The Rise and Fall of Post-Communist Oligarchs:
Legitimate and Illegitimate Children of Praetorian Communism

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Abstract

In the early 1990s Russia seemed to have a chance of becoming a market economy and political democracy. Instead, it has developed a hybrid system aptly called "oligarchic capitalism". We study this institutional transition process by examining the rise and fall of post-communist oligarchs. Although the Soviet order was characterized by insider-serving property rights and discriminatory barriers against outsiders, especially Jews, more than half of the first cohort of oligarchs came from new entrepreneurial entrants in market-oriented sectors. Compared to "old oligarchs" who derived their status from insider connections, "new oligarchs" were younger, better educated and were disproportionately Jewish. But instead of changing the rules of the socio-economic game, they themselves were changed by those rules, as the overwhelming majority engaged in asset stripping and rent seeking. Business empires based on politically-protected oligarchic property rights were vulnerable to political risk. The recent backlash against oligarchs took a particularly heavy toll on former new entrants, especially those of Jewish ethnicity.

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Introduction

At least since Alfred Marshall put the famous epigraph *Natura non facit saltum* on the title page of his Principles of Economics (Marshall, 1966, first edition 1870), economists have realized that institutional change is a continuous and incremental process. The transition from communism to capitalism in the former Soviet Union is a good case in point, since it has been anything but the revolutionary jump from an abstract totalitarian order to a similarly abstract ideal market economy and democracy envisaged by the early reformers (Braguinsky and Yavlinsky, 2000). Instead, the transition process so far has only led to a hybrid system aptly called "oligarchic capitalism".

The study of the actual process of transition from communism to "oligarchic capitalism" is important because it contains valuable lessons about the interaction between economic reform and institutional environment that need to be better incorporated into economic analysis. The communist ideology and the planned economy were widely viewed as the greatest obstacles to normal economic development based on private property and market prices. Once those obstacles had been removed, economists saw good reason to predict a smooth transition to a market economy, followed by sustained economic growth (see Roland, 2000, p. 3).

Fifteen years after that promise, Russia is still far away from western-style market economy and even further away from western-style political democracy. Its most valuable assets and political power are concentrated in the hands of a few privileged (politically connected) owners. A large part of the cold war rhetoric is back, and the Russian people who once embraced the new perspective of capitalism and democracy with enthusiasm seem to be disillusioned and retreating into nostalgia and strong nationalistic sentiment. Thus, studying the evolution of oligarchic capitalism is very important also from a pragmatic point of view.

The "big" question that we attempt to address in this paper is whether oligarchic capitalism represents a transition stage that will eventually lead to a true market economy and political democracy, or whether it is a blind alley that can only lead to another inefficient socio-economic system. Our own conclusion is that at this moment, there are more reasons to be pessimistic than optimistic, but, to paraphrase Joseph Schumpeter, it is not so much the conclusion itself as the analysis that we consider to be the main contribution of this paper.[1]

[1] Needless to say, we hope that similar to Schumpeter's prophecy with respect to the fate of capitalism in the 20th century, our specific answer would also turn out to be wrong,.

We approach the answer to the question of the nature and possible evolution of the oligarchic capitalism by taking a detailed look at the main players, the "oligarchs" themselves.[2] While the phenomenon of oligarchic capitalism in Russia has been widely recognized, the role of oligarchs has continued to stir debate. According to one influential view, oligarchs are "crooks, who transferred their skimming talents to the enterprises they acquired, and used their wealth to further corrupt the government and block reforms." (Black et al., 2002, p. 1731). The opposite view considers them to be representatives of the new entrepreneurial class, the engine of Russian economic revival (Boone and Rodionov, 2002). Which of these opposing views is closer to the truth obviously has important implications for answering the big question posed in the previous paragraph.

The controversy may at least partly come from the fact that past studies have looked at a very small sample (e.g., six oligarchs chosen by Hoffman, 2002) and/or relied mostly on anecdotal evidence. Even the most recent and much more systematic study by Guriev and Rachinsky (2005) covers just 22 largest oligarchic groups and for most part presents a snapshot picture. For this paper, we have assembled, from a variety of sources, our own data set covering a much larger sample of oligarchs, whose careers we follow for over a decade, with the 2000 transition of power from President Yeltsin to President Putin coming right in the middle of our time frame. We can thus employ quantitative methods to study the rise and evolution of post-communist oligarchy in its interaction with changing institutional environment.

Our first insight into defining characteristics of first-wave post-communist Russian oligarchs comes from looking into their backgrounds, that is, pre-transition careers and positions held at the time immediately preceding the collapse of the Soviet Union. Ideological garment aside, the salient features of the old Soviet order were its highly politicized and insider-serving property rights system, and high discriminatory barriers against outsiders, especially ethnic Jews. As the communist system gradually decayed following the death of Stalin, the privileged *nomenklatura* class gained more independence in economic decisions and increasingly exploited their positions for personal gain, in particular by teaming up with parallel economy businesses in what became known as the "Soviet mafia" (Vaksberg, 1991). Still, insider political patronage

[2] In some recent literature, the term "oligarchs" has been reserved for just a "few tycoons" who acquired large formerly state-owned assets at privatization auctions (see e.g., Shleifer and Treisman, 2005, p. 160-161). In this paper, we use this term as a convenient short-cut for any member of the post-communist business elite.

remained the *sine qua non* right until the collapse of the Soviet Union in 1991.[3] When the showdown between the Soviet government and the populist anti-communist movement led by renegade former party leadership member Boris Yeltsin finally took place in August of that year, a large part of *nomenklatura* rallied behind the populist forces ensuring their victory. Over the next few years, this opportunistic part of the former privileged class became the first major source of supply into the pool of the oligarchic elite studied in this paper. We call these "legitimate children" of the previous system "old oligarchs".

The collapse of the Soviet Union also removed at least some of the discriminatory barriers and opened up opportunities for outsiders. Those who took their chances in early years of transition while coming from the outside of the former privileged class faced an intense and often violent war of attrition, but in a few years' time, the survivors emerged as the second major source of supply into the pool of the oligarchic elite. While these outsiders were also largely a product of the decaying praetorian communism, the absence of *nomenklatura* background makes them "illegitimate children" of the previous system, so we call them "new oligarchs".

We find that, at least initially, new oligarchs possessed many of the characteristics that could be considered important for representatives of the new entrepreneurial class. They were younger, more urban, educated more broadly and at higher-quality institutions than old oligarchs, and they also had a very high proportion of ethnic Jews among them. Their initial business success came in market-oriented finance and consumer goods and services sectors that had been conspicuous by their absence under the planned economy. However, a vast majority of new oligarchs subsequently actively participated in asset stripping (Campos and Giovannoni, 2006), largely rendering those initial differences mute. The evidence we have collected indicates that most of the new entrants could not or perhaps would not change the rules and the reward structure of the socio-economic game established by the "Soviet Mafia" and ended up embracing those themselves. However, we do find that a noticeable minority of new oligarchs continued to develop their new businesses independently, and although they were less likely to make it to the very top of the oligarchic pyramid, their long-terms survival chances might have been slightly better than those of their counterparts who played the rent-seeking game.

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[3] "Wherever the newly-emerging Soviet businessman found support from party and state functionaries, both sides flourished, [while if] separate groups of clever dealers were bold enough to try to operate independently, not sharing with or relying upon the ruling elite, they usually got it in the neck." (Vaksberg, 1991, pp. 22-23).

We also find evidence that even though most new entrepreneurs successfully integrated into the oligarchic system and actually increased their influence over time, they have continued to suffer from the stigma of "illegitimate children", in the sense that they apparently felt they could not trust the formal institutional system as much as old oligarchs. We extract oligarchs' reported incomes from the Moscow incomes and taxes database and we demonstrate that at the end of the 1990s, new oligarchs chose to report much less of their incomes to tax authorities than did old oligarchs. New oligarchs were also more likely than old oligarchs to act as behind-the-scenes owners of their businesses and to seek elected political offices. We interpret the latter phenomenon as evidence of the lack of insider connections that could prevent reneging on pre-election promises made to them by politicians (see Gehlbach, Sonin, and Zhuravskaya, 2006).

After the transition of power from President Yeltsin to President Putin, many new oligarchs did indeed lose their privileged positions, although the same happened also to a number of old oligarchs to make way for Mr. Putin's own political cronies. In fact, we find that the expropriation process of oligarchs in our sample is a continuous one, with its peak occurring between 1998 (when President Yeltsin was still in power) and 2003 (the third year of Mr. Putin's presidency). But while during the Yeltsin era it was mostly old oligarchs who were expropriated to allow new oligarchs to take over the prized Soviet-era assets, it is largely powerful new oligarchs and unrepentant former Yeltsin loyalists who are falling under President Putin. Expropriated oligarchs, especially those of Jewish ethnicity are also much more likely to be ostracized under Mr. Putin than used to be the case before. The evidence is mounting that anti-semitism may again be playing a significant role in Russian business and politics.

Section 2 briefly describes the data and methodology. In Section 3, we compare old and new oligarchs in terms of demographics and sources of initial business success and we examine how they co-evolved to produce a new amalgamated post-communist oligarchy during President Yeltsin's second term in office. In Section 4 we document and interpret lingering behavioral differences between old and new members of the amalgamated Yeltsin oligarchy. Section 5 then examines factors affecting the survival of the first-wave post-communist oligarchs in the wake of the first transition of power after the collapse of communism and examines their accumulated personal wealth. Section 6 concludes, while Appendix contains additional details.

2. Data and methodology

2.1 The sample and sources

To identify the oligarchs relevant to our sample, we use the rankings of top business people in Russia compiled by various research and news agencies and brought together in the database LABYRINTH (2005). The first such ranking coming from a legitimate Russian source was compiled in 1995, and it includes 20 richest individuals with personal wealth between 40 – 150 million U.S. dollars. The year of 1995 appears to be the reasonable year to start selecting oligarchs into our sample also because the immediately preceding period was aptly described as that of the "great mob war" (Klebnikov, 2000), so that if a business leader did not survive it, he probably has never had a chance to make it into the ranks of post-communist oligarchy proper.[4]

Several Russian news agencies and the influential journal *Expert* compiled expert-rated ranking lists of the top 50 businesspeople on a regular basis in 1996-1999. The total of 35 such ratings are available from LABYRINTH (2005). For example, AEN (the *Economic News Agency*) would conduct quarterly interviews of 50 experts asking them to assign ratings between 0 and 10 to several hundred "nominees", using the criteria such as the expert's opinion about the degree of influence on Russian business and politics, the amount of capital under control, and so on. AEN would then average those ratings and publish the list of the top 50, together with the corresponding mean rating numbers assigned by experts. The initial cut for our sample consisted of all individuals who were included in at least one of the above-mentioned 36 ratings (including the 1995 ranking of the top 20 richest people – see Appendix for the list of name).

The period of 1995-1999 spanning the battle for re-electing the first post-communist President Yeltsin and his second term in office is widely considered to be the period of emergence and initial consolidation of oligarchic capitalism in Russia. The oligarchic social order has been consolidating even further after President Putin took office in 2000, but not surprisingly for the system where ownership rights are still intrinsically linked to political patronage, a lot of new personalities have emerged. Including oligarchs of this second post-

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[4] There are cases where prominent businessmen were physically assassinated or otherwise retired from business during the "great mob war", but the ventures they helped create were carried on by the remaining partners and evolved into oligarchic businesses included in the sample. Inasmuch as those early-retired partners stay under our radar, the description of the background of the businesses affected remains incomplete. Our sense of the data, however, is that the degree of noise introduced by these omissions is negligible.

communist cohort ushered in by the new President and his team and comparing them with the first cohort is a fascinating task for future research that is, however, obviously too early to undertake at this point. In particular, the period of observation for the new oligarchic cohort is too short and, even more importantly, with President Putin still in power, serious survival bias cannot be avoided. We thus stop adding new members to our sample after 1999.

The number of individual oligarchs included in our sample through the process described above is 176. Subsequent developments have demonstrated, however, that expert ratings of the 1990s were far from complete. In particular, many of the first-wave oligarchs preferred to keep their actual business ownership ties private, to the extent that even experts were not be able to identify all or even most important owners. A variety of more recent sources allow us to identify those owners better than experts could do at the time. For example, it has been revealed only relatively recently that Vitaly Malkin, a permanent fixture in all the 1990s ratings as the oligarch in charge of one of the largest Russian banks, Roskredit, in fact controlled only 1/3 of the shares, with 2/3 belonging to his senior partner Bidzi Ivanishvili who never made it to expert ratings at the time. In another case, behind-the-scenes owner of another major bank "came out" in 2002 following the attempt by the bank's CEO (who had featured in all previous experts' ratings as the oligarch in control of the bank) to sell the bank to another oligarchic group.

Thus, to make our sample more complete, we decided to amend the 1990s experts' rankings by including also those individuals who can be identified based on the information that has become available more recently as behind-the-scene owners or at least major partners of the 176 initially selected oligarchs. In addition to examining cases similar to those mentioned in the previous paragraph, we also read the biographies of oligarchs in the initial sample and looked at the composition of the board of directors of public companies owned by them in order to identify their partners who had been part of the businesses since inception. At the end of the day, we added 120 more individuals, who in our judgment legitimately belong to the same first cohort of business leaders as those identified in experts' ratings in the 1990s. Thus, the total number of oligarchs in our sample is 296. The list of names of the additional 120 individuals, along with the relevant explanations, is presented in the Appendix. We believe that, overall, we have in this paper a fairly comprehensive sample of the first cohort of post-communist business elite.

The main source of information about biographical facts and backgrounds of individual oligarchs and their companies in our sample is LABYRINTH (2005) (http://www.panorama.ru/info/labir-e.html). This database contains more than 22,000 biographies, including biographies of all but 2 of the oligarchs in our sample and detailed information about 1,470 commercial companies, including most of those relevant to our sample. In some cases where the information in the LABYRINTH database was too scanty, we complemented it by more research of our own. We also used comprehensive Moscow incomes and taxes databases for 1999-2004 (see Guriev and Rachinsky, 2006) to extract information about incomes reported to tax authorities in those years, and estimates of personal wealth of oligarchs in 2003-2006 conducted by Russian experts and published in "Finance" journal.

The oligarchs in our sample span a broad range of sectors of economic activity. We employ the following sector classification for the purposes of this paper: 1) finance (banking, investment, insurance); 2) energy (oil, natural gas, coal, utility); 3) metallurgy (including non-ferrous metals); 4) telecommunications and engineering (including weapons); 5) consumer goods and services (including retail and wholesale trade, transportation, and construction); and 6) unclassified, comprised of oligarchic businesses that defy classification (such as when the Mayor of Moscow is ranked among prominent oligarchs). For 176 oligarchs that appear in top 50 rankings used by us as the identification criterion to begin with, the sector of the company that qualified them to appear in those rankings for the first time determines the assignment. In some cases, the main focus of business interests of oligarchs in the sample had shifted considerably over time, but using the classification based on the first time they appeared in the rankings allows us to identify the sector in which the first major business success occurred. For 120 oligarchs who are not present in the rankings we assigned them to the same sector as their partners who did make the rankings.

2.2 Summary characteristics

The average "oligarch" in our sample was 42 years old in 1995, with the youngest aged 23 and the oldest aged 68 (Table 1). Just 7 oligarchs were female (2.36%), so the population of first-wave post-communist oligarchs was predominantly male. Russian or Slavic (Ukranian or Belorussian) ethnicity comprised 73.12% of the sample, while 13.98% of oligarchs were of Jewish ethnicity and 12.9% were other ethnicities (Georgians, Chechens, Tatars, etc.). These numbers can be compared to the numbers from the 2002 Russian Census, according to which the share of Slavic ethnicities in total population of Russia was 82.4%, while the total number of

Jews at 230 thousand people accounted for less than 0.16% of the total population. We can thus see that the share of Jews in the population of oligarchs is almost 90 times their share in the general population, and as shown below, this is almost entirely due to the very high share of ethnic Jews in the population of "new oligarchs".

Table 2 shows that 30% of the oligarchs in our sample were born in Moscow and less than a quarter were born in rural areas. Information about parents' background is available for 103 oligarchs (Table 3): among them, 32% were born in families belonging to the former Soviet *nomenklatura*, while 12.6% more were born to the professorial elite. Still, over 30% managed to become oligarchs despite being born in blue-collar families or even orphaned in childhood.

Educational attainment, in contrast, is almost uniformly high (Table 4). Counting only those who had attended and graduated from college prior to becoming oligarchs, 280 individuals, or 94.6% of our sample did receive at least some college education (all but 3 actually graduated from the colleges they attended). Several oligarchs had more than one bachelor degree, and 69 (23.3%) had completed post-graduate education and held master or doctoral degrees.[5]

The qualitative aspect of the oligarchs' educational attainment is also quite impressive. Out of 296 oligarchs, 116, or 39.2% attended elite colleges in Moscow and St. Petersburg (see Appendix for the list of schools that we deem to be elite), while 35 of them graduated from one of the two most prestigious colleges, Moscow State University (MSU) or Institute of Foreign Relations (IFR). Among others, 99 graduated from colleges in Moscow and in the provinces that give strong professional education in a particular field, such as oil exploration. Only slightly over 20% graduated from colleges where the quality of education looks suspect.

2.3 Distinguishing "old" and "new" oligarchs

To classify oligarchs into "old" and "new" required rules. The first rule we employed was to deem an oligarch "old" if prior to the collapse of the Soviet Union, he/she had been the top manager or one of the top managers in charge of the main asset that qualified him/her to

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[5] We have excluded the degrees obtained by oligarchs since the mid-1990s, that is, when they already had their high status because of doubts about the merits of such degrees. The practice of buying degrees with money or simply awarding those to influential people without academic merit has been wide-spread since the communist era. Inasmuch as some oligarchs seriously studied economics or business management to retool themselves while already working on their oligarchic businesses, Table 4 actually underestimates their true educational attainment.

become a member of our sample. These members of the post-communist business elite have also been called “red directors,” and we retain this naming for this particular subset of old oligarchs in our sample. Our reading of the oligarchs’ biographies classified 61 individuals based on this rule into the “old” and “red director” category.

The second rule assigned to the “old” category the individuals who had been prominent politicians or *nomenklatura* functionaries under the communist regime. These include ministers, deputy ministers and department heads in the former Soviet government, members and staff of the Central Committee of the Communist Party apparatus, regional party and government leaders, managers of the State Bank of the USSR, military and secret service top brass supervising production and export of military materials and equipment. The idea is that those oligarchs had been in the position to supervise the businesses they later gained control over, which classifies them in the "old" category. An example would be the oligarchs in control of the oil company Lukoil, led by Vagit Alekperov, former First Deputy Minister of Oil and Gas Industry of the USSR. Under this same rule we also deemed previous employees of Ministry of Foreign Affairs and Ministry of Foreign Economic Relations of the USSR and of several Soviet-owned foreign exchange banks to belong to the category of “old oligarchs” even if they had not been among the top management. In the Soviet Union, jobs such as those mentioned above required high-level *nomenklatura* clearance and approval; moreover, those individuals also enjoyed privileged access to foreign currency assets at the time when oligarchs as a class were extremely short on safe assets abroad and local interest rates in foreign currency were sky-rocketing (Braguinsky and Myerson, 2007), clearly giving them an important head-start advantage over other oligarchs. The total number of individuals classified as “old oligarchs” based on the second rule is 57.

The third and final rule was to classify individuals as members of “old” oligarchy if they were either relatives or long-time colleagues of the oligarchs classified as “old” under the first two rules. Examples include Yelena Baturina, wife of Moscow mayor Yuri Luzhkov and her brother Victor as well as several junior partners in the Lukoil oil company and the Oneximbank group who were promoted because of long-time relationships with the founding *nomenklatura* partners. There are 14 such individuals in our sample. The total number of oligarchs assigned into the “old” category ("the legitimate children") in our sample is thus 132. Brief explanation of the backgrounds and which rule was applied in deeming each particular oligarch “old” is presented in the Appendix.

As with all rules, some cases do not fit into the intended picture completely. Among oligarchs classified as “old”, the most important such cases are Dmitry Zimin and Konstantin Kuzovoy (founders of Vymplekom, the largest mobile phone network in Russia), and Alexey Soldatov, the founder of the first ISP provider in Russia who created the .ru domain. All these three oligarchs had been top managers of military-related research institutes, clearly *nomenklatura* positions, and their businesses span off from those positions, so our rule 2 above applies. In more functional terms, however, they look rather different from the rest of this category since they clearly created new pioneering businesses. Since these are only 3 cases out of 132, the resulting noise does not appear to be significant enough to raise concerns.

Our examination of the pre-transition biographies of the remaining 164 oligarchs revealed that they either had not been in any particularly privileged position under the communist regime or, at the very least, they had earned some headway in the late years of the Soviet regime due not to *nomenklatura* job but due to exceptional personal talent (such as Svyatoslav Fyodorov, the eye surgeon who founded the Microsurgery of the Eye Institute or the popular fashion designer Anatoly Klimin). We classify these oligarchs as "new" (“illegitimate children”). As documented below, the careers of many new oligarchs (and most of those who were particularly successful) were subsequently bolstered by close relationships they established with the “old oligarchs” and also with transitional government. But according to our rules, they still belong to the “new” category if they had not been members of the privileged insider class in the former Soviet Union. It should be specially noted here that the classification rules required us to classify into the category of new oligarchs also reformist politicians turned oligarchs (e.g., Anatoly Chubais, the architect of the Russian privatization who later became chairman of the largest utility monopoly in Russia) and oligarchs whose source of power was their control of the mob (e.g., Anton Malevsky, a mob leader who until his death in 2002 had been a senior partner in a number of largest steel producers in Russia).

Once again, we encounter a few cases that seem borderline. The most notable example is perhaps that of Mikhail Khodorkovsky, the former owner of the largest Russian oil company Yukos who had been a (relatively low-level) young communist league functionary, and, self-admittedly, started his first business by using political patronage (Hoffman, 2002, p. 101). Still, it appears that his business success as “a pioneering financier” (*ibid.*) was just an early instance of a successful coalition formed between a new oligarch (Mr. Khodorkovsky) and Sergey

Monakhov, first secretary of the young communist league district committee in Moscow and an old oligarch in our classification. We wanted to keep the study of such coalitions and their effects separately from our study of different backgrounds.

3 New oligarchy: origins and consolidation

3.1 New players and new businesses

As the post-communist oligarchy emerged in the second half of the 1990s, many new oligarchs joined the ranks of old oligarchs (or sometimes even surpassed them) in establishing "special relationship" with the state. Still, even in those cases, we can often see a distinction between sources of initial business success and subsequent methods used to further expand and diversify oligarchic businesses. In this subsection, we concentrate on the former part of the story.

Table 5 presents the break-down of sectors in which old and new oligarchs achieved their first major business success (the sector classification was explained in Section 2.1). Almost half of new oligarchs (56% if former politicians and mob-tied oligarchs are excluded) made their first fortunes in finance and banking. While the same is true also of 31% of old oligarchs, the big difference is that new oligarchs established their own banks and/or investment companies, while old oligarchs often simply continued to preside over privatized former state-owned banks that they had controlled since the Soviet era.[6] The share of new oligarchs who made their initial fortunes in the consumer goods and services sector is more than 3 times higher than the corresponding share among old oligarchs. Market-oriented businesses in commercial banking, investment, consumer goods and services had of course been conspicuous by their absence in the former Soviet Union. Thus, almost 2/3 of new oligarchs (more than 70% excluding former politicians and those with ties to mob) first qualified for their status not just through new businesses, but through new businesses in new market-oriented sectors. In contrast, nearly half of old oligarchs derived their status from the control over Russia's natural resources, such as oil, gas, utilities, ferrous and non-ferrous metallurgy. In addition, 13 out of 23 old oligarchs in the engineering sector either represented the old Soviet weapons industry, or were red directors

[6] Notable exceptions are Oneximbank the National Reserve Bank, and Bank Imperial, the new banks that, however, were initially established using privileged access to foreign currency assets by members of the *nomenklatura.* None of our results would change qualitatively if we reclassified the few old oligarchs who established new businesses as new oligarchs.

presiding over state and/or regional telephone monopolies that did not create any new businesses. Thus, with some exceptions noted above, oligarchs whose status in the new Russian capitalism was derived from their status under the previous regime contributed very little to setting up new businesses and expanding the scope of the market economy in Russia.

Not surprisingly, the role of business pioneers required a different type of human capital than had been demanded by the *nomenklatura* system. Demographic data (Table 6) show that an average new oligarch was more than 10 years younger than an average old oligarch, and more than 12 years younger than an average "red director". New oligarchs were also almost twice more likely than old oligarchs and six times more likely than red directors to have been born in Moscow. In terms of quality of education, new oligarchs were 50% more likely than old oligarchs in general and 3.5 times more likely than red directors in particular to be graduates of elite colleges, and the gap in the share of graduates of two of the most prestigious colleges is even higher. The data on family backgrounds are more limited, but for those whose family background we do know, one or both parents of 16% of new oligarchs were college professors, while this was true for only 6 % of old oligarchs.

But probably the most striking feature revealed in Table 6 is that 23.2% of new oligarchs were of Jewish ethnicity, while there were just 2.4% Jews among old oligarchs (1.7% among “red directors”). We can think of the collapse of communism as a “natural experiment” that (at least temporarily) destroyed the mechanism of *nomenklatura*-led selection of business elite, so this big disparity in the share of Jews between old and new oligarchs can be interpreted as strong evidence of discrimination against Jews under the communist regime (Becker, 1957). In contrast, relative shares of other non-Slavic ethnicities (such as Tatars, Chechens, Armenians, etc.) are quite similar between old and new oligarchs. Of course, the wide-spread discrimination against Jews in the Soviet Union is a fact well known to historians.[7]

Table 6 also shows that new oligarchs of Jewish ethnicity were significantly less likely to have graduated from elite colleges, especially from Moscow State University and the Institute of Foreign Relations than new oligarchs overall. However, this hardly constitutes any evidence of

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[7] In an ironical twist of history, there was an even more disproportionate share of ethnic Jews in the early communist leadership (which replaced the officially anti-semitic tsarist rule early in the 20th century). Three out of five members of the first Politburo elected after the Bolsheviks came to power in 1917 were of Jewish ethnicity, and the share of ethnic Jews in the Soviet leadership overall had been extremely high at least until the 1930s.

lower human capital because ethnic Jews were clearly discriminated against not just in *nomenklatura* jobs but also in admission policies of elite colleges, especially the above-mentioned top two ones.[8] In the light of this, the fact that the share of graduates of elite colleges among Jewish oligarchs is still higher than the corresponding share among old oligarchs is a very strong indication that their human capital was extremely high (also, 25% of Jewish oligarchs for whom we have family background data were born to professorial families).

Finally, it is interesting to note the difference in the relationship between education field and the oligarchs' main business. The Soviet educational system placed emphasis on technical and engineering skills (in professional colleges) or, in elite colleges, on fundamental natural sciences and/or basic humanitarian education (heavily indoctrinated by Marxism-Leninism, of course). But in no place (not even in economic or so-called management departments) did it provide even the most basic education in economics, business or market-oriented management. Thus, for those starting new businesses in post-communist Russia, high-level education was perhaps useful in terms of general human capital acquisition, but not for any practical purposes. In line with this, we see that 68.7% of new oligarchs work in businesses that have nothing to do with their education (such as a graduate of performing arts college founding and owning a major commercial bank), and this share is even higher (80%) for new oligarchs of Jewish ethnicity. In contrast, 60.8% of old oligarchs (and almost 80% of red directors) control businesses in the industries closely related to their education (such graduates of oil and gas engineering colleges managing oil and gas related businesses). This is another indicator showing that old oligarchs were mostly old-type professional managers of the Soviet era, while new oligarchs were recruited from those who had high intelligence deployable in new directions on short notice.

[8] Mikhail Fridman, one of the most prominent new oligarchs in our sample, has claimed in an interview that he could not get admitted to the elite Moscow Institute of Physics and Technology because of his Jewish ethnicity. While we could not independently verify his story, it was indeed much more difficult (although not entirely impossible) for Jews to get admittance to elite colleges during the Soviet era. Part of the reason seems to be that Soviet Jews were the only category of the former Soviet citizens with at least a theoretical right to apply to emigrate. Applying to leave the country was tantamount to high treason in the mentality of the communist party leadership, so that management and party functionaries at workplaces and colleges where Jews applied to emigrate were subject to punitive disciplinary action.

3.2 New and old oligarchy: the amalgamation

As already mentioned, the Soviet ownership system had been administered based on the relationship of political patronage, and while the collapse of the Soviet Union opened up opportunities for new oligarchs to enter the scene, the situation in which political and insider connections defined the control over most of the physical capital inherited from the planned economy could not and did not change overnight. Campos and Giovannoni (2006) show that the transitional environment generated huge incentives to "strip" those insider-controlled assets, and many new oligarchs as well as old oligarchs who had made their initial fortunes in newly created commercial banks indeed actively participated in such asset stripping. The resulting story of the emergence and consolidation of the new oligarchic system during President Yeltsin's second term in office (1996-1999) has been told through anecdotal evidence by many sources (see, for example, Klebnikov, 2000; Black et al., 2002). Here we will look for some quantifiable evidence to this effect in our sample, but first it might be useful to review the main storyline.

The first big chance for adept new oligarchs to square up against members of the old *nomenklatura* elite with regard to ownership of most lucrative tangible assets of the former Soviet economy came on the verge of the first Presidential election after the collapse of communism. In late 1995 – early 1996, Yeltsin's popularity was at a historic low and the communist party seemed to have a real chance of regaining power. The new oligarchs who had made fortunes in the banking sector deployed this wealth (in particular by actively buying influence over the country's media) to turn the tide of the presidential campaign. Reelected to the second term, President Yeltsin rewarded his most active political supporters by allowing them to greatly speed up the process of large-scale asset reallocation in their favor, punctuated by a number of high-level political appointments. Thus, Vladimir Potanin (the leader of the Oneximbank group) became first deputy Prime-Minister, while Boris Berezovsky was appointed deputy chairman of the powerful Security Council. The new government appointed by Yeltsin in early 1997 was led by reformist politicians with even closer ties to new oligarchs.

A number of old oligarchs, especially red directors, who tried to maintain independent control of the assets they inherited from the Soviet era found themselves expropriated. For example, Victor Paliy had been general director of a big oil development in Tyumen region since 1989 and held on to it under the name of Tyumen Oil Company (TNK). In 1997 he lost control of his business to the consortium of two new oligarchic groups, Alpha and Renova, led by

Mikhail Fridman and Victor Vekselberg. Mr. Paliy refused to go away peacefully, so he was also criminally charged and prosecuted. In another instance, Anatoly Filatov who had worked at Norilsk Nickel, the largest producer of nickel in Europe since 1957 and had been its general director since the Soviet era, was fired from his position in 1996, shortly after the oligarchic group led by the Mr. Potanin won control over the factory in one of the infamous "loans for shares" auctions.[9] The financial meltdown of 1998 cost several former *nomeklatura* bankers their positions as their banks were declared bankrupt while profitable assets were transferred to other banks, controlled by new oligarchs.[10]

The old Soviet-era oligarchy was also forced to share its control over productive assets with new members coming from the ranks of reformer politicians. One of the earliest examples was Pyotr Aven, the first post-communist minister of Foreign Economic Relations, who left the government in 1993 to become a senior partner in the newly emerging oligarchic group Alpha. This process greatly accelerated during President Yeltsin's second term in office. For example, when Boris Nemtsov became first deputy Prime-Minister in Yeltsin's "young reformers" government in 1997, he pushed through the appointment of his crony, Boris Brevnov, a small banker from the provincial city of Nizhny Novgorod, to the all-important position of the Chairman of the United Energy System (UES), the Russian utility monopoly, which until then had been run by its former "red director". Mr. Brevnov's stint at the helm of the UES was short-lived but his replacement was Anatoly Chubais, "the architect of Russian privatization" who also brought in a number of his political allies and personal aides with him. Overall, 28 oligarchs in our sample came from former reformist politicians and their close personal assistants, and 11 more oligarchs represent political hirings by private oligarchic groups of former politicians who were not necessarily among the leading reformers but who nevertheless possessed significant political clout (such as former members of the Presidential administration, governors, mayors, and their relatives and aides).

[9] In these rigged auctions, government shares in a number of major companies in primary resources and telecommunication sectors were basically given away to just a few oligarchic groups that had developed special relationships with the polity. Among those hand-picked winners we find both old (Lukoil, Surgut and Oneximbank) and new groups (the Berezovsky-Abramovich and Khodorkovsky groups). Klebnikov (2000, Chapter 7) describes the loans-for-share auctions in more detail (see also Guriev and Rachinsky, 2005).

[10] The meltdown of 1998 also resulted in expropriations of a few new banking oligarchs, but most of them came out of the crisis stronger than before.

The frequently-cited story of Boris Berezovsky's business empire (see, for example, Klebnikov, 2000) contains in a nutshell stories of evolution of many of what initially promised to be pioneering new businesses. Mr. Berezovsky started with a small team comprised mostly of mathematicians specializing in automated systems, but he also recruited an influential member of an ethnic mob from the outset. His business took off after he joined forces with Vladimir Kadannikov, the red director of AutoVAZ, the largest car manufacturer in Russia. The newly formed partnership launched the "Logovaz" company in 1989, hailed at the time as "the first western-style car dealership" in the Soviet Union. In reality, it was more of a simple price arbitrage scheme, in which the factory sold its cars to the dealership at government-regulated prices, and the dealership resold those at much higher market prices. Mr. Berezovsky then marketed an investment fund promising to build "the first people's car" in Russia that turned out to be a trivial Ponzi scheme and promptly collapsed. Mr. Berezovsky, however, went on to become a media mogul by taking control of the first channel of Russian television, and he used loans-for-shares auctions to acquire Sibneft oil company. His infamous personal relationship with President Yeltsin's family made him the most powerful Russian oligarch of his time.

Similarly, Roman Abramovich, the richest Russian oligarch as of 2005, began his career in a small toy-producing cooperative where he was not even the owner but rather a hired manager. His career, which is somewhat obscure at that point, might have turned around when his reported personal acquaintance with Andrey Gorodilov, son of the red director of what later became Sibneft oil company, caught Mr. Berezovsky's attention. Mr. Gorodilov-senior agreed to peacefully transfer control over the company to Messrs. Berezovsky and Abramovich, and, in return, Mr. Gorodilov-junior was appointed to a senior managerial position. In yet one more example, Alexei Mordashov, a freshly mint MBA from a British University, started his career at the age of 28 as he was hired by the red director of the Cherepovets steel factory, one of the largest steel producers in Russia, to become his financial guru. Mr. Mordashov then pushed through a privatization scheme that resulted in transferring control over the factory to a newly formed Severostal company where Mr. Mordashov owned 51% of the shares. The red director who, according to his own subsequent interview, failed to understand the importance of this one extra per cent, was forced to retire and Mr. Mordashov has since emerged as the oligarch in sole control of one of the largest steel companies in Russia.

New oligarchs also frequently worked together with politicians and/or government bureaucrats in positions to directly channel flows of government money. For example, in 1993 President Yeltsin created government-funded State Investment Corporation (Gosinkor) with the official aim of investing in strategically important projects. Mr. Yeltsin's former chief of staff, Yuri Petrov was appointed to head the new corporation but instead of investing in rebuilding strategically important industries, he channeled the government-provided funds to a privately owned holding group Guta, which used it to finance its business acquisitions, particularly in confectionery industry. Do we need to mention that Mr. Petrov's son became one of the senior managers of the Guta group? In yet another example, the Inteco company owned by Yelena Baturina has grown into the largest construction company in Russia courtesy of the political clout of her husband, Yuri Luzhkov, the powerful Mayor of Moscow.[11]

While the extent of this asset-stripping and rent-seeking was indeed, "[o]ne of the least pleasant surprises of the transition from centrally planned to market economy" (Campos and Giovannoni, 2006, p. 681), two observations are in order here. First, even if new oligarchs made use of opportunities to engage in those activities, the basic environment that made them lucrative had been created long before them.[12] Second, in what might be considered a surprisingly large number of exceptions to the rule, new oligarchs have been able to grow their businesses without developing ostensible special relationships with either old oligarchs, or the state, or the mob. For example, Ruben Vardanyan started his career in 1990 as a hired manager for Dialog bank, one of the first joint ventures with foreign capital participation in the banking sector in the former Soviet Union. In 1991 he borrowed $35,000 from Dialog bank to start his own investment company called "Troika Dialog". Ten years after that, "Troika Dialog" with Mr. Vardanyan at its helm emerged as the largest and most successful investment bank in Russia. In other examples, the already-mentioned Svyatoslav Fyodorov became one of the major players not only on the economic but also on the political scene by simply continuing to run his microsurgery of the eye business, while Kakha Bendukidze transformed a number of old engineering factories including the Soviet industrial giant Uralmash into profitable market-oriented companies.

[11] Mr. Luzhkov himself was repeatedly picked up in expert ratings used by us as one of the most influential businessmen in the land despite never formally owning any business.

[12] Arkady Vaksberg, the investigative journalist with life-time experience of studying and exposing "the Soviet Mafia", dates its emergence back to the 1960s (Vaksberg, 1991).

3.3 Factors of success in Yeltsin-era oligarchy: an attempt at quantitative analysis

As already mentioned, when constructing our sample, we initially picked 176 oligarchs included at least once in experts' ratings of top 50 businesspeople in Russia in 1995-1999. Six of them can be found only in the earliest, 1995 list that does not include numerical scores of relative influence assigned by experts. For the remaining 170 oligarchs we have measures of their influence from expert polling conducted regularly in 1996-1999, and together they give us 1798 observations. While not all of the 1990s experts' ratings may have been completely accurate as measures of true importance of individual oligarchs, overall they give us a reasonably good measure of such importance. Hence, in this section we limit our attention to the 170 oligarchs for whom we do have experts' influence ratings and we employ regression analysis to quantify how these ratings depended on oligarchs' various characteristics.[13]

Our first aim is to see if we can substantiate the story according to which relative influence of new oligarchs, especially those of them who engaged in asset-stripping, was growing as compared to old oligarchs during President Yeltsin's second term in office. Thus, in the regression specification, we use both the dummy variable capturing the "new" background and year dummies, together with relevant interaction terms. Second, we also want to see if actively supporting President Yeltsin during the 1996 reelection campaign paid off to the oligarchs (both old and new) who gave him such support.

To capture the importance of being an active Yeltsin supporter, we match the oligarchs in our sample to the lists of individuals commended by President Yeltsin for their contributions to his 1996 reelection campaign.[14] There are 47 oligarchs in our sample whose names are in these lists and we assign them the "supporter" dummy variable with the value equal to 1. The "supporter" dummy is also set equal to 1 if the oligarch was a senior partner or a relative of an oligarch commended by Mr. Yeltsin (e.g., Mrs. Baturina, wife of Moscow Mayor Yuri Luzhkov, among those commended by Mr. Yeltsin) and also if the oligarch was Mr. Yeltsin's own relative (e.g., Valery Okulov, Chairman of Aeroflot – Russian Airlines and Mr. Yeltsin's son-in-law).

[13] Different ratings used different numerical scales to measure oligarchs' influence (from 5-points to 11-points). For the purposes of our regression analysis, we have converted all those scales to the 10-points scale.

[14] In July 1996, President Yeltsin signed 4 Presidential Orders (Nos. 360-pn, 361-pn, 365-pn and 366-pn) commending the total number of 375 individuals for active participation in his reelection campaign (the lists are available at http://law.optima.ru/main.html).

Thus, the total number of "supporter" oligarchs among expert-rated 170 oligarchs is 78 (see Appendix for the list of names). We then run the following baseline regression on pooled observations for 170 rated oligarchs (89 new and 81 old) in our sample:

$$ln(inf) = \alpha_0 + \alpha_1 \cdot new + \sum_{j=2}^{4} \beta_j new \cdot year_j + \sum_{j=2}^{4} \gamma_j year_j + \alpha_2 \cdot supporter + \mathbf{b} \cdot \mathbf{X} + \varepsilon \quad (1)$$

where *inf* is the experts' influence rating, *new* is the "new" oligarch dummy, *supporter* is the "supporter" dummy explained above, year dummies capture year effects for 1997, 1998, and 1999 and vector **X** contains other controls.

The estimation results are presented in Table 7 in 4 different specification. First, we run regression (1) with the value of 1 in the "new" dummy assigned to all oligarchs classified by us as "new" according to the rules in Section 2.3. The control vector includes dummy variables capturing the red director background, ties with the mob, whether the oligarch was a former reform politician or not and whether the business he or she controlled was still owned by the state during that period. In the second specification, the control vector also includes all the demographics (age, gender, Jewish and other non-Slavic ethnicity dummies, dummies capturing place of birth, the elite status of college from which the oligarch graduated and whether his business was related to his education field or not).

It turns out that new oligarchs start the period with influence that is statistically indistinguishable from old oligarchs, but especially in 1997 and 1998 their influence grows by 6.0% and 9.6%, respectively, without controlling for demographics and by 3.6% and 8.3% if demographic controls are included. Moreover, only the Jewish ethnicity dummy is significant among the demographic controls, and this, as we already saw, is strongly correlated with new background (we also tried interacting the Jewish ethnicity dummy with year dummies, but the interaction terms do not appear to be significant). Adding the corresponding coefficients, we can see that especially in 1998, being a new oligarch of Jewish ethnicity increased the oligarch's influence ratings by more than 19%.

We can also see that having actively supported President Yeltsin's reelection campaign in 1996 had a significant and lasting effect of increasing our measure of oligarch's importance by 18-20% during the late 1990s (once again, year dummies interaction terms are not significant, so that all the effect of political closeness to the President appears to be already absorbed into influence ratings right after Yeltsin's reelection in 1996). This is, of course, what is to be expected in an oligarchic system where economic and political powers are closely intermingled.

Being in charge of a state enterprise also has a big and significant effect on influence in all specifications (the main such businesses were the largest world producer of natural gas, Gazprom, and the utility monopoly UES).

Guriev and Rachinsky (2005, p. 139) point out that some new entrepreneurs "were neither industry nor government insiders … yet they converted Soviet manufacturing enterprises into modern capitalist firms". To allow for the fact that not all new oligarchs actively participated in asset stripping, two alternative estimates are presented in Table 7 where we replace the simple "new" dummy and its interactions with year dummies in (1) by the dummy that assigns value of 1 to only those new oligarchs whose businesses were not in the engineering or consumer goods sector. The results in those specifications (3 and 4 in Table 7) are both numerically and qualitatively similar to the first two ones. We also tried specifications (not shown) in which the "new" dummy was replaced by the banking and finance sector dummy (as a proxy for asset stripping by both new and old oligarchs) and time interaction terms adjusted accordingly, and, once again, the results were similar but numerically even stronger (the influence ratings of new oligarchs in banking and finance are statistically indistinguishable from all new oligarchs in 1996, but in 1997 and 1998 their relative influence ratings increase by 6.6% and 12.0%, respectively, significant at 5% and 1% levels, respectively).

The estimation results in Table 7 also suggest that the increase in relative influence of new oligarchs came to a halt in 1999. This makes sense since in the wake of the financial meltdown of 1998, President Yeltsin had to sack the so-called government of "young reformers" and to appoint a former Communist Party Politburo member Evgeny Primakov as the new Prime-Minister. Mr. Primakov tried to curb the influence of some of the most prominent new oligarchs, notably Mr. Berezovsky, against whom he ordered a criminal investigation.[15] Although this investigation got nowhere at the time as Mr. Yeltsin changed the government two more times in 1999 in search for his "designated successor", once the ultimate successor (who turned out, of course, to be Mr. Putin) took over, many investigations would proceed at full speed, leading to career crashes for a significant number of new post-communist oligarchs of the Yeltsin era. We will come back to this in Section 5 below.

[15] In early 1999, the Russian media circulated the so-called "Primakov list" of potential criminal cases to be brought against many more prominent oligarchs, including almost all rated oligarchs in our sample. Although the list itself appears to be a hoax, it was an ominous sign for many of those mentioned in it.

To sum up, our quantitative analysis demonstrates that in the new amalgamated oligarchic elite, ties to the previous regime no longer played a significant role in determining the oligarchs' influence and, if anything, the influence of new oligarchs, especially those of them who actively participated in asset stripping, was growing over time. Political loyalty to the current leader (President Yeltsin) was the single most important factor determining individual oligarchs' influence, as it could be expected in an oligarchic socio-economic system.

4. Old and new oligarchs at the turn of the century

4.1 Transparency, from the personal income reporting view

The emergence of the consolidated Yeltsin-era oligarchy did not mean that there were no more differences left between "old" and "new" oligarchs. On the contrary, especially in terms of behavior, many important differences persisted and they subsequently might have played a role in determining the oligarchs' chances for survival under the new regime of Mr. Putin. We examine this survival and factors affecting it in Section 5, while here we document lingering behavioral differences and try to speculate about their causes.

We begin by looking into what we can learn from the ways oligarchs reported their incomes. Most oligarchs in our sample were obviously very rich people leading successful businesses. And some of them did report incomes that were commensurate with this status. Still, others would report only a few thousand dollars of annual incomes or even no income from their primary businesses at all. We can use Moscow income tax databases (see Guriev and Rachinsky, 2006, for a discussion of those) to see if differences in oligarchs' income reporting can be systematically linked to their basic characteristics.

In this subsection, we look at income reporting in the years 1999 and 2000. The 1999 income tax database is the earliest one available, while the 2001 and 2002 databases are available in a slightly different format that makes it more difficult in particular to distinguish between gross and net incomes from securities transactions. Since oligarchic incomes would sometimes differ by an order of magnitude depending on whether securities transactions are counted on a gross or net basis, we chose not to use the 2001 and 2002 income tax databases in this paper. In 2003 and 2004, however, the format is again the same as in 1999 and 2000, so we will utilize the information from those databases in Section 5 to see what changes had happened between 1999-2000 and 2003-2004, the years during which Mr. Putin's new power was already in full swing.

Table 8 presents summary statistics for oligarchs' annual reported incomes in the years 1999 and 2000, calculated in U.S. dollars using the average market exchange rate for the corresponding year, including incomes of family members (while the difference in averages is not very large, in a few cases including family members' income from the same oligarchic business sources seems to be important to get the correct overall picture). Since some oligarchs in good status in one year will have lost it in a subsequent year, we only include entries for oligarchs still in control of their businesses (not expropriated and not retired) at the beginning of each year. More precisely, average reported incomes for 1999 in Table 8 exclude observations for those oligarchs who had retired or had been expropriated before the start of 1999, and average reported incomes for 2000 exclude observations for those oligarchs who had retired or had been expropriated before the start of 2000. We also exclude observations on oligarchs whose main businesses and sources of income were outside of Moscow since the databases cover only incomes generated in the capital city. The total number of observations used in Table 8 and in the subsequent regression analysis is 338, 176 pertaining to 1999 and 162 pertaining to 2000.

To begin with, note that coefficients of variation in Table 8 are extremely high. While some degree of variance in returns should be expected in any kind of business incomes, we believe that much more than that is involved here. Let us first look at some anecdotal evidence. On November 6, 2003, the Russian general prosecutor's office charged Mikhail Khodorkovsky, the owner of Yukos and one of the most influential oligarchs of the 1990s with personal income tax avoidance claiming that he failed to properly report 142.4 million rubles (over $4.5 million) of his personal income in 1999. Since then, Mr. Khodorkovsky has been convicted on several charges, including this one, and sentenced to 9 years in prison. Checking Mr. Khodorkovsky's entries in the income tax databases, we can see that for the whole year of 1999 he indeed reported a meager $1,220 of income received from Yukos. Another top manager of Yukos and Mr. Khodokovsky's partner, Vasily Shakhnovsky, reported just $518 of income in the same year (Mr. Shakhnovsky since pleaded guilty to personal income tax evasion charges, and escaped serving time by agreeing to restitution).

Of course, Messrs. Khodorkovsky and Shakhnovsky were by no means exceptional cases. The already mentioned Mr. Berezovsky who in 1999 was the uncrowned king of Russian oligarchs, officially received only a stipend from the Russian Academy of Sciences worth $417 for the whole year (Mr. Berezovsky, an accomplished mathematician, is an associate member of the Academy of Sciences). In 2000, after being elected to State Duma, the lower chamber of Russian parliament, deputy's salary was added to Mr. Berezovsky's official income for the year, bring the total to \$4,357, but there are still no traces of any income from his business ventures.

At the same time, as can be seen from the data in Table 8, the average income reported by oligarchs in our sample in 1999 was \$396,954 and \$374,202 in 2000. Thirty three oligarchs reported more than \$500,000 of income in 1999, 15 reported more than \$1 million, and 3 reported more than \$5 million. For 2000, the corresponding numbers are 22, 10, and 2.

We can see from Table 8 that incomes reported by old oligarchs were on the average more than 4 times higher in 1999 than incomes reported by new oligarchs, and the corresponding ratio for 2000 is still more than 3 (despite very high standard errors, this difference is statistically significant at 5% level using the two-sample t-test with unequal variance). The previous section showed that by 1999 old oligarchs possessed no particular advantage over new oligarchs in terms of their influence, so we may conjecture that difference in reported incomes might largely be the result of systematically different choices as to how much of the actually received incomes to report. To test this conjecture we have run several regressions where we also try to see if some other parameters of interest, especially being an active political supporter of President Yeltsin, also led to systematic income underreporting. The baseline specification is given by

$$ln\, y_i = \alpha + \beta \cdot old_i + \mathbf{b} \cdot \mathbf{X} + \varepsilon_i, \qquad (2)$$

where y_t is reported income, old_i is the dummy variable that is equal to 1 if the oligarch is "old" and 0 otherwise, and **X** includes various other controls discussed below.

Table 9 reports the results of the regression in three different specifications and with observations for 1999 and 2000 pooled together, employing robust clustered standard errors estimation procedure (we also ran the regressions separately for 1999 and 2000 and the results were qualitatively the same). The first specification includes all oligarchs from our sample, with the control vector **X** consisting of other background characteristics (the "supporter" dummy from the previous section, the "red director", ties to the mob, former reformist politician dummies and the dummy capturing if the business was a state-owned enterprise) as well as all the demographic controls (age, and dummy variables capturing gender, ethnicity, elite college status, the relationship of the job to educational field, being born in Moscow as opposed to province and being born in a city as opposed to rural). The second specification limits the sample to only those oligarchs who were rated by experts in the rating lists employed by us to select the first cut for our sample. Other control variables are the same, but the third and last specification also includes the natural logarithm of cumulative influence ratings assigned by experts to oligarchs throughout the 35 rating lists (hence, if an oligarch was rated in all 35 ratings, his cumulative influence rating is the sum of all 35 ratings, while if he was rated only once, the cumulative rating consists of only that one rating).

The dummy capturing the old privileged background can be seen to affect reported incomes very strongly and statistically significantly regardless of the specification. Thus, it appears that even controlling for other observables, the old privileged class background exhibited a strong and positive effect on reported incomes, although, as we saw in the previous section, there was no similar difference in the degree of actual business success (as measured by experts' influence ratings) between old and new oligarchs. To further test the conjecture that reported income differences may have had a lot to do with income reporting transparency rather than with actual income differentials, we ran the third specification of regression (2), adding experts' influence ratings as an additional control variable.

Note that the elasticity of reported incomes with respect to influence in the regression that includes all our other controls is 0.902, that is, pretty close to 1. Inasmuch as experts' influence ratings reflected the true importance and success of oligarchic businesses, these should be strongly correlated will actual incomes received by oligarchs. But then the coefficients at other variables can be thought of as capturing the degree to which the corresponding characteristics affected the oligarch's decisions about how much of those actual incomes to report. As can be seen from Table 9, while the coefficient at the "old" dummy is still very high and statistically significant in the specification that includes influence ratings as another control, the negative coefficient at the "supporter" dummy almost doubles in its absolute value and becomes significant at 5% level. Thus, other things, including influence equal, active political supporters of the president reported on the average 84.4% less incomes than other oligarchs. Similarly, other things equal, the oligarchs in charge of state-owned businesses reported twice as much incomes as others, presumably because it was more difficult to hide incomes in those businesses.

We can further explore the role of background and its interaction by looking at the elasticity of reported incomes with respect to experts' influence ratings by new and old oligarchs separately (Table 10). The estimate results in Table 10 reveal that this elasticity (estimated without any further controls) is just 0.31 and statistically not significant for new oligarchs, while it is 0.88 and statistically highly significant for old oligarchs, suggesting, once again, that their higher reported incomes might be largely due to better transparency in personal income reporting than to higher actual incomes. Adding supporter and state-owned business dummies has no significant additional effect on incomes reported by old oligarchs, but for new oligarchs, those dummies have significant and large negative and positive effects, respectively.

It has been noted in the literature that oligarchs who actively supported Mr. Yeltsin often used their political capital as a license to ignore both the spirit and the letter of the rule of law (as, for example, manifested in loans-for-shares auctions and other similar methods). Our findings show that this apparently also was the case with the transparency of personal income reporting. But we can also see that those were mostly Yeltsin supporters among new oligarchs for whom such behavior became a norm by the end of his term, while old oligarchs, including active political supporters of Yeltsin still reported their incomes much more transparently.

Why would new oligarchs and especially politically influential new oligarchs be inclined to report less incomes than old oligarchs? We can only speculate, but differences in personal integrity may not be such a big factor. The answer might have more to do with the fact that "legitimate children" with former *nomenklatura* background tended to identify themselves more with the state and the government than "illegitimate children" without such a background, and this made old oligarchs on the average more likely to take the duty of paying taxes more seriously. Also, as we will see in Section 5, new oligarchs and especially Mr. Yeltsin's loyalists turned out to be the most vulnerable category in terms of surviving in the ranks of the oligarchy after President Putin came to power in 2000. Being forward-looking, those new oligarchs could have partly anticipated imminent expropriation following the transfer of power, making them less inclined to cooperate with the state and also increasing their need to tunnel funds to safe banking deposits abroad to hedge against political risk (see Braguinsky and Myerson, 2007).

4.2. Visibility and political activity

There is more evidence, besides differences in income reporting, showing that despite rapid convergence in influence and ownership of most valuable assets, new oligarchs, at least in their own subjective perception, did not feel quite as comfortable as old oligarchs in their role of members of the post-communist elite. We discuss two more pieces of such quantifiable evidence here: the decision to stay out of the public spotlight and the decision to seek political offices.

As already mentioned, 126 oligarchs in our sample were not rated by experts in the 1990s. This might have happened for two reasons: first, non-rated oligarchs might have been known to experts but considered by them to be junior or at least lesser partners of rated oligarchs. The second reason, which is of particular relevance to us here, is that the real owner may have made a deliberate decision to stay behind the scenes, so that instead of this true behind-the-scenes owner the experts would pick up a junior or lesser partner as the main oligarch in control.

Based on information that became available more recently, we have classified 46 out of 126 non-rated oligarchs in our sample as real behind-the-scenes owners or equal partners at the least (hereafter "non-rated senior" oligarchs), while the remaining 70 individuals appear to have indeed been junior partners (see Appendix for details). Table 11 compares various characteristics of non-rated oligarchs subdivided into senior and junior partners, with the characteristics of the 170 rated oligarchs. It turns out that 70% among non-rated senior oligarchs are new oligarchs, a statistically significant difference from the corresponding shares among both rated oligarchs (52%) and non-rated junior oligarchs (54%). Non-rated senior oligarchs are also significantly younger on the average than rated oligarchs, they are more likely to be of Jewish ethnicity and to have ties with the mob. They are less likely to be graduates of elite colleges, and to be former reform politicians. It is not difficult to see how each of these characteristics may have contributed to the decision to stay out of the public spotlight. As expected, the share of active political supporters of President Yeltsin among senior non-rated oligarchs is also much lower than among rated oligarchs – aversion to public spotlight in transitional institutional environment is correlated with aversion to politics in general.

Reported incomes, on the other hand, are quite similar between rated and senior non-rated oligarchs, while non-rated junior oligarchs report substantially lower incomes in both years (which in this case probably reflects the difference in actual incomes). Overall, the examination of characteristics of non-rated senior oligarchs shows that a relatively large number of new oligarchs, especially those whose "illegitimate child" background was accentuated by Jewish ethnicity or less than stellar vitae deliberately elected to exercise caution in seeking public profile.

Similarly, new oligarchs tended to seek elected and other political offices more than did old oligarchs. The total number of oligarchs in our sample who became elected politicians or joined the government at some point of their careers *after* becoming oligarchs is 67. Almost 2/3 of them were new oligarchs, as opposed to slightly over 50% share of new oligarchs among the

229 who did not seek political offices (the difference is statistically significant at 5% level). The model presented by Gelbach, Sonin, and Zhuravskaya (2006) furnishes the reason as to why the decision to seek political offices may reflect the feeling of insecurity or not full integration into the business elite. In weak institutional environments, election promises made to special interests may not be credible, therefore, business owners have to seek political offices themselves instead of lobbying with professional politicians as they would do in stronger institutional environments. Old oligarchs in our sample had been insiders in the bureaucratic game since the Soviet era, so we can expect them on the average to have much better insider connections if not with elected politicians then at least with the bureaucrats actually implementing business regulation. These connections substitute for the (lack of) credibility of election promises. The to new oligarchs who did not have those insider connections would, on the other hand, have to run for offices themselves.

To test this prediction we run a simple linear regression that makes the decision to seek political offices a function of background (new or old) and the location of the main business outside of the capital city of Moscow. Since both the dependent and independent variables take only discrete values of zero or one, the linear probability model is the easiest one to interpret; we did, however, run also probit and logit regressions and the results are qualitatively the same.

Table 12 presents the results of several such regressions, where we first only include among oligarchs turned politicians the 46 individuals who became federal legislators (members of the State Duma, the lower house of Russian parliament, or of the Council of Federation, the upper house) and then expand them to 58, including also those who became ministers or deputy ministers in the federal government. We do not have enough variation to study regional politics in our sample, so we omit the 9 remaining oligarchs who became regional governors or legislators from the regressions reported in Table 12. We also ran these regressions including demographic and other controls, but none of those was significant, so we omit those results here.

As can be seen from Table 12, the new background tended to increased the probability of seeking a political office by 9-14% depending on whether federal government offices are included or not and on the specification. The location of business outside of Moscow also appears to be positively affecting this decision, but the effect disappears when the interaction term with the new background is included. The interaction term, on the other hand, increases the probability of seeking a federal political office by more than 20%, so that we can conclude that it is indeed the new oligarchs with main businesses outside of the capital city who found it most imperative to try to influence Moscow politics by directly participating in it.

5. Post-communist oligarchs under Putin: the backlash and the adaptation

5.1 Expropriation and ostracism: basic evidence

One of our main findings so far has been that although the collapse of the Soviet Union opened the gates to new entry into the ranks of business elite for people who could not have done so before (such as ethnic Jews and other new entrepreneurial oligarchs), the inertia ("institutional hysteresis effect") of the Soviet era was still very strong, so that the rules of the socio-economic game had not changed by much. In particular, this meant that the transition of supreme political power from President Yeltsin to President Putin would inevitably cause a big reshuffle of the business elite, particularly that part of it that depended on political patronage to protect their ownership rights. In this section we study how the transition of power affected the fortunes of Yeltsin-era post-communist oligarchs and which of them were particularly strongly affected.

A priori, we might expect that the oligarchs whose fortunes were particularly tied to the outgoing President would be most vulnerable. Anecdotal evidence certainly seems to point in this direction, as Mr. Berezovsky, the "Godfather of the Kremlin" under Mr. Yeltsin was one of the first oligarchs to be expropriated, despite (or perhaps because of) the fact that he apparently played a large role in selecting Mr. Putin as Mr. Yeltsin's successor. Also, as Mr. Putin assumed power, he almost immediately orchestrated a wholesale change in the top management of the largest state-run monopoly Gazprom.

Other oligarchs of the Yeltsin era with similar backgrounds continued to prosper, however. For example, Mr. Abramovich who used to be Mr. Berezovsky's junior partner has become the richest Russian oligarch since Mr. Putin took over, while Mr. Chubais has survived as the head of the other largest state-owned utility monopoly, UES. The size of our sample in this paper allows us to conduct quantitative analysis that goes beyond assessing individual cases, and it can be expected to produce interesting insights into the effects major political changes might have on individual business fortunes in weak institutional environments.

This analysis also bears upon a different, although related broader question: namely, can an oligarchic system evolve on its own into something less oligarchic and more transparent, and can changes at the top of the political pyramid be a catalyst for such evolution? In the Russian case, it has sometimes been argued that the political regime change from Yeltsin to Putin has led to a generally better rule of law (see, for example, Letiche, 2007). Boone and Rodionov (2002) also conclude that since the turn of the century the oligarchs "have … turned from promoting lawlessness and low transparency to supporting the rule of law and property rights" (p. 2), although they attribute this change to the inner logic of evolution of the oligarchic businesses rather than to an exogenous political change. By looking into which oligarchs from the Yeltsin era had better chances of survival under the new regime and how the behavior of those who did survive changed (if at all), we hope to make a contribution to this debate.

We begin by looking into the factors that might have affected the survival of Yeltsin-era oligarchs in the ranks of Putin-era oligarchy, but first we present here the overview of the whole period of observation. During the 11 years from 1995-2005, 157 oligarchs, or 53.0% of our sample had been separated from the assets they had controlled at least on one occasion, but just 28 such separations (17.8% of the total number of separations) occurred either through natural causes such as death or voluntary retirement or, at the very least, the information was not conclusive that the separation occurred involuntarily. In all other cases, we have conclusive evidence that the oligarchs who lost control over assets did so because of some kind of adverse government action or a hostile takeover or because they were ousted by their own business partners. We call such cases "expropriation" in this paper.

In most of the 129 expropriations the outgoing oligarch left peacefully and did not face any further harassment. In 44 cases, however (more than 1/3), expropriations were accompanied by bitter fighting, sometimes involving literal takeovers and sieges of corporate headquarters by armed security guards and/or law enforcement troops, or they were followed by harsh punitive actions taken against the expropriated oligarch either by the government or by his former partners. These punitive actions included but were not limited to criminal investigations, detentions, sometimes followed by conviction and jail time, forced immigration and even assassinations (including attempted assassinations). We call all such events "ostracism" in this paper. Both avoiding expropriation and ostracism if and when expropriated were thus no trivial matters for the oligarchs in our sample.

The average yearly empirical expropriation rate in our sample was 5.3%. This average number, however, hides considerable fluctuations from year to year, and the same is true of the empirical conditional ostracism rate (Figure 1). The expropriation rate in Figure 1 appears to exhibit an inverted U-shape, with the years 1998-2001 being "high-expropriation" years during which 7-9% of oligarchs would lose their assets. The year of 1997 and 2002-2003 were in the middle range (5-6% empirical expropriation rate), while 1995-1996, and 2004-2005 were low-expropriation years. It is clear from this that expropriation of Yeltsin-era oligarchs was by no means a phenomenon that started only after Mr. Yeltsin had left office; in fact, average empirical expropriation probabilities are fairly similar across both Yeltsin (when it was 5.0% on the average) and Putin eras (when it was 5.6% on the average). The empirical conditional probability of ostracism, on the other hand, indeed increased significantly under President Putin. An oligarch who got expropriated under Mr. Yeltsin faced on the average just slightly over 20% probability of being also ostracized, while with Mr. Putin in power, the chances of an expropriation act being followed by ostracism have more than doubled and stood at 42.7% on the average for 2000-2005. This seems to confirm the conventional wisdom that Mr. Putin's administration has taken a tougher stance against the Yeltsin-era oligarchs, but as we will see in the next subsection, the true picture is actually much more sinister than that.

The aggregate numbers tell only a small part of the story because both expropriated and ostracized oligarchs were very different during these two periods. As we have already mentioned when discussing the formation of the amalgamated Yeltsin-era oligarchic elite, many of the expropriations at that time happened to old oligarchs trying to resist takeovers by members of the new politically connected elite. Table 13 shows that 63% of oligarchs expropriated under Yeltsin were of the old background, compared to only 41% of those expropriated under Putin (the difference is statistically significant at 1% level). Similarly, while 50% of those ostracized under Yeltsin were old oligarchs, their share goes down to 25% under Putin. Not surprisingly, far more oligarchs politically loyal to Yeltsin and whose influence was noticed by experts in 1996-1999 found themselves in trouble under Putin than they did under Yeltsin.

5.2 Comparing expropriations under Yeltsin and Putin: regression analysis

We have seen that differences between old and new oligarchs manifested themselves in various characteristics, demographic, educational as well as behavioral (notably, the degree of transparency in income reporting). There were also important differences within each category – both old and new oligarchs differed in how actively they supported Yeltsin's reelection campaign in 1996, and also new oligarchs made different choices with respect to either playing a political influence game or, on the contrary, staying completely out of the public spotlight in the role of behind-the-scenes owners. We now employ regression analysis to study how all these diverse characteristics might have affected the probabilities of survival and ostracism.

Table 14 presents our estimates of the relative importance of various factors in affecting the probability of expropriation under the Yeltsin administration (1995-1999) using a simple linear probability model. The linear probability model is the most natural one for our purposes as all variables employed in the specification below, both dependent and independent take only discrete values of zero or one. We have also run probit and logit regressions and the results are qualitatively the same.

In the regression results presented in Table 14 we employ the following specification:

$$\begin{aligned} prob\left(exp\right) &= \alpha_0 + \alpha_1 \cdot old + \alpha_2 \cdot supporter + \alpha_3 \cdot old \cdot supporter + \\ &+ \alpha_4 \cdot nonrsen + \alpha_5 \cdot state + \alpha_6 \cdot spec + \alpha_7 \cdot mob + \alpha_8 \cdot refpol + \mathbf{b} \cdot \mathbf{X} + \varepsilon \end{aligned}, \qquad (3)$$

where the dependent variable is the probability of expropriation, "old" is the old background dummy, "supporter" is the dummy that is equal to 1 if the oligarch received Yeltsin's commendation for active support during the 1996 reelection campaign and zero otherwise, "nonrsen" is the dummy variable identifying non-rated senior oligarchs, "state" identifies oligarchs in state-owned businesses, "spec" (standing for "specialist manager") is the dummy that is equal to 1 if the oligarch controlled the business related to his education field and zero otherwise, "mob" is the dummy capturing mob ties, and "refpol" is the dummy capturing the former reformer politician background. Additional controls included in vector X are ethnicity and the elite status of the college from which the oligarch graduated. Eleven oligarchs who voluntarily retired or died of natural causes during the period of 1995-1999 are excluded from the regression. We also test the specification that includes cumulative influence ratings assigned by experts using only the rated part of our sample. These estimates are shown in the last two columns of Table 14 (influence ratings themselves, somewhat surprisingly, turned out to be not significant, so the coefficient on them is omitted).

We can see from these estimation results that old *nomenklatura* background was indeed a significant predictor of higher probability of expropriation during the Yeltsin era. Other things equal, oligarchs who qualified for their status using the privileged background inherited from the Soviet era faced a 16.2% higher probability of being expropriated than did new oligarchs. However, the coefficient on the interaction term between old background and being an active supporter of President Yeltsin, although statistically significant only at 18% level, is a minus 16.3%, suggesting that old oligarchs could completely offset the higher risk of expropriation by investing in political loyalty. It is thus hard to argue that higher degree of expropriation of old oligarchs may have had something to do with replacing less efficient old Soviet-style managers with new entrepreneurial oligarchs – unless, of course, one is prepared to argue (as we are not) that higher managerial efficiency might be positively correlated with political rent-seeking.

Two other categories of oligarchs that faced lower probabilities of expropriation under Mr. Yeltsin were what we have called "specialist managers", that is, oligarchs whose businesses were related to their educational fields, and also non-rated senior partners. As we saw in Section 2.3, specialist managers were mostly old oligarchs, so the 12.4% *lower* probability of expropriation they faced during the Yeltsin era is another indicator that replacing old-style Soviet management with new entrepreneurs was not really a high priority (it can also be interpreted as relatively high valuation placed on specialized skills of those oligarchs during the Yeltsin era). The fact that non-rated senior oligarchs faced the expropriation probability 12.3% lower than other oligarchs is also quite interesting. It can either be interpreted in a straightforward manner as an indication that being identified publicly as an owner of a major business invited more adversity on the part of the government and/or rival oligarchs (so that the decision to play behind the scenes made by some oligarchs was indeed a smart one), or the decision to play behind the scenes could simply be correlated with better survival skills.

A similar regression run using only the sample of rated oligarchs and controlling for their cumulative influence produces very similar results summarized in the last two columns of Table 14. Active political support for President Yeltsin now more than offsets the handicap of having old background in terms of expropriation probability, so that old rated oligarchs who turned into active supporters of the new oligarchic system actually end up facing an overall 13.1% *lower* probability of expropriation than other oligarchs (including new oligarchs and even new oligarchs who were also active Yeltsin supporters). And being a Soviet-style "specialist manager" lowers the probability of expropriation by 14.4% in this sample of rated oligarchs.

Things have changed quite dramatically after President Putin took power in 2000. Table 15 presents the results of estimations of the probability of expropriation for the survivors of the Yeltsin era oligarchs during 2000-2005 using the same specification (3) as above. Once again, the oligarchs who retired voluntarily or died of natural causes between 2000-2005 (there were 17 of those) are excluded, as are, of course, all those who had already been expropriated or otherwise retired by the end of 1999. We can also test another specification here, which looks at the oligarchs for whom we have income reporting data for 1999-2000, and we include those reported incomes (the averages of 1999 and 2000) as an additional explanatory variable (the estimates are presented in the last two columns of Table 15).

The results across the first two specifications (the first 4 columns in Table 15) are very similar despite the fact that in the second specification the sample is limited to oligarchs who were rated by experts in the 1990s. In hindsight, experts' ratings did not matter at all as far as expropriation probability was concerned, and the coefficients on those ratings (not shown) are statistically indistinguishable from zero. We can see that the old *nomenklatura* background no longer is a predictor of expropriation under Mr. Putin; if anything, it appears to somewhat reduce this probability. Being a Yeltsin loyalist, on the other hand, now definitely works in the opposite direction, increasing the probability of being expropriated by 40.1% for all oligarchs and by 41.3% for rated oligarchs. Once again, however, the interaction term between being an active supporter of President Yeltsin and having the old *nomenklatura* background almost entirely offsets this effect. And the coefficient of -22.4% (-26.8% for the subsample of rated oligarchs from the 1990s) on former reformer politician background also offsets more than half of the impact of being a Yeltsin loyalist. The fact that being a Yeltsin loyalist had no adverse effect on the survival of old oligarchs may be due to some sort of "natural selection" bias – after all, those oligarchs had already demonstrated high survival and adaptation skills by successfully serving both the communist regime and the "reformist" government of Mr. Yeltsin. Alternatively, Mr. Putin may possess a positive bias towards the old *nomenklatura* functionaries, perhaps related to his clearly pronounced nostalgia for Soviet times. In any case, we can clearly see that the change of the political regime produced a strong backlash against new oligarchs, especially against those who had been loyal to Mr. Yeltsin.[16]

It is also interesting to note that in one more reversal of the situation under Mr. Yeltsin, the "specialist manager" background also resulted in a significantly higher probability of

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[16] Mr. Putin was Mr. Yeltsin's "designated" successor and he apparently considers himself bound by the promise not to do anything against his well-being or the well-being of his family. This promise may also cover members of the reformist government that had worked with Mr. Yeltsin, which would explain lower probability of expropriation faced by oligarchs with this background. The promise, however, clearly did not cover other new oligarchs.

expropriation under Mr. Putin. This may be related to management replacement implemented by Mr. Putin at the top of some of the state-owned monopolies (notably Gazprom). In fact, our conversations with experts suggest that new top management appointed by Mr. Putin in many such cases was much less professional and competent than even old Soviet-time incumbent management, which was at least comprised of specialists who knew their field.

Including reported incomes as another control does not change much the coefficients on other characteristics, but the coefficient on (the log of) reported incomes themselves is negative and significant. It appears that a 1% reduction in the probability of subsequent expropriation could be gained from a 23.8% increase in 1999-2000 reported incomes.

5.3 The fall of Jewish oligarchs – evidence of anti-semitism?

We now turn to changes that happened to the conditional probability of ostracism between the two periods. During the Yeltsin era, the only significant factor predicting which of the expropriated oligarchs was also going to be ostracized were ties with the mob – in fact all three oligarchs with such ties who were expropriated in 1995-1999 also faced criminal charges (were "ostracized", in our definition). The results of estimating the conditional probability of ostracism under Mr. Putin, using the same specification (3) as above are presented in Table 16.

Qualitatively, most coefficients are similar to Table 15 (showing the estimated effects on the probability of expropriation under the Putin administration), but the coefficient on state-owned business is now negative as most expropriated oligarchs in those businesses were allowed to leave peacefully. Also, income reporting does not have a significant influence on the probability of ostracism (while it had on the probability of expropriation). But it is the Jewish ethnicity factor that really stands out as a determinant of whether an oligarch faced ostracism after being expropriated or not under Mr. Putin. The linear probability model actually understates this phenomenon, while probit and logit models fail to capture it at all for reasons that will become clear immediately, so we turn to raw numbers.

There were 39 oligarchs of Jewish ethnicity in our initial sample. Just 5 of them (12.8%) were expropriated during the Yelstin administration and only one of those (20%) was ostracized. The corresponding numbers for non-Jewish oligarchs were 23.8% and 19.0%, respectively. Thus, under the Yeltsin administration Jewish oligarchs faced lower probability of expropriation and a similar probability of conditional ostracism as oligarchs of other ethnicities.

Under the Putin administration expropriation happened to 12 more oligarchs of Jewish ethnicity (38.7% of the 31 who remained in the sample after subtracting the 5 who were expropriated under Yeltsin and 3 others who retired before 2000). The cumulative probability of expropriation for oligarchs of non-Jewish ethnicities was 26.9% in 2000-2005, so that Jewish oligarchs do appear to have a higher probability of expropriation than non-Jewish oligarchs under Mr. Putin. Still, many Jewish Yeltsin-era oligarchs have continued to do well under the new regime (Mr. Abramovich has even become the richest among all Russian oligarchs and one of the richest people in the world, according to Forbes). It is the jump in the conditional probability of ostracism for oligarchs of Jewish ethnicity that is really stunning. In 2000-2005, this probability is actually more than 100%, as *all* of the 12 Jewish oligarchs expropriated under Mr. Putin were also ostracized, and in addition, one more Jewish oligarch expropriated back in 1995 was investigated and arraigned in court in 2000 on charges related to economic crimes that allegedly happened five years before that. In contrast, ostracism happened to 22.9% of expropriated oligarchs of non-Jewish ethnicities, the ratio that is very similar to the conditional ostracism rate under Mr. Yeltsin.

Our findings suggest that the backlash against new oligarchs, particularly those who were Mr. Yeltsin' active political supporters targeted Jewish oligarchs particularly hard. As we saw in Section 2.3, one of the most striking changes that happened to the business elite in Russia following the collapse of communism was a very high share of ethnic Jews among new entrepreneurial entrants. During the Yeltsin era many of those new Jewish oligarchs built huge business and media empires and were constantly ranked by experts among the most influential members of the amalgamated Yeltsin-era oligarchy. But they, alongside with their non-Jewish colleagues, failed to build a truly long-lasting foundation for those empires that could only have come from a competitive market economy and a western-style democratic political system. Instead, as Mr. Yeltsin's term neared its end in 1999, the new oligarchs tried to hand-pick a successor who would guarantee them "stability" and "continuity". Mr. Berezovsky, the most influential oligarch of the time and a close friend of the Yeltsin family, is particularly credited by the Russian media to have orchestrated two changes of the Prime-Minister, the position second-in-line to Presidency under the Russian Constitution, within the span of just 3 months. When Mr. Putin became the third and final choice in early fall of 1999 and Mr. Yeltsin announced him as his "official" successor, the new leader was practically unknown to the public and widely regarded as Mr. Berezovsky's puppet. Once Mr. Putin assumed powers in 2000, however, he very quickly showed that he was no one's puppet. Not surprisingly, Mr. Berezovsky was one of the first among those whose fortunes took a plunge under the man he had helped bring to power.

As the fates of Mr. Berezovsky and other moguls, particularly Jewish moguls of the Yeltsin era demonstrate, seeking "stability" in an oligarchic system is largely an illusion. The Yeltsin-era oligarchs had built their empires on a shaky foundation of rent-seeking and political patronage, and once the political regime changed, especially Jewish oligarchs found themselves in an extremely vulnerable position given the latent anti-semitism ever-present in the Russian society. Mr. Putin himself may not be an anti-semite (at least we do not think that he is) but a lot of members of his administration, in law enforcement in particular, apparently are, and the oligarchic system simply does not possess sufficient checks and balances to keep them at bay.

5.4 Who were the survivors and did their behavior change?

We started following the Yeltsin-era oligarchs careers with 296 individuals in 1995. By the end of 2005, 157 of them were no longer in good status because of expropriation or retirement events, giving the cumulative attrition rate of 53.2%. We now take a look at the survivors to see if we can find some systematic differences between them and the whole initial sample. The interesting question here is whether some changes in the oligarchic system may be coming simply from uneven attrition within one cohort of oligarchs. We also compare income reporting in 2003-2004 of those oligarchs who survived until the end of our period of observation to income reporting of the same individuals in 1999-2000 to see if we can find evidence that some changes might be under way not just because of attrition of part of the cohort but also because of changes in the behavior of those who survive.

The data summarized in Table 17 shows that overall, there are little differences in terms of most observable characteristics between the whole initial sample of oligarchs and the ultimate survivors. Survivors were somewhat younger in 1995 and also a little more likely to have graduated from elite colleges (a little less likely to be specialist Soviet-era managers). Sector of initial business success doesn't seem to matter much, but new oligarchs appear to have survived overall a little better than old oligarchs. The only significant difference between the whole initial sample and the ultimate survivors, however, is in the share of non-rated senior partners among new oligarchs of Jewish ethnicity. Given the severe backlash that prominent Jewish oligarchs suffered under the Putin regime, it is not surprising that the decision to stay behind the scenes played out especially well for this category of oligarchs in our sample. It also does not indicate any advantages of transparency and western-style public relations in determining survival in the oligarchic system.

The overall unimportance of transparency and abiding by the rule of law in determining survival in the ranks of the oligarchy is also revealed through income reporting data. There are no significant differences in reported 1999-2000 incomes between all new oligarchs still in good status as of 1999 and those of them who ultimately survived. The 1999-2000 incomes reported by ultimate survivors among old oligarchs are about 30% higher than those reported by all old oligarchs, but we saw in Section 4 that old oligarchs tended to report their incomes more fully anyway, so this difference probably reflects differences in actual accrued incomes rather than any behavioral differences between these two groups.

Overall, the data presented in Table 17 suggest that the attrition factor had more or less neutral effect on the composition of the surviving part of first-wave post-communist oligarchs, so that if there were any changes in the composition and characteristics of the oligarchy under Mr. Putin, those changes musts have come from new Putin-era entrants who are not part of our analysis in this paper.

One thing that does catch attention in Table 17 is the fact that incomes reported by ultimate survivors in 2003-2004 grew by the factor of 3.11 for old oligarchs, while the corresponding gross growth rate for new oligarchs was 5.52 and 6.76 for those of Jewish ethnicity. While there apparently has been an overall increase in the degree of transparency in income reporting over those years (partly perhaps attributable to personal income tax reform introduced in 2001), reported incomes by new and especially new Jewish oligarchs had increased even more rapidly. To check for possible indicators of behavioral changes of survivors between 1999-2000 and 2003-2004 we have run the income regression (2) (Section 4.1) for both periods only for those oligarchs who had survived until the end of our observation period in 2005.

The results of these estimates are presented in Table 18. In 1999-2000, the coefficients on the variables which were important for all oligarchs in good status at that time (see Table 9, Section 4.1) have the same signs and are similar in magnitude. This confirms the earlier conclusion that the attrition of Yeltsin-era oligarchs was not that much related to the degree of transparency in income reporting. However, the coefficients in the same income regressions run with 2003-2004 reported incomes are quite different, especially for the sample that includes all surviving oligarchs, both rated and not rated by experts in the 1990s. It can be seen that the biggest change happened to the transparency of income reporting by Yeltsin loyalists: in 2003-2004 incomes reported by this category of oligarchs are much higher than those reported by other oligarchs in the whole sample, while in the rated sample (controlling for influence ratings) the impact of the supporter dummy, although still negative, is much less than in 1999-2000 both in terms of the absolute value and statistical significance. This apparent increase in the degree of transparency of income reporting by new oligarchs, particularly Yeltsin loyalists may at least partly be due to increased threat of expropriation and ostracism they faced under Mr. Putin.

5.5 How much wealth did the survivors accumulate?

How much wealth did the surviving members of the Yeltsin-era oligarchy manage to amass and is it related to any of the characteristics we have studied in this paper? The "Forbes" journal regularly publishes its estimates of the world's richest people, and 6 Russian oligarchs made it to the Forbes list for the first time in 1997. After a few years of absence in the wake of the financial crisis that struck in 1998, Russian oligarchs roared back to the Forbes list in 2001 and since then their presence has been felt more and more. The latest Forbes list of richest people in the world in 2005 counts 33 Russian oligarchs with the total estimated personal wealth of over \$172 billion, or 22.6% of the Russian GDP at the market exchange rate in the same year. The personal wealth of the richest of these, Roman Abramovich, was estimated at \$18.7 billion, or 2.45% of the GDP, roughly 5 times the ratio of Bill Gates' wealth to the U.S. GDP.

Since 2003, the Russian journal "Finance" has been publishing its own estimates of personal wealth of the richest people in Russia. These estimates are available for a much larger sample of oligarchs that the Forbes estimates, and we employ these in our analysis (the estimates that overlap between the two lists are very close). We also impute personal wealth for 2 more oligarchs in our sample whose shares as partners of oligarchs included in "Finance" lists are well-known (see Appendix for details). In Table 19 we present summary data on accumulated personal wealth for the years from 2003-2006 by all oligarchs who were in good status at the start of each year, together with the breakdown of this wealth by some important characteristics.

To see how oligarchic wealth was affected by those characteristics, we ran a regression where the natural logarithm of personal wealth pooled across all observations is estimated as a function of various background dummies and demographics. Since oligarchs who began their careers in the primary resource sectors and stayed there may have especially benefited from the recent upward trend in oil and primary metal prices for (in 2006 3 out of 5 and 6 out of 10 richest oligarchs indeed began their careers either in energy or metallurgy sectors), we also test the specification that includes year dummies and dummies capturing initial business success in the energy and metallurgy sectors, along with the corresponding interaction terms. As can be seen from Table 20, the coefficients on variables of interest are not very sensitive to the addition of these controls, although most of the additional controls are highly significant by themselves and adding them improves the R-squared considerably.

It appears that, other things equal, old *nomenklatura* background is still a major factor affecting the oligarchs' accumulated wealth (the coefficient is somewhat less in magnitude controlling for the primary sectors and time trend, but still quite high and significant). Given that we are looking at the situation 12-15 years after the collapse of the Soviet Union, this finding may be considered surprising, but there are at least two considerations that may help to explain it. The first such consideration is that we are, of course, looking at long-term survivors, and especially the oligarchs with old Soviet *nomeklatura* background among such survivors have successfully endured not one but two major regime changes. It may be argued that only the fittest could have survived this double selection process, and this is manifested in higher wealth that they have managed to accumulate in the process. The second observation has to do with the fact, which we saw repeatedly in this paper, that amidst all the big changes on the surface of events, the rules of the socio-economic game in "new" capitalist Russia have not changed all that dramatically from those that prevailed during the praetorian communism. Viewed from this perspective, higher accumulated wealth of oligarchs who come from old Soviet *nomenklatura* is perhaps more of an indictment of 15 years of "reform" that failed to fundamentally change the rules of the game than it is a tribute to the talents of those oligarchs.

Among other factors that exhibit positive effect on personal wealth of surviving Yeltsin-era oligarchs, Jewish ethnicity stands out once again. To confirm that this is not driven by just one outlier (Mr. Abramovich) we ran the regressions in Table 20 without him, and although the coefficients on Jewish dummy in Table 20 go down by about 0.1 (in both specifications), they are still large and significant. Thus, Jewish oligarchs who have managed to survive (at least until now) under Mr. Putin seem to be doing extremely well.

Two more interesting coefficients in Table 20 are the negative and significant coefficient on the age variable and also negative (although not significant) coefficient on business owned by the state. The latter is in stark contrast to large and positive coefficients on state-owned business in reported income regressions (Table 18) and it thus supports our conjecture that the latter reflects a higher degree of transparency in income reporting in the state-owned sector as compared to the private sector. The coefficients on the age variable in reported income regressions, on the other hand, although not shown in Table 18, are actually also negative and significant. Thus, it appears that, other things equal, older oligarchs did worse than young oligarchs, possibly because young oligarchs adapted better to changing environment.

6. Conclusions

We have seen that first-wave post-communist oligarchs came from two sources, part of the old *nomeklatura* elite that managed to maintain control over the assets it had controlled under the previous regime in the new environment, and the new entrepreneurial oligarchs who initially at least started their business ventures mostly in finance and consumer goods and services sectors, largely ignored under the planned economy. The new oligarchs were younger, had higher human capital and were disproportionately of Jewish ethnicity.

The subsequent course of events, especially immediately before and after President Yeltsin was reelected to his second term in 1996 created opportunities for many of the new oligarchs to engage successfully in asset-stripping and political rent-seeking game, the game which rules were basically the same as those played by the old oligarchy under the decaying praetorian communism. The outcome was an amalgamated oligarchy, where business influence strongly depended on personal loyalty to Mr. Yeltsin and his cronies, and which rapidly became a new exclusive club, stifling competition and corrupting the young and immature democratic institutions of post-communist Russia. If anything, the disregard for the rule of law and the need for transparency appears to have struck many new entrepreneurial oligarchs even more than it did old oligarchs, the fact manifested in our data, in particular, in much less transparent personal income reporting by new oligarchs.

Not surprisingly, business empires built on the foundation of politically-protected oligarchic property rights turned out to be extremely vulnerable to all sorts of political risks, from adverse governmental action to break-down in the trust among business partners themselves. More than half of the post-communist oligarchs who rose to prominence during the Yeltsin era did not survive in the ranks of the oligarchy until 2005, and almost half among those who did not survive had lost their positions even before the first major transition of power from President Yeltsin to President Putin. This transition from Yeltsin to Putin, however, did change the nature of the risks faced by the Yeltsin-era oligarchs: while under Mr. Yeltsin most expropriations happened as a result of fights among oligarchs themselves for the reallocation of most prized assets and were relatively seldom followed by further punitive action, especially by the state, most expropriations under Mr. Putin were initiated by the state and they have been affecting especially new oligarchs who rose to prominence during the Yeltsin era.

Expropriations in the Putin era are also much more likely to be followed by harsh punitive actions by the state, especially so for expropriated oligarchs of Jewish ethnicity, suggesting that the overall backlash against former new oligarchs may be at least partly driven by anti-semitism. Notably, we could not find significant enough evidence that could support the conclusion that those Yeltsin-era oligarchs who continue to survive and prosper under Mr. Putin were qualitatively different in terms of important inherent or behavioral characteristics (such as transparency of income reporting) from those who did not survive. Thus, the changes in the composition of the oligarchic elite coming from attrition do not point into the direction of changes towards a more transparent and less oligarchic system. There are, however, some moderate changes in the behavior of survivors in recent years that may indicate better transparency in terms of personal income reporting.

In the early 1990s it appeared as if Russia had a good chance of joining the club of western countries with market economies and systems of political democracy. The fact that more than half of the post-communist business elite in the 1990s consisted of new entrepreneurial entrants possessing very high human capital, documented by us in this paper, shows that these hopes may not have been completely unfounded at the time. Still, so far they have failed to materialize. The basic message from our analysis appears to be that instead of changing the rules of the socio-economic game established by the "Soviet Mafia", the new entrepreneurial entrants were themselves changed by those rules. The process of institutional transformation has demonstrated once again that it is impervious to rapid changes. Only the future will tell if the current stage of "oligarchic capitalism" turns out to be a step toward the eventual promised land of "true" capitalism.

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Table 1. Age, gender, and ethnicity

Age in 1995	Average	St. deviation	Minimum	Maximum
	42.2	9.8	23	68
Gender and ethnicity			Frequency	Percent
Male			289	97.64%
Female			7	2.36%
Slavic (Russian, Ukranian, Belorussian)			204	73.12%
Jewish			39	13.98%
Other			36	12.90%

Note to all tables: total might be less than 300 because of missing data

Table 2. Place of birth

	Frequency	Percent
Moscow	71	29.46%
Other city	111	36.06%
Rural town or village	59	24.48%

Table 3. Parents' background

	Frequency	Percent
Nomenklatura (military and civilian)	33	32.04%
Professors	13	12.62%
White collar	26	25.24%
Blue collar	25	24.27%
Orphaned in early childhood	6	5.83%

Table 4. Education attainment and college status

Attainment (prior to becoming an oligarch)	Frequency	Percent
High school and unknown	16	5.4%
College (including some college)	210	70.9%
Post-graduate	70	23.6%
College status (see Appendix for criteria explanation)	Frequency	Percent
Elite	116	39.2%
Of which: MSU, IFR	35	11.8%
Professional, Moscow	47	17.3%
Professional, province	52	19.1%
Other	57	21.0%
Majoring in:	Frequency	Percent
Natural sciences and engineering	165	59.4%
Social sciences (including finance)	104	37.4%
Education and business related	Frequency	Percent
Closely	105	38.2%
Somewhat	34	12.4%
Not at all	136	49.4%

Table 5. Sectors of first business success.

	Frequency	Percent
Finance (banking, investment, insurance)	121	40.88%
Energy (oil, gas, coal, utility)	64	21.62%
Metallurgy (including non-ferrous metals)	31	10.47%
Telecommunications and engineering (including weapons)	29	9.80%
Consumer goods and services	34	11.49%
Unclassified	17	5.74%

	old	of which: "red directors"	new	of which: Jewish
Finance	31.06%	18.03%	48.78%	50.00%
Energy	31.06%	45.90%	14.02%	25.00%
Metallurgy	10.61%	13.11%	10.37%	5.56%
Engineering	17.42%	16.39%	3.66%	2.78%
Consumer goods	4.55%	4.92%	17.07%	11.11%
Unclassified	5.30%	1.64%	6.10%	5.56%

Table 6. Basic demographics of old and new oligarchs

	old	of which: "red directors"	new	of which: Jewish
Average age in 1995	47.8	50.1	37.7	38.4
Shares in total:				
Slavic	84.7%	82.8%	63.9%	-
Jewish	2.4%	1.7%	23.2%	100%
Other	12.9%	15.5%	12.9%	-
Born in Moscow	21.2%	5.8%	36.7%	40.0%
Born in cities	65.5%	48.1%	84.4%	96.7%
Elite college graduates	30.3%	11.7%	46.3%	33.3%
Of which: MSU, IFR	6.1%	3.3%	16.5%	8.3%
Education field and business related:				
closely	60.8%	79.3%	19.3%	14.3%
somewhat	12.8%	10.3%	12.0%	5.7%
not at all	26.4%	10.3%	68.7%	80.0%

Table 7. Regression analysis of influence ratings

		Specifications 1 and 2				Specifications 3 and 4			
Dummy variables		Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
New		-0.009	0.87	-0.016	0.80	0.039	0.43	0.015	0.80
New&year interact.	1997	**0.060**	0.07	0.036	0.30	**0.062**	0.08	0.051	0.16
	1998	**0.096**	0.03	**0.083**	0.08	**0.094**	0.04	**0.100**	0.03
	1999	0.031	0.59	0.037	0.53	-0.034	0.58	-0.016	0.78
Supporter		**0.206**	0.00	**0.180**	0.00	**0.210**	0.00	**0.190**	0.00
State enterprise		**0.164**	0.02	**0.188**	0.00	**0.166**	0.01	**0.186**	0.00
Jewish ethnicity		Not included		**0.106**	0.06	Not included		0.078	0.20
# of observations		1798		1590		1798		1590	
# of individuals		170		143		170		143	
R-squared		0.219		0.257		0.240		0.267	

Pooled OLS regressions of experts' influence ratings for 1996-1999 using individual-clustered robust clustered standard errors. Specifications 1 and 2 include all new oligarchs as "new". Specifications 3 and 4 exclude from "new" those new oligarchs who developed their businesses in engineering and consumer goods and services sectors. Coefficients significant at least at 10% level are in bold. Other controls include year dummies, red director, mob ties and former politician backgrounds in the first two specifications, and also all demographics in the two last specifications.

Table 8. Oligarchs' reported incomes (sum of monthly net reported incomes)

Year	# of observations	Mean	St.Deviation	Minimum	Maximum	Coefficient of variation
1999	176	396,954	1,342,195	1	11,400,000	3.38
	Of which:					
old	75	698,863	1,934,395	2,165	11,400,000	2.78
new	101	172,763	514,278	1	4,435,760	2.98
2000	162	374,202	1,220,946	46	12,300,000	3.26
	Of which:					
old	65	622,781	1,735,714	3,196	12,300,000	2.79
new	97	207,629	649,385	46	5,906,678	3.13

Note: oligarchs with main sources of income outside of Moscow as well as oligarchs who had already been expropriated by the end of the previous year have been excluded.

Table 9. Regression analysis of oligarchs' reported incomes

Variables		All oligarchs	Rated oligarchs only	
old	coefficient	**1.656**	**1.778**	**1.562**
	p-value	0.00	0.01	0.00
Supporter	coefficient	-0.344	-0.291	**-0.844**
	p-value	0.43	0.62	0.05
State enterprise	coefficient	0.181	0.645	**1.081**
	p-value	0.67	0.27	0.02
ln(cumulative influence)	coefficient	Not included	Not included	**0.902**
	p-value			0.00
R-squared		0.118	0.201	0.420

The dependent variable is log reported income for the years of 1999 and 2000, pooled together, and including family members' income. Oligarchs with main sources of income outside of Moscow as well as oligarchs who had already been expropriated by the end of 1999 have been excluded. Other controls are all the background dummies and the demographics. Robust standard errors controlling for clustering are employed. Coefficients significant at least at 10% level using robust standard errors are in bold. The number of observations and distinct individuals are 251 and 127, respectively, for all oligarchs and 145 and 74 for rated oligarchs.

Table 10. Old versus new oligarchs' income reporting

Variables	New oligarchs			Old oligarchs		
ln(cumulative influence)	coefficient	0.313	**0.478**	coefficient	**0.882**	**0.873**
	p-value	0.11	0.00	p-value	0.00	0.00
Supporter	coefficient	Not included	**-1.138**	coefficient	Not included	0.046
	p-value		0.04	p-value		0.94
State enterprise	coefficient	Not included	**1.909**	coefficient	Not included	-0.056
	p-value		0.00	p-value		0.91

The dependent variable is log reported income for the years of 1999 and 2000, pooled together, and including family members' income. Oligarchs with main sources of income outside of Moscow as well as oligarchs who had already been expropriated by the end of 1999 have been excluded. Robust standard errors controlling for clustering are employed. Coefficients significant at least at 10% level using robust standard errors are in bold. The number of observations and distinct individuals are 93 and 48, respectively, for new oligarchs and 70 and 35 for old oligarchs.

Table 11. Differences between rated and non-rated oligarchs.

Variables	Rated oligarchs	Non-rated senior	Diff.significance	Non-rated junior	Diff.significance
Age in 1995	43.9	39.8	***	40.0	***
Shares of:					
new oligarchs	0.52	0.70	**	0.54	
Jewish ethinicity	0.13	0.23	*	0.11	
Other ethnicity	0.10	0.18		0.15	
Elite college graduates	0.42	0.30	*	0.39	
born in Moscow	0.32	0.21		0.29	
former reformist politicians	0.15	0.02	***	0.01	***
ties with the mob	0.04	0.22	***	0.06	
Active Yeltsin supporters	0.36	0.15	***	0.13	***
Mean reported income in 1999	446,334	480,316		251,148	
Mean reported income in 2000	451,128	347,029		245,791	

Difference significance refers to statistical significance of the difference between means of non-rated senior oligarchs and rated oligarchs, and non-rated junior oligarchs and rated oligarchs using two-sample t-test with unequal variance. *** means significant at 1% level, ** means significant at 5% level, * means significant at 10% level.

Table 12. Factors affecting the decision to seek national political office.

Variables	OLS regression	Federal legislator		Federal legislator or minister	
New background	Coefficient	**0.138**	**0.096**	**0.129**	**0.090**
	p-value	0.00	0.04	0.01	0.08
Business not in Moscow	Coefficient	**0.093**	-0.018	0.076	-0.026
	p-value	0.09	0.81	0.21	0.75
New*Business not in Moscow	Coefficient	Not included	**0.244**	Not included	**0.225**
	p-value		0.03		0.07
Supporter	Coefficient	Not included	Not included	0.075	0.079
	p-value			0.15	0.13

Note: federal minister positions include deputy ministers.

Figure 1.
Empirical expropriation and conditional ostracism rates of Russian oligarchs, 1995-2005.

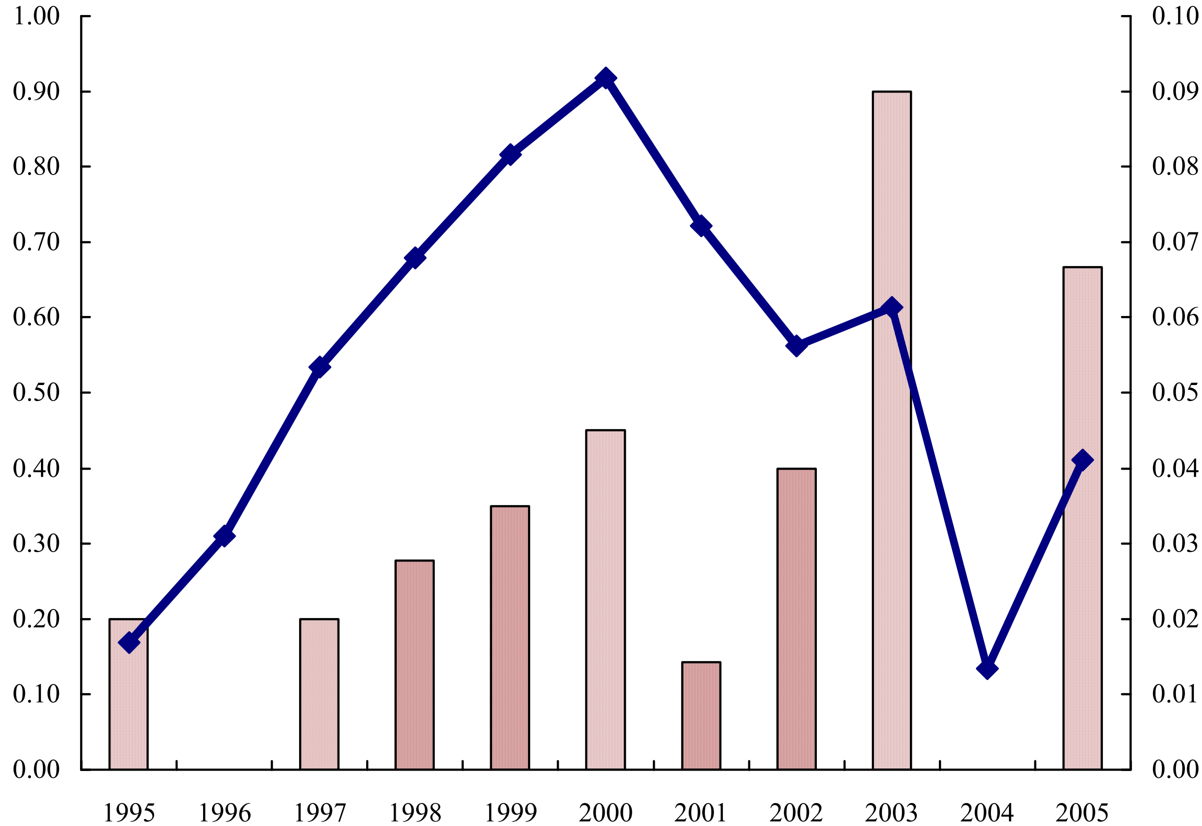

Table 13. Expropriations and ostracism by background, ethnicity and visibility.

	Ratio among those expropriated			Ratio among ostracized		
Variables	Yeltsin	Putin	Difference	Yeltsin	Putin	Difference
old	0.63	0.40	**0.22**	0.53	0.24	**0.29**
Active Yeltsin supporters	0.28	0.37	-0.09	0.20	0.48	**-0.28**
Rated by experts	0.76	0.60	**0.16**	0.47	0.59	-0.12
Jewish ethnicity	0.08	0.20	**-0.12**	0.08	0.48	**-0.40**
Non-rated senior	0.07	0.11	-0.04	0.27	0.14	0.13
Elected to federal legislature	0.09	0.16	-0.07	0.07	0.14	-0.07
Mob ties	0.04	0.10	-0.05	0.20	0.14	0.06

Differences significant at least at 10% level are in bold.

Table 14. Regression coefficients for expropriation probability under Yeltsin (1995-1999)

	All oligarchs		Rated, controlling for influence	
Variable	Coefficient	p-value	Coefficient	p-value
Old	**0.162**	0.05	**0.233**	0.05
Yeltsin supporters	0.041	0.64	0.040	0.72
Old and supporters	-0.163	0.18	**-0.364**	0.02
Non-rated senior	-0.123	0.13	Not applicable	
Business&educ. related	**-0.124**	0.05	**-0.144**	0.10
State enterprise	-0.005	0.94	0.016	0.87
Mob ties	-0.067	0.60	-0.138	0.46
Reformer politician	0.018	0.86	-0.011	0.93
Jewish ethnicity	-0.113	0.18	-0.137	0.27
# of observations	250		153	
Adj. R-squared	0.028		0.065	

Linear probability model. Other controls include red director dummy, other ethnicity, elite college status and cumulative influence (for rated oligarchs). Coefficients in bold are significant at least at 10% level.

Table 15. Regression coefficients for expropriation probability under Putin (2000-2005), conditional on being in good status at the end of 1999.

	All oligarchs		Rated, contr.for influence		Oligarchs w/rep. income	
Variable	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Old	-0.029	0.77	-0.090	0.58	0.000	1.00
Yeltsin supporters	**0.401**	0.00	**0.413**	0.00	**0.360**	0.01
Old and supporters	**-0.370**	0.02	**-0.385**	0.05	**-0.308**	0.10
Non-rated senior	-0.027	0.78	Not applicable		-0.011	0.93
Business&educ. related	**0.202**	0.01	**0.218**	0.06	**0.233**	0.01
State enterprise	**0.242**	0.01	**0.228**	0.07	**0.250**	0.01
Mob ties	0.233	0.12	0.160	0.49	0.119	0.53
Reformer politician	**-0.224**	0.09	**-0.268**	0.08	**-0.279**	0.06
Jewish ethnicity	0.093	0.35	0.071	0.64	0.015	0.90
Log rep.inc. 99-00	Not applicable		Not applicable		**-0.041**	0.06
# of observations	176		96		134	
Adj. R-squared	0.121		0.105		0.125	

Linear probability model. Other controls include red director dummy, other ethnicity, elite college status and cumulative influence (for rated oligarchs). Coefficients in bold are significant at least at 10% level.

Table 16. Regression coefficients for conditional ostracism probability under Putin

	All oligarchs		Rated, contr. for influence		Oligarchs w/rep. income	
Variable	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Old	-0.130	0.47	-0.148	0.53	-0.159	0.46
Yeltsin supporters	**0.352**	0.04	0.171	0.46	**0.472**	0.10
Old and supporters	**-0.450**	0.06	-0.279	0.30	-0.437	0.20
Non-rated senior	0.144	0.42	Not applicable		0.305	0.26
Business&educ. related	0.084	0.57	-0.169	0.39	0.127	0.46
State enterprise	-0.052	0.71	**-0.298**	0.08	-0.066	0.67
Mob ties	0.038	0.87	-0.139	0.69	-0.154	0.67
Reformer politician	**-0.583**	0.01	**-0.437**	0.09	**-0.666**	0.01
Jewish ethnicity	**0.476**	0.01	**0.506**	0.02	**0.398**	0.06
Average rep.inc. 99-00	Not applicable		Not applicable		0.000	1.00
# of observations	53		34		44	
Adj. R-squared	0.482		0.575		0.389	

Linear probability model. Other controls include red director dummy, other ethnicity, elite college status and cumulative influence (for rated oligarchs). Coefficients in bold are significant at least at 10% level.

Table 17. Comparing survivors and the initial sample.

	All		New		Of which: Jews		Old	
Sample	Initial	Survivors	Initial	Survivors	Initial	Survivors	Initial	Survivors
Age in 1995	42.17	39.35	37.67	36.77	38.36	37.50	47.81	43.53
Shares of:								
Slavic	0.73	0.71	0.64	0.69	N/A	N/A	0.85	0.73
Jewish	0.14	0.14	0.23	0.20	1.00	1.00	0.02	0.04
Other	0.13	0.16	0.12	0.11	N/A	N/A	0.13	0.22
Elite coll.	0.39	0.43	0.46	0.49	0.33	0.31	0.30	0.34
Spec.managers	0.51	0.44	0.31	0.31	0.20	0.19	0.74	0.63
New	0.55	0.62	1.00	1.00	1.00	1.00	0.00	0.00
Non-rated sen	0.16	0.21	0.20	0.27	0.22	0.38	0.11	0.11
By sectors of initial business success, shares of:								
Finance	0.41	0.40	0.49	0.45	0.50	0.56	0.31	0.30
Energy	0.22	0.21	0.14	0.15	0.25	0.31	0.31	0.30
Metallurgy	0.10	0.13	0.10	0.12	0.06	0.00	0.11	0.15
Engineering	0.10	0.07	0.04	0.02	0.03	0.00	0.17	0.15
Consumer	0.11	0.13	0.17	0.19	0.11	0.06	0.05	0.04
Other	0.06	0.06	0.06	0.07	0.06	0.06	0.05	0.06
Mean reported incomes (only survivors until 1999 counted among initial sample):								
1999-2000	399,218	515,001	195,320	182,453	150,304	158,273	700,361	1,070,707
2003-2004	N/A	1,896,979	N/A	1,007,524	N/A	1,070,438	N/A	3,324,789
Gross gr. rate		3.68		5.52		6.76		3.11

Table 18. Regression analysis of survivors' reported incomes in 1999-2000 and 2003-2004

	1999-2000				2003-2004			
	All		Rated		All		Rated	
Variables	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
Old	**1.150**	0.04	**1.598**	0.07	0.891	0.21	1.447	0.25
Supporter	0.283	0.58	-1.173	0.13	**1.096**	0.09	-0.302	0.70
State enterprise	0.668	0.25	**1.950**	0.01	0.727	0.25	**1.595**	0.05
Ln(cum.infl.)	Not included		**1.205**	0.00	Not included		**1.111**	0.00
R-squared	0.255		0.573		0.249		0.453	
# of observ.	153		82		148		79	
# of ind.	78		42		77		41	

The dependent variable is log reported income for the years of 1999 and 2000, and 2003 and 2004, respectively, pooled together, and including family members' income. Oligarchs with main sources of income outside of Moscow as well all oligarchs who had been expropriated by 2005 have been excluded. Robust standard errors controlling for clustering are employed. Coefficients significant at least at 10% level using robust standard errors are in bold. Other controls include all those in specification (2) in the text, Section 4.1.

Table 19. Oligarchs' accumulated personal wealth in 2003-2006 (millions of US dollars).

Estimated personal wealth		All	Old	Yeltsin supporters	New	Of which: Jewish
2003	Mean	1,392	1,426	1,402	1,373	2,256
	Coeff. of var.	1.39	1.17	1.02	1.52	1.40
2004	Mean	1,610	1,765	1,638	1,523	2,814
	Coeff. of var.	1.48	1.20	1.42	1.66	1.34
2005	Mean	2,156	1,980	2,465	2,265	3,528
	Coeff. of var.	1.60	1.48	1.38	1.66	1.57
2006	Mean	4,123	4,279	6,217	4,032	5,086
	Coeff. of var.	1.20	0.94	0.89	1.36	1.36

Source: "Finance", 2006.02.17, 2006.02.13, 2005.02.07, 2004.02.14; author's estimates. Included are only oligarchs in good status (not expropriated and not retired) at the beginning of the corresponding year.

Table 20. Regression analysis of accumulated personal wealth

	Coefficient	p-value	Coefficient	p-value
Old	**1.739**	0.01	**1.270**	0.07
Yeltsin supporter	-0.396	0.46	0.089	0.87
Jewish ethnicity	0.767	0.11	**0.975**	0.04
Other ethnicity	-0.521	0.32	-0.362	0.48
Red director	-0.520	0.33	-0.331	0.52
Reform politician	-0.931	0.15	-0.994	0.11
Mob ties	0.716	0.47	0.572	0.57
State enterprise	-0.833	0.28	-0.568	0.52
Age	**-0.065**	0.01	**-0.051**	0.02
Female	**-1.591**	0.06	-1.034	0.22
Specialist manager	-0.633	0.15	-0.552	0.21
Rated by experts in the 1990s	**1.434**	0.00	**1.394**	0.00
Non-rated senior oligarch	**1.570**	0.00	**1.529**	0.00
Elite college graduate	-0.287	0.46	-0.105	0.78
Primary resource sectors & time	Not controlled for		Controlled for	
R-squared	0.278		0.407	

Pooled OLS regression on 2003-2006 data on all oligarchs in good status at the beginning of each year, using robust clustered standard errors. The dependent variable is the natural logarithm of estimated personal wealth. The number of observations is 239, and the number of clusters (individuals) is 80. Coefficients in bold are significant at least at 10% level.