type of largest controlling shareholder to the one who controls 50 percent or more—but they all provide similar results. The concentration of control within firms is very high (only in 5 percent of firms does the largest owner controls less than 25 percent). The effect of degree of control on productivity is not significant; apparently, there is too little variation in the degree of control in our sample. Once we control for industry, it is likely that regressions for output Y would provide results similar to those for value added; unfortunately, due to omnipresent avoidance of the value-added tax, there are no reliable firm-level data on value added in Russia. Results are robust to choosing alternative specifications for production function, to controlling for size or past productivity levels in total factor productivity growth regressions. We have also found that oligarch firms feature higher reported accounting profits and annual wages in 2002 than other Russian owners (although the difference in wages is not significant in some specifications). The difference may reflect higher productivity or more transparent accounting.

Table 4
Oligarchs Outperform other Russian Owners in Terms of Productivity Growth

	Productivity growth	*Growth in output, employment and assets*		
Dependent variable	*Change in log Y*	*Change in log Y*	*Change in log L*	*Change in log K*
Oligarch	0.08	0.08	0.01	−0.01
	(2.32)**	(2.22)**	−0.19	−0.60
Foreign	0.11	0.10	−0.03	0.05
	(2.01)**	−1.62	−0.76	−1.05
Federal	−0.01	0.01	0.03	0.04
	−0.15	−0.20	−0.64	−0.62
Regional	−0.10	−0.10	−0.01	−0.05
	−1.06	−1.05	−0.22	−1.12
Change in log L	0.60			
	(7.11)***			
Change in log K	0.05			
	−1.07			
Observations	1005	1005	1005	1005
Adj R^2	0.34	0.19	0.56	0.32

* Significant at 10 percent; ** significant at 5 percent; *** significant at 1 percent.
Robust t statistics in parentheses.
Notes: The definition of control is based on the type of largest controlling stake holder given that the stake is at least 25 percent. The omitted category is "other private domestic owner," dummy for "no controlling owner" included but not reported. Dummy variables for regions and industries are included in all regressions but not reported. Outliers: 1 percent highest and 1 percent lowest observations of $\log(Y_{i,2002}/Y_{i,2001})$, $\log(K_{i,2002}/K_{i,2001})$, and $\log(L_{i,2002}/L_{i,2001})$ are excluded.

owners are significantly more productive than other owners). Given that our ownership data refer to June 2003, there can be two potential interpretations. First, if we assume that ownership has not changed much in 2001–2003, then the regressions for 2001 and prior years compare firms within and outside oligarch groups. In this case, it may just take some time to consolidate ownership and restructure, so that the restructuring efforts have not produced tangible results before 2002, and only now are starting to show up. Alternatively, if we assume that a substantial part of oligarch holdings was purchased after 2001, then pre-2002 regressions point at firms that were not yet within oligarch groups but only joined them later. This argument implies that oligarchs have taken over poorly performing firms and turned them around. In both cases, the evidence is consistent with the view that oligarchs do manage their firms better than other Russian domestic owners and better than regionally owned firms, and almost as well as foreign owners.

Naturally, the results should be treated with caution. We only have one observation on ownership structure and only contemporaneous data on performance. The performance of these firms should be tracked for years after the date of our ownership survey. Also, it would be useful to have more than one observation on ownership structure for each firm and test whether changes in ownership imply changes in performance. The other problem is the endogeneity of oligarch ownership: the oligarchs may have acquired assets with higher growth potential. Controlling for industry and regions does not fully address this problem; one has to devise instruments related to the nature of acquisition of each asset by its current owner. Finally, oligarchs' productivity advantage may be explained at least in part by political connections, rather by superior management skills.

Ownership Concentration and Political Economy of Reform

As a small group with many common interests and substantial economic resources, oligarchs possess enormous political power (Olson, 1971). Do oligarchs as a group promote or impede the institutional change in Russia? On one hand, oligarchs are large private owners who should be interested in establishment of private property rights, contract enforcement and the rule of law (Boycko, Shleifer and Vishny, 1995). On the other hand, given Russia's immature political system, they can use their political influence for redistribution from other economic agents (Stigler, 1971; Sonin, 2003; Glaeser, Scheinkman and Shleifer, 2003). A look at oligarchs' lobbying activities in 2000–2003 suggests that both effects are important in Russia. Oligarchs work hard to reduce their own cost of doing business in Russia, but do not lobby for other entrepreneurs to have access to an improved business environment.

In 2000, the oligarchs took over the Russian Union of Industrial and Entrepreneurs (RSPP), which was converted from an association of middle-size manufacturing enterprise managers into a leading lobby of big business. After the oligarchs secured control over the RSPP's governance; they then created and led multiple taskforces, each responsible for a specific avenue of reform: tax reform, industrial policy, foreign trade, land reform, judiciary reform, railroad reform, international relations and many others. Since 2000, RSPP's leaders have regularly met with President Putin to discuss economic policy, reform of bureaucracy and other strategic issues. They also provided "advice" to the government and parliament on legislative changes; on several occasions RSPP even drafted and put forward important pieces of legislation. In many cases, the RSPP lobbying activities have been conducive to Russia's long-term economic prosperity. RSPP leaders lobby for low and transparent taxes, competent judiciary, reform of bureaucracy, reform of natural monopolies, Russia's accession to the World Trade Organization, development of small business and even pragmatic foreign policy. Indeed, since other pro-market constituencies in Russia—like small- and medium-size entrepreneurs and consumers—have failed to acquire any political weight, RSPP has become the only effective interest to support these reforms.

However, the intensity and outcomes of RSPP's efforts vary widely across activities. RSPP has been most successful in lowering taxes, liberalizing current and capital accounts and promoting land reform. Some progress was achieved in administrative reform. However, RSPP was much less active in promoting banking reform and in establishing a strong competition authority. This pattern is consistent with Stigler (1971) and Rajan and Zingales (2003), who argue that powerful insiders try to design the rules of the game so that benefits obtained from the state (for example, through lower taxes) are not shared with new entrants.

RSPP members have been divided on Russia's accession to the World Trade Organization (Cottrell and Wagstyl, 2002). While the steel exporters were in favor of accession, the oligarchs that had stakes in protected sectors such as automotive, insurance and banking strongly opposed it. Also, again in line with Stigler (1971), many oligarchs were interested in delaying accession until they have completed their acquisitions of Russian firms and then in switching to support accession so that they could at that time more easily sell assets to foreign investors.

Curbing the oligarchs' political influence was an essential part of Vladimir Putin's presidential campaign already in 2000. In his open letter to voters, he promised to treat the oligarchs in the same way as other entrepreneurs (*Kommersant,* 2000); a few days later he announced that all interest groups would be kept at an "equal distance" from his government. In the first meeting with the leading oligarchs on July 28, 2000, President Putin offered them the following pact. As long as the oligarchs paid taxes and did not use their political power (at least not against Putin), Putin would respect their property rights and refrain from revisiting privatization. This pact defined the ground rules of oligarchs' interaction with central and regional government for Putin's first term (2000–2004). Although the pact could never have been written down, even the general public was well aware of its existence. A poll by FOM (an independent nonprofit Russian polling organization) a week after the meeting showed that 57 percent Russians knew about it.

Putin's threat to prosecute any oligarch who would deviate from the pact was based on the median voter's support for expropriating the oligarchs. Putin proved his credibility in 2003, when the prominent oligarch Mikhail Khodorkovsky, the major owner of the Yukos oil company, deviated from the pact by openly criticizing corruption in Putin's administration (Moscow Times, 2003a) and supporting opposition parties and independent media (Vedomosti, 2003a). Khodorkovsky and his partners were soon arrested or forced into exile, and their stakes in Yukos appear likely to be expropriated.[12] It is not clear why Khodorkovsky did not stick to the pact. Perhaps Khodorkovsky thought that if he supported opposition parties, rather than challenged Putin himself, he was not violating the pact. Probably he did not expect Putin to respond so decisively. The expropriation of Yukos shareholders has certainly involved serious costs for Russian economy—the investment climate worsened and capital flight increased substantially. Stock of Yukos, once the most valued Russian company, is now traded at about 20 percent of its earlier price even though world oil prices are at historical high. However, Putin has clearly demon-

[12] Yukos case hearings are still underway as we are writing the paper. The logic of our argument suggests that the most likely outcome is a full expropriation and imprisonment/emigration of Yukos majority owners even if this fully destroys the value of the company.

strated that his priority was to establish his credibility even if this damaged his economic agenda.

The Yukos affair has clarified the rules of the game between oligarchs and the Kremlin. Oligarchs have learned the risks related to violating the pact, and so in the future, they will be less likely to interfere in national politics. Ironically, by crushing Russia's most transparent company, Putin has pursued the "political antitrust" policy that was crucial in building the U.S. democracy and economy in the beginning of twentieth century (Rajan and Zingales, 2003). Even though oligarchs remain economically powerful, they have no longer any weight in politics.

Khodorkovsky's case may even have made the oligarchs too vulnerable. Given that bureaucracy is as corrupt as before, the Yukos affair effectively shifted the bargaining power from oligarchs to bureaucrats. Although outright expropriation of oligarchs will probably remain just a threat, their cash flows will be milked more intensively by bureaucrats in the form of kickbacks, donations to pet projects and direct bribes.[13] This will in turn undermine oligarchs' property rights and incentives to invest. To sustain economic growth, Putin has to constrain rent seeking by his own bureaucrats. This task is certainly not an easy one, given that democratic checks and balances are very weak. Moreover, neither government nor oligarchs are interested in the development of democracy and civil society. Bureaucrats do not like to cede their control, while oligarchs are afraid of the median voter's redistributive agenda.

Putin's task is difficult but not impossible. It is instructive to look back at Park Chung-hee's first years in power in Korea. While there are many differences between Korea in the 1960s and Russia, it is certainly not true that corruption was initially low in Korea. Nor did Korea possess developed democratic institutions. General Park came to power in 1961 after Korean public was deeply disappointed in the corrupt regime of Syngman Rhee, the first president of independent Korea. At that time chaebol owners had already built their initial wealth; the public deemed their wealth illegitimate as it was related to corrupt deals and misuse of U.S. aid (Graham, 2003). General Park started off with a crackdown on these "oligarchs." He even made them promise to donate large parts of their wealth to charities or return to the state. Korea's richest person, Lee Byung-chol of Samsung—who supposedly held 19 percent of all national wealth (Graham, 2003)—was in opposition to Park and eventually had to pay fines to the government in 1963. Yet no chaebol lost any serious part of its wealth. No chaebol leader was prosecuted, even though Park's new laws certainly allowed that and 24 arrests were initially

[13] The renovation of Konstantinovsky Palace in St. Petersberg in 2003 provides a striking example. The renovation was run by Kremlin; the total cost amounted to $300 million even though a private firm offered to do it for $56 million (Vedomosti, 2003b). The project was financed via "voluntary" donations of oligarchs of $10 million apiece. Anonymous oligarchs complained that they "were made an offer they could not refuse." The cost per square meter exceeded even Yeltsin's luxurious (and allegedly overpriced) renovation of Kremlin palaces by the factor of six. Another example is the financing of the ruling "United Russia" party that raised $150 million from oligarchs in 2003, an order of magnitude higher than pro-business opposition parties.

made to establish credibility. In Park's later years, chaebols received substantial support from the state in the form of subsidized loans. The support was awarded mostly to those who succeeded in the export markets. Apparently, Park's administration was happy with chaebols as long as they led Korea's industrialization and economic growth.

There are two important problems with the Korean scenario for Russian voters and Russian rulers. First, it illustrates that democracy may take a very long time to emerge along this path. After losing popularity, Park Chung-hee first rigged an election, and then cancelled presidential elections altogether, appointing himself a president for life. He was assassinated by his own intelligence chief in 1979. The second problem is that part of Korea's success was ingenious picking of industrial winners by Park. Against all odds and economists' advice, he promoted specific industries where Korea did manage to establish a market niche. It is hard for Russia to reproduce this strategy now, because Russia is no longer in the industrialization stage and global competition is much tougher. However, this may be less of a problem because oligarchs should be capable of choosing profitable market strategies themselves.

Conclusions

Both negative and positive stereotypes about Russian oligarchs are true. Russia's oligarchs do control a substantial part of the economy including natural resources industries. The concentration of ownership in modern Russia is probably higher than in other countries. Moreover, it is likely to increase further as Russian's natural monopolies are reformed and privatized. Oligarchs seem to run their empires more efficiently than other Russian owners. While the relative weight of their firms in Russian economy is huge, they do not seem to be excessively large by the standards of the global economy where most of them are operating. However, a majority of the Russian population deems their property rights illegitimate, which creates a fundamental problem for building a democratic and prosperous Russia. This problem is neither insurmountable, nor unique to Russia. Quite a few countries have experienced a period of high ownership concentration, but then eventually moved beyond it.

An unpleasant implication of this analysis is that the development of democracy in Russia may take a long time. Countries with concentrated ownership have lived with "1½ party system" for decades. A real competition between strong political parties is more likely to emerge when financial development, competition policies and openness lower entry barriers and promote the rise of middle class. Neither oligarchs nor the bureaucracy seem to be interested in implementing these policies in Russia anytime soon.

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