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**Ownership and Enterprise Performance in the
Russian Oil Industry 1992-2012**

Nat Moser^a

^aSSEES, UCL

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Centre for Comparative Economics
UCL School of Slavonic and East European Studies
Gower Street, London, WC1E 6BT
Tel: +44 (0)20 7679 8519
Fax: +44 (0)20 7679 8777

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Abstract

This paper examines enterprise performance in Russian oil companies between 1992 and 2012. The analysis is based upon longitudinal trend output data, and distinguishes between four different types of owners - outsider private, insider private, federal state and regional state. In comparison with previous studies which considered just 1999-2004, and identified outsider private companies as the best performers, this paper finds that over the longer period 1992-2012 federal state and insider private owned companies actually performed best. The explanation for this relates to 'institutions' and the business environment.

Keywords

Russia, oil industry, enterprise performance, institutions, economy

1. Introduction

The oil industry has historically been and remains one of the most important sectors of the Russian economy, providing a key support in terms of export earnings, fiscal revenue and cheap fuel. In 1992, just months after the collapse of the Soviet Union, the government of the Russian Federation under President Boris Yeltsin embarked upon a comprehensive reform programme aimed at transforming the Russian economy from a system based on central planning to one based on the market. For Russian industry a major part of this reform was a privatization programme which sought to transfer ownership from state to private hands. Alongside other industries, the oil sector was profoundly impacted by this policy, and from a starting-point in 1992 of complete state ownership, by the end of the decade most output was in the hands of private companies. Under a new President, Vladimir Putin, however, policy changed again, and from the mid-2000s the state progressively increased its level of ownership of oil output at the expense of private companies.

This article examines the relationship between ownership and enterprise performance in the Russian oil industry during the twenty-one year period between 1992 and 2012.¹ Due to the diversity of ownership types after 1992 the Russian oil industry makes a particularly interesting case study. Enterprise performance is examined through an analysis of changes in oil production at the nine largest Russian oil holding companies. In every year between 1992 and 2012 these companies accounted for approximately 80-90% of total Russian crude oil production. Of the nine companies, five were fully privatized, while four remained under state control for much of, if not all, of the period in question. Of the five that were fully privatized, three were privatized to completely new owners, or ‘outsiders,’ while two were acquired by their incumbent managers, or ‘insiders.’ Of the four that remained under state control, two were controlled from Moscow by the federal government, while two were controlled by regional governments. With the exception of the two companies controlled by regional governments which were in the Volga-Urals, all the companies had their main operations in West Siberia, and as a result had considerable similarity in the nature and quality of their resource base.

Oil output is the chosen measure of enterprise performance because of the reliability of the data in terms of both a consistent measurement methodology and a very limited degree of manipulation. Between 1992 and 2012 oil production data in Russia was collected on a monthly basis for every

¹ The author is grateful to the UK Economic and Social Research Council for funding (grant#ES/J004405/1), and to Peter Gatrell and Chris Gerry for their help. Any mistakes are the responsibility of the author alone.

producing company by the Ministry of Energy and the Federal Customs Service. Various firms then bought this information and published it.² Production is the industry-standard benchmark measure for any oil company's performance. Of course, in an ideal world, one would also look at financial information - such as revenue, profit, and asset values - as well as reserve information and 'headcount' figures in gauging oil company enterprise performance. Unfortunately in Russia during the period in question all of these were subject to a lack of availability of data, differences in reporting methodology, and considerable data manipulation. As a result, a comparison of the performance of different oil companies over a twenty-one year period, as is undertaken in this article, is only possible through the use of production data.

The article is structured as follows: the following section introduces the relevant literature; two sections then summarise the changes in ownership and output that took place in the in oil industry in Russia 1992-2012; three sections then examine separately the sub-periods 1992-1999, 1999-2004, and 2005-2012; and the final section relates the findings back to the literature and concludes.

2. The literature

Starting with the relevant academic literature, in the early 2000s, Megginson and Netter (2001), and Djankov and Murrell (2002) undertook comprehensive surveys of existing empirical studies of privatization in both transition and non-transition economies. Djankov and Murrell, for instance, looked at more than one hundred empirical studies. Both studies found that in non-Commonwealth of Independent States (CIS) countries, privatization had a positive impact on enterprise restructuring, with divested firms becoming more efficient, more profitable and growing faster after privatization (Megginson and Netter, 2001, p.381; Djankov and Murrell, 2002, p.740). Djankov and Murrell also identified that privatization to outsiders was associated with "50 percent more restructuring" than privatization to insiders. (Djankov and Murrell, 2002, p.741). The studies were, however, much less positive about the results of privatization in the CIS. Djankov and Murrell found that the privatization effect was "statistically insignificant in the CIS," (Djankov and Murrell, 2002, p.740) while Megginson and Netter asserted that "insider privatization had been a failure throughout the former Soviet Union," and that the concentrated managerial ownership structure that characterizes almost all privatized firms was likely to "hamper" these economies for many years. At the same time, they also

² In this article I use data published by Energy Intelligence Group for 1991-1997, and two Russian brokerage houses - Renaissance Capital, for 1998-2007, and Otkritie for 2008-2012.

noted the lack of a “truly persuasive” empirical study of privatization in the former Soviet Union (Megginson and Netter, 2001, p.363).

In 2005 a new empirical study of the impact on privatization on enterprise performance in Russia appeared in the form of a report by Guriev and Rachinsky which sought to examine the role of the “oligarchs”³ in the Russian economy (Guriev and Rachinsky, 2005). The study made use of a dataset of several hundred Russian companies in mining, manufacturing, construction and market services constructed for the World Bank’s Country Economic Memorandum of 2004, and a methodology based upon calculating growth in firms’ total factor productivity. The oil sector was one of the thirty-two sectors of the economy considered, though ranked as the most important of all sectors by sales, and the oligarchs’ share of total sales in the oil sector was estimated at 72% (Guriev and Rachinsky, 2005, p.137). In their analysis Guriev and Rachinsky did not differentiate between insider and outsider owners of the privatized oil companies, categorising all the main private owners of companies as “oligarchs.” Their overall finding was that “oligarchs manage their firms better than other Russian domestic owners, and better than regionally owned firms, and almost as well as foreign owners.” (Guriev and Rachinsky, 2005, p.144).

Also in 2005, in a report marking fifteen years since the start of the reforms in Russia, Ahrend and Tompson of the OECD undertook an assessment of the impact of privatization on enterprise performance. Basing their results on existing empirical studies, they found that “virtually all studies showed improved performance after privatisation” (Ahrend and Tompson, 2005, pp.32-33). They found higher productivity in privatised enterprises, with privatized firms shedding excess labour more rapidly than state-owned firms, and more likely to change product lines, invest in new equipment and adopt forms of remuneration linked to productivity (Ahrend and Tompson, 2005, pp.32-33). Further, they found that “in sectors such as oil,” where private and state-controlled companies had been operating side by side, private companies had generally been “much more efficient” (Ahrend and Tompson, 2005, p.33).

Ahrend reinforced these observations in an article looking specifically the oil sector during the period 2001-2004 (Ahrend, 2005). He found that “private oil companies accounted for almost all of the growth (in production) recorded over the period,” and that “the private companies that did the most

³ By “oligarch” they meant a businessman who controlled sufficient resources to influence national politics (Guriev and Rachinsky, 2005, p.132).

to drive this growth were those controlled by major financial groups (the so-called *finansisty*) rather than those under the control of oil-industry insiders (the *neftyaniki*)” (Ahrend, 2005, p.591).

Most recently, in 2012, Gustafson in a major and authoritative work on the Russian oil industry echoed these earlier works. Gustafson concluded that the “form of ownership” was clearly “important” in explaining the differences in performance of companies between 1999 and 2004, and went onto identify that: “The privately owned companies as a group increased production by nearly two-thirds, while the state-owned companies grew by only one-quarter. But the private companies themselves performed very differently from one another. As a group, the *finansist* (outsider-private) companies did best, increasing their output of crude by over three-quarters between 1999 and 2004, while the *neftianik* (insider-private) companies grew by barely more than a half. Thus the fact of private ownership, plus the culture and style of the owners, appears to account for most of the differences in performance from company to company” (Gustafson, 2012, p.196).

In conclusion, in the academic literature, several major studies from the early 2000s were positive about the impact of privatization on enterprise performance, especially of outsider-owned firms, though initially not in Russia. However, later studies became more positive about the impact of privatization on enterprise performance in Russia, in particular in the oil sector during the period 1999-2004. Further, developments identified in the oil sector by the literature appeared to confirm the findings of the earlier broader studies, namely that privatized firms outperform state-owned firms, and that outsider privatized firms outperform insider privatized firms.

3. Ownership changes 1992-2012

After 1992 the Russian government created a dozen oil holding companies - each containing several individual oil production and refining enterprises - out of the formerly completely state-owned oil industry of the Soviet period, and between 1992 and the early 2000s it progressively privatized these new oil holding companies. In the first phase of privatization, between 1992 and 1995, insider managers acquired minority stakes in the holding companies, with the state retaining majority stakes. In the second phase after 1995, which included the ‘loans-for-shares’ scheme of 1995-1997, the government sold many of its remaining majority stakes in the companies. This time though the buyers were new outsider owners, alongside the existing insider managers. Only insiders or outsiders with connections with top-level government officials were able to acquire these stakes though, and the

basic features of nearly all the sale transactions were opaque deals at well below market prices (Moser and Oppenheimer, 2001, pp.301-314).

The situation was complicated by the fact that in the early 1990s as well as selling shares in oil holding companies, the Russian government also sold minority stakes in individual oil production and refining enterprises (also known as subsidiaries). Some of these stakes were acquired by foreign equity investors. Although the holding companies owned majority stakes in these enterprises they did not own all the shares. In order to buy-out the minorities and take full control, owners of the holding companies launched consolidation or 'swap' schemes whereby subsidiary minority shareholders received shares in holding companies in return for their shares. However, the owners of the holding companies used a variety of devices such as share dilutions, transfer pricing and non arms-length asset transfers to drive down the value of subsidiary company shares and thereby secure as favourable swap ratios as possible for themselves (Moser and Oppenheimer, 2001, pp.314-317; Moser, 2004). Whilst this meant that they were able to give-up only a small number of shares in the holding companies to gain full title to the subsidiaries, it also had, as shall be shown, repercussions for enterprise performance.

By the early 2000s, the total number of oil holding companies had fallen from twelve to nine as several of the original dozen companies had merged with, or been acquired by, one of the others. These nine companies were divided between outsider and insider private ownership, and federal and regional state ownership. The outsider private companies comprised Yukos, headed by Mikhail Khodorkovsky, Sibneft, headed by Roman Abramovich, and TNK, owned by the Alfa-Access-Renova Group (AAR).⁴ The insider private included LUKoil, headed by Vagit Alekperov, and Surgut, headed by Vladimir Bogdanov. The state-owned were Rosneft and Slavneft, controlled by the federal government in Moscow, and Tatneft and Bashneft, controlled by the regional governments in Tatarstan and Bashkortostan respectively.

There were a number of further ownership changes after 2000. Slavneft was sold in a government auction in 2002 to Sibneft and TNK in equal part. Although its ownership changed, the company was kept as a single, separate oil holding company. In October 2003, following the arrest of its head Mikhail

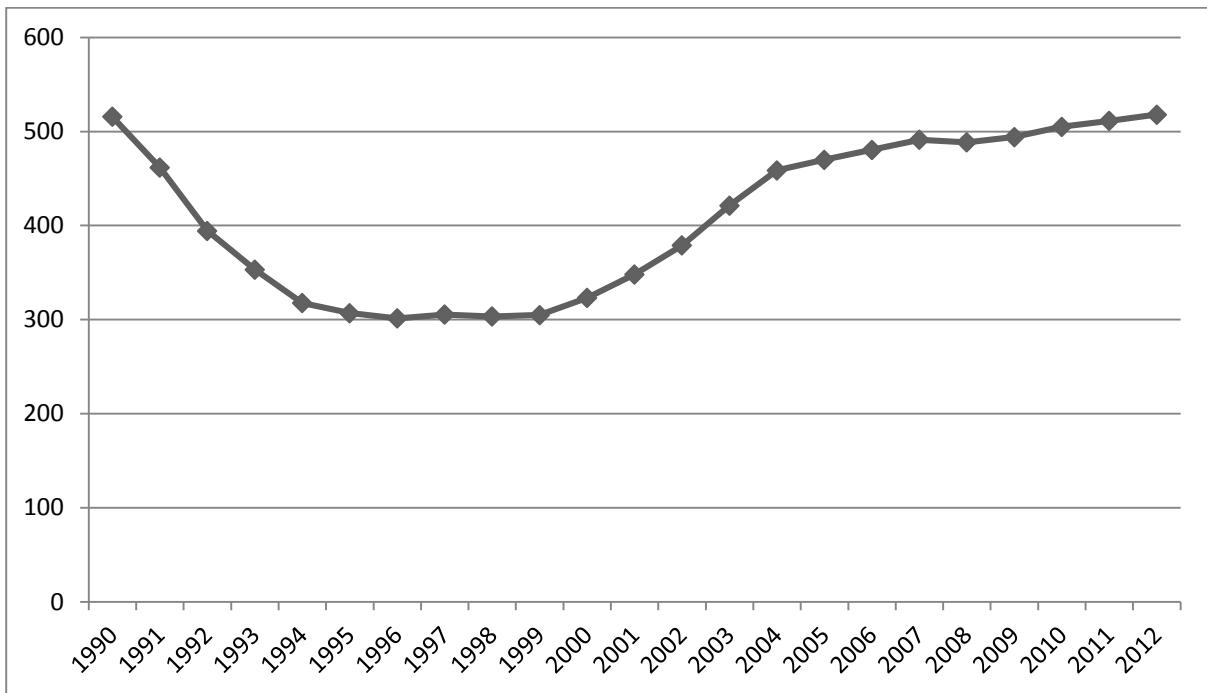
⁴ The key people behind AAR were Mikhail Friedman, Pyotr Aven, Viktor Vekselberg, Len Blavatnik and German Khan. TNK initially sought control of Sidanco another oil holding company in the early 1990s before losing out in 1995-1997 to Vladimir Potanin. In 2003, though, TNK acquired Sidanco from Vladimir Potanin. I consolidate the two companies output as TNK throughout the period. BP, which had since 1997 been a minority shareholder in Sidanco, came to an agreement with AAR in 2003 whereby it purchased 50% of the combined company of TNK and Sidanco, and this was henceforth known as TNK-BP.

Khodorkovsky, Yukos was presented by the government with a bill for tens of billions of dollars for allegedly unpaid taxes. Unable to pay, the company was forced into bankruptcy and its main production enterprise Yuganskneftegas was sold in December 2004 to Rosneft in an uncontested auction. Yukos’ other assets were then sold to Rosneft and the state gas company Gazprom in 2005-2007, effectively renationalizing them. In October 2005, Roman Abramovich sold Sibneft to Gazprom, also effectively renationalizing it. From 2005, the Russian company Sistema, headed by Vladimir Yevtushenkov, began acquiring shares in Bashneft, and eventually took full control of it from the republic of Bashkortostan in 2009, effectively privatising it. Most recently in December 2012, Rosneft purchased TNK-BP. In terms of the proportion of state ownership of oil output, from 100% in 1992, this fell to a low of 15% in 2004, before increasing back to 40% by 2008, and then to 51% at the end of 2012.⁵

4. Production trends 1992-2012

Figure 1, below, shows total Russian oil production in the period 1990-2012, while Figure 2, below, shows the percentage change year-on-year in production 1990-2012.

Figure 1: Total Russian crude oil production 1990-2012 (million metric tons)

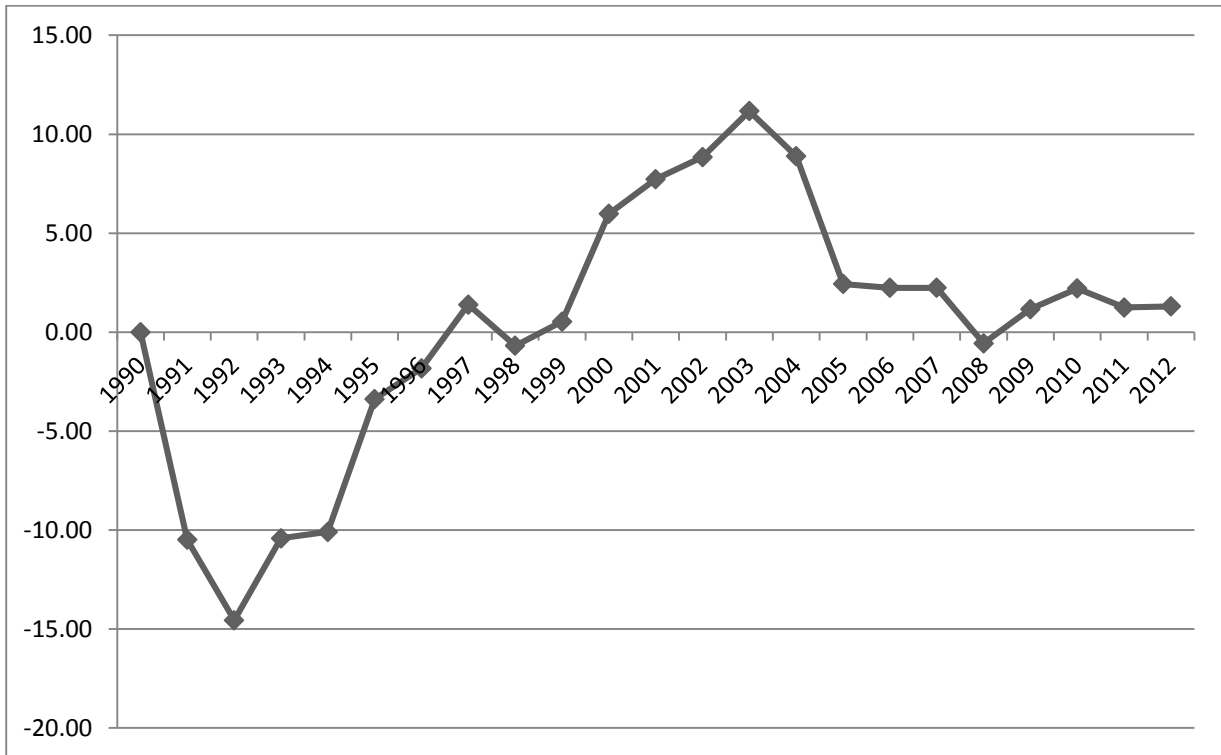


⁵ Author’s calculations from oil production data (see list of sources for Figures 3, 5 and 9).

Sources:

- 1990-1997: Energy Intelligence Group, *Almanac of Russian and Caspian Petroleum* (New York: EI Research, 2002), pp.7-8.
- 1998-2002: Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2003), p.15.
- 2003-2007: Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2008), p.25.
- 2008-2012: Otkritie Capital, *Oil & Gas Yearbook* (Moscow, 2013), p.16.

Figure 2: Total Russian crude oil production 1990-2012 (% change year-on-year)



Source: calculated by author from data used in Figure 1

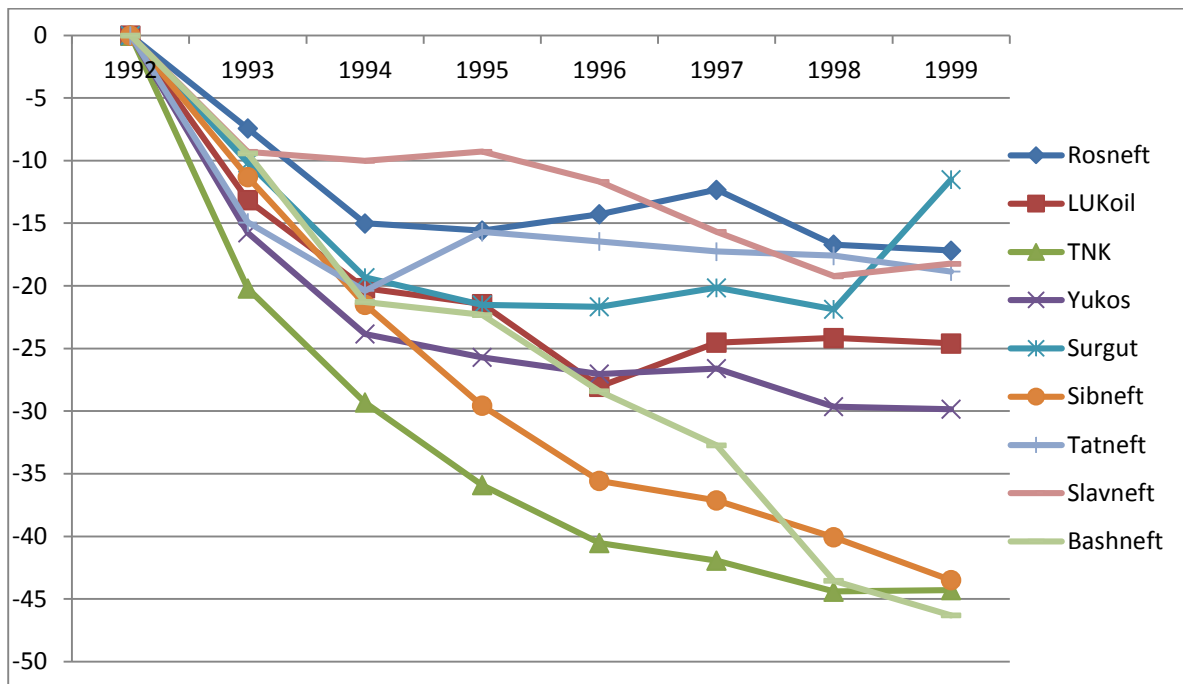
Having peaked in 1987, total Russian oil production already started to decline during the final years of the Soviet Union. Figure 1, which shows the absolute level of production, reveals how output declined from over 500 million tons in 1990 to around 300 million tons in 1995, a level at which it remained until 1999, before beginning to increase again, eventually reaching the 500 million ton mark by 2010. Figure 2, which shows the percentage change each year in output, shows how production fell 10% or more per annum between 1991 and 1994, before stabilizing around the zero growth mark in 1996-1999. After 1999, output grew at 5% or more per annum during the 2000-2004 period, with the greatest increase of 11% recorded in 2003. From 2005-2007 the rate of increase in production slowed to around 2.5% per annum, and in 2008, output even fell slightly. After 2008, production growth resumed though at a modest 1-2% per annum rate.

The following sections consider the broad changes in output identified here through analyzing the performance of individual Russian oil companies during three separate sub-periods within the period 1992-2011.

5. Enterprise performance 1992-1999

Figure 3, below shows Russian oil production by company between 1992 and 1999 (1992 = 100)⁶, and Figure 4 shows the average percentage change in production between 1992 and 1999 by ownership type.

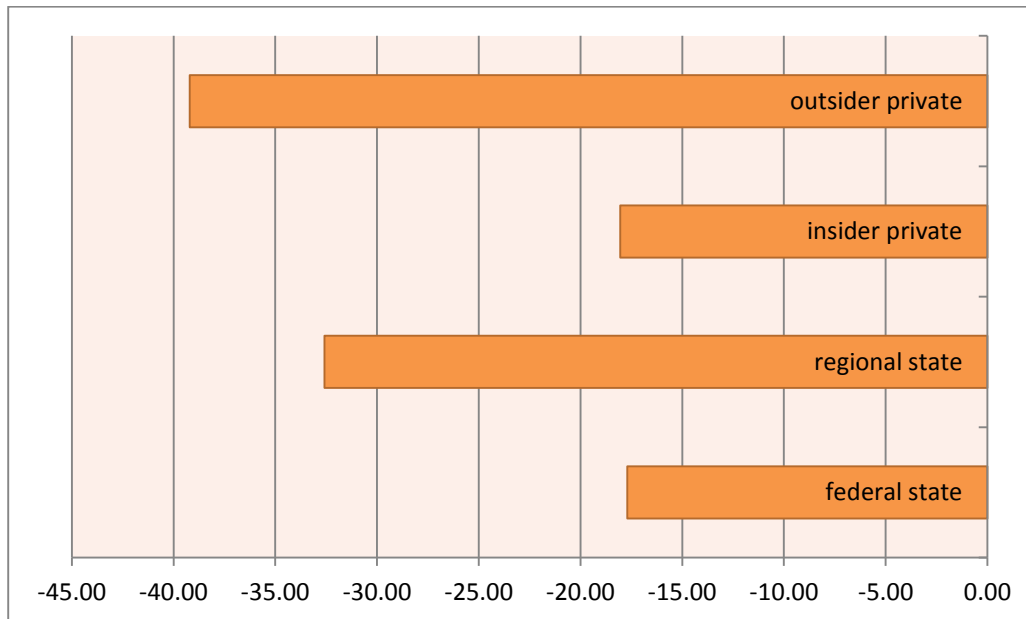
Figure 3: Russian oil production by company 1992-1999 (1992 = 100)



Source: author's calculations from data in Energy Intelligence Group, *Almanac of Russian and Caspian Petroleum* (New York: EI Research, 2002), pp.197, 209, 225, 237, 243, 250, 258, 265, 271, 274, 279; and Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2003), p.15.

⁶ For each company output in 1992 is indexed at zero. Output in following years is a proportion of the level in 1992. Data is presented in this way so that company performance can be compared without reference to differences in the absolute size of output in 1992.

Figure 4: Average change in production between 1992 and 1999 by ownership type (%)



Note: 'outsider private' consists of Yukos, TNK and Sibneft; 'insider private' consists of LUKoil and Surgut; 'regional state' consists of Tatneft and Bashneft; and 'federal state' consists of Rosneft and Slavneft.

Source: author's calculations from data in Energy Intelligence Group, *Almanac of Russian and Caspian Petroleum* (New York: EI Research, 2002), pp.197, 209, 225, 237, 243, 250, 258, 265, 271, 274, 279; and Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2003), p.15.

As can be seen in Figure 3, in line with the national picture, oil output fell at all nine of the Russian oil holding companies between 1992 and 1999. In the immediate years after 1992 the economic dislocation that accompanied the collapse of the Soviet Union resulted in considerable disruption to long established oil supply contracts, and a fall in the demand for oil. Further, domestic oil prices remained at low regulated levels - and even then many consumers did not have the means to pay - whilst prices for labour and materials used by oil companies were freed, and appreciated. The result was that many oil production companies began to build up debts. Their generalized response was to halt investment in new exploration and drilling activity, and in some cases to cut-back even on the basic maintenance of existing wells. A fall in production was the natural consequence.

Figure 3 shows that production fell most – by around 45% - at TNK, Sibneft and Bashneft, while it fell least – by around 20% - at Rosneft, Tatneft, Slavneft and Surgut. In the case of Surgut it was already growing strongly by 1999. Figure 4 shows that the worst performing type of owners during the period 1992-1999 were outsider private companies – on average production fell close to 40% - followed by the regional state companies, which were 33% down, while the best performing companies were the

federal state and insider private companies, where production at both fell around 18% during the period.

The inferior performance of the outsider private companies Yukos, Sibneft and TNK during this period can be explained by the fact that the new owners were focused on taking and then consolidating control of these enterprises, rather than on maintaining let alone improving performance. Indeed they did not have complete control of their enterprises until around 1999, the end of the period. Thus, in 1994-1995, the prospective new owners were contending with claims for ownership from the Soviet era managers. Then, in 1995-1997, they were waiting for the loans-for-shares scheme to be confirmed, and in 1998-1999, they were pushing through share consolidation schemes to create a single unified holding company share for the companies in which they would ultimately hold a super-majority of shares (ie. more than 75%). Arguably falling rather than increasing production actually served the aims of these new owners better during this period as it made the assets they were trying to take-over appear less valuable.

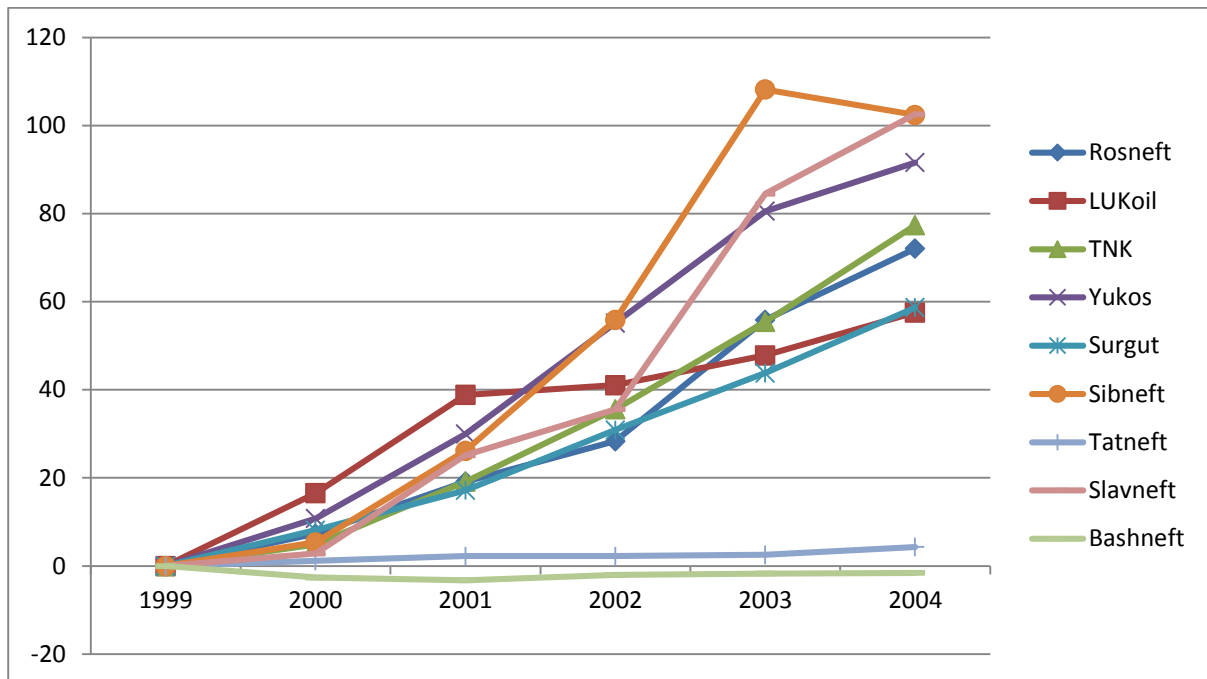
At the insider private companies Surgut and LUKoil the incumbent Soviet era managers halted the fall in output much earlier – as soon as the national economic situation had stabilized – and began to re-invest, and therefore expand production. At LUKoil the new owners led by Vagit Alekperov secured control of the company as early as 1996, and production increased thereafter. At Surgut, the Soviet era manager Vladimir Bogdanov did not secure complete control over the company until 2000 – the actual ownership of the company remains unclear to this day - nevertheless this does not appear to have prevented Bogdanov from investing in the business to halt the fall, and then expand output.

In terms of the state companies, federal controlled companies Rosneft and Slavneft, along with regionally controlled Tatneft, were three of the best performers of the period with their managements doing their best to navigate the uncertain economic climate of the period and maintain production as far as possible. However, Bashneft, controlled by the Bashkortostan regional elite, was one of the worst performers; the reasons for this are unclear, though certainly the company – along with Tatneft - would not have been helped by having a more mature asset base than the other companies which were in West Siberia, and one which would have required more investment just to maintain the existing level of output.

6. Enterprise performance 1999 – 2004

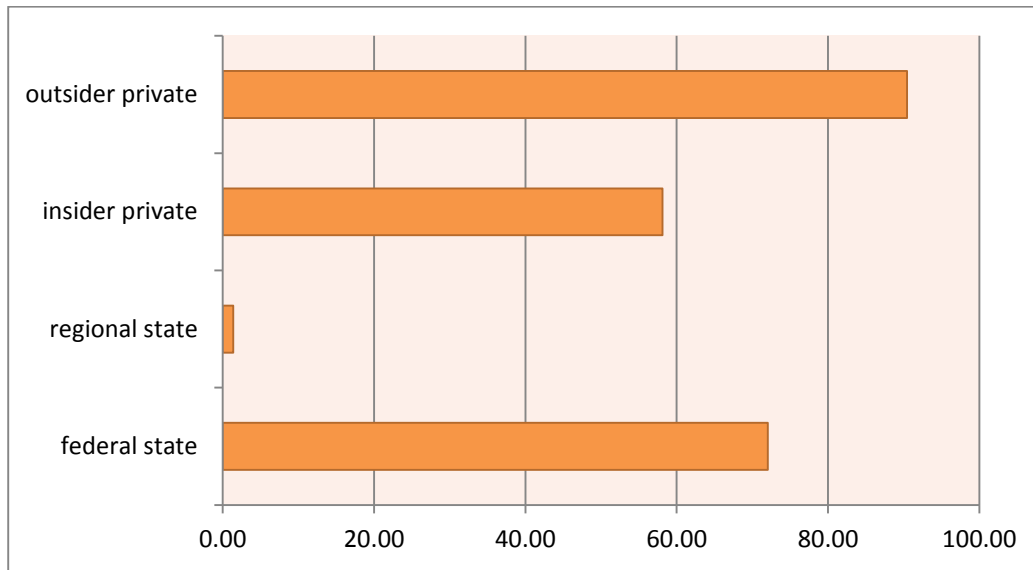
Figure 5, below shows Russian oil production by company between 1999 and 2004 (1999 = 100), and Figure 6 shows the average percentage change in production between 1999 and 2004 by ownership type.

Figure 5: Russian oil production by company 1999-2004 (1999 = 100)



Source: author's calculations from data in Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2003), p.15.; Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2008), p.25.

Figure 6: Change in production between 1999 and 2004 by ownership type (%)



Note: 'outsider private' consists of Yukos, TNK and Sibneft; 'insider private' consists of LUKoil and Surgut; 'regional state' consists of Tatneft and Bashneft; and 'federal state' consists of Rosneft.

Source: author's calculations from data in Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2003), p.15.; Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2008), p.25.

Figure 5 shows oil production by company between 1999 and 2004. In line with the national trend, oil production grew at all the major oil companies (except Bashneft where it fell marginally) during this period.

The market environment suddenly became considerably more favourable for Russian oil companies in 1999 due to two factors - the devaluation of the ruble and an increase in the price of oil. Following a financial crisis, the ruble was devalued in August 1998, falling from RUR 6 per dollar to more than RUR 20 per dollar. Costs for oil companies which were denominated in rubles fell correspondingly – more than three-fold - in dollar terms. Meanwhile the price of oil, which traded within the \$10 - \$20 range in the 1990s, hit a low of \$10 in 1998, doubled to \$20 per barrel in 1999 and doubled again to \$40 per barrel by 2004. Companies' dollar-denominated revenues grew correspondingly.

Figure 5 shows rapid rates of production growth at all six of the West Siberian producers, and marginal growth/decline at the two companies in the Volga-Urals (Tatneft and Bashneft). Of the West Siberian producers, initially LUKoil was the fastest growing in 1999-2001, but from 2002 was overtaken by other companies, notably by the outsider owned companies Yukos, Sibneft, TNK and Slavneft – the latter which was privatized to outsiders in 2002. Sibneft and Slavneft more than doubled their output

during the period 1999-2004. In terms of the different types of owners, Figure 6 shows that output during the period 1999-2004 grew fastest at outsider private companies - by an average of 90% - followed by federal state – around 70% - and then the insider private companies - approx 60%. Regional state companies' output growth was just a couple of percentage points above zero.

The improved market conditions clearly incentivized all owners to invest in expanding output. For the private companies this improvement came just as the property rights of their assets were much more secure, with both the loans-for-shares and the share consolidation schemes completed. For the oligarchs and oil generals the fact that they now controlled majority or super-majority (more than 75%) stakes in the companies also opened-up a new avenue to vast fortunes – through increasing the market capitalization of the companies. As output and profit expanded, the values of the listed companies and therefore the owners soon started to be measured in billions of dollars (at least on paper).

One factor which contributed to the strong performance of the outsider private companies during this period was their readiness to apply the latest (western) technologies to their wells including hydraulic fracturing, directional (horizontal) drilling and advanced reservoir management techniques. Yukos and Sibneft were at the forefront of this process (Gustafson, 2012, pp.196-225), and both were in the top three companies in terms of output growth during this period.⁷

At the same time, the outsider private outperformance during this period was also the result of capturing the gains from reversing the poor the performance of 1990s. As a result the lower growth achieved by the insider private companies in 1999-2004 was as much to do with a higher output starting point – ie. they had performed better in 1992-1999, as with management practices or technology. The data (as far as it can be trusted) indicates that both outsider and insider private companies were investing comparable sums,⁸ and the major improvements in production approaches – a reduction in well construction time, reductions in exploration and development drilling, and increases in flow rates of new wells – were shared right across the industry rather than particular to one type of owners (Maximov, 2010). While outsider private companies tended to rely more on senior

⁷ It is of note that these companies were also criticized by some commentators for 'squeezing' existing reserves rather than drilling for new, with the more advanced technology applied "only to draw down the most easily exploitable reservoirs and at the expense of balanced drilling on new sites." (Dienes, 2004, pp.319, 325, 340). Certainly their time horizons were relatively short, but so are those of many Western oil companies which seek to adapt output to prevalent market conditions.

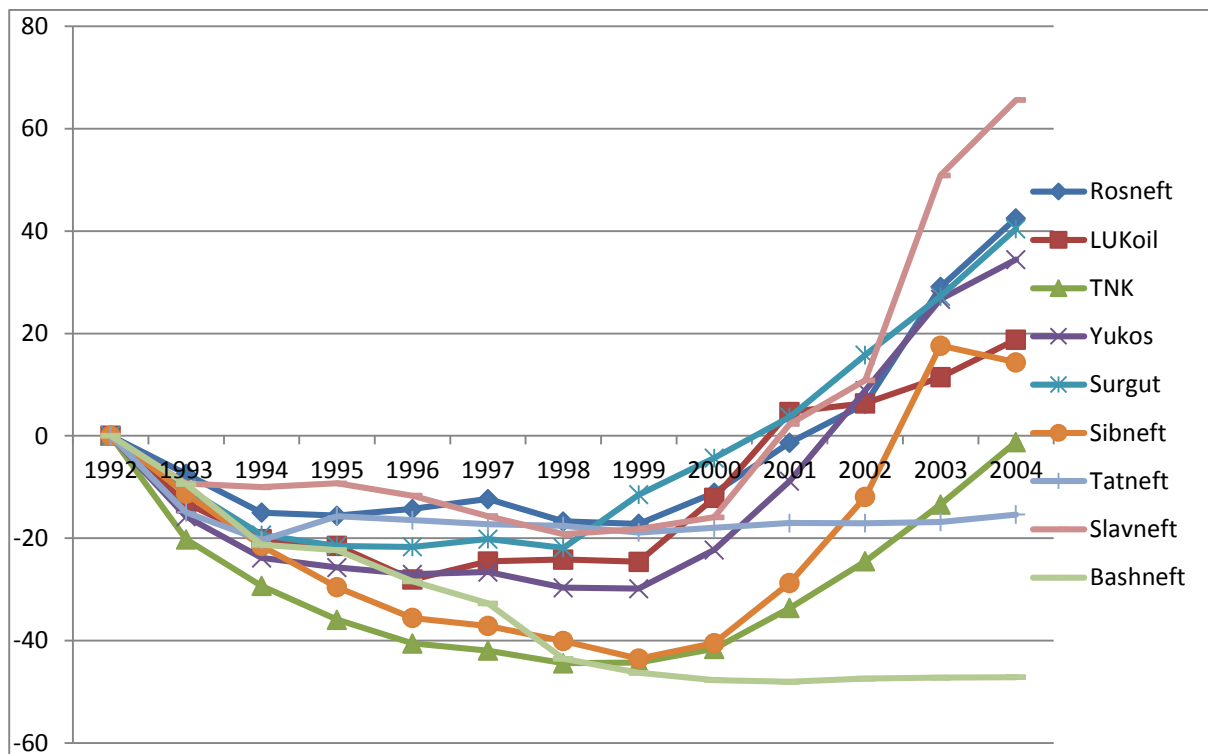
⁸ In 2003, for example, Surgut reportedly invested the most in capital expenditure in the sector, spending \$1.1 billion, followed by LUKoil with \$990 million, and Yukos with \$902 million, Renaissance Capital, *Russia Oil & Gas Yearbook*. Moscow: 2007, p.83.

foreign managers, insider private and federal state companies were still able to access the latest western expertise through employing foreign oil service companies, which they made extensive use of.

Of the state companies, the federal companies Rosneft and Slavneft (until its privatization in 2002) performed strongly during this period, with Rosneft expanding output by more than 70% and Slavneft – when it was a still a state company - at a comparable rate (35% in half the time-period). Meanwhile, the regional state companies Tatneft and Bashneft only managed to maintain a stable level of output, though this was a significant improvement over the previous period, and given, as previously mentioned, the inferior quality of their reserve base, not an insignificant achievement. Separating out the federal from regional state companies - not least because of the differences in their asset bases reveals a different picture than aggregating both types of owners into a single “state” category.

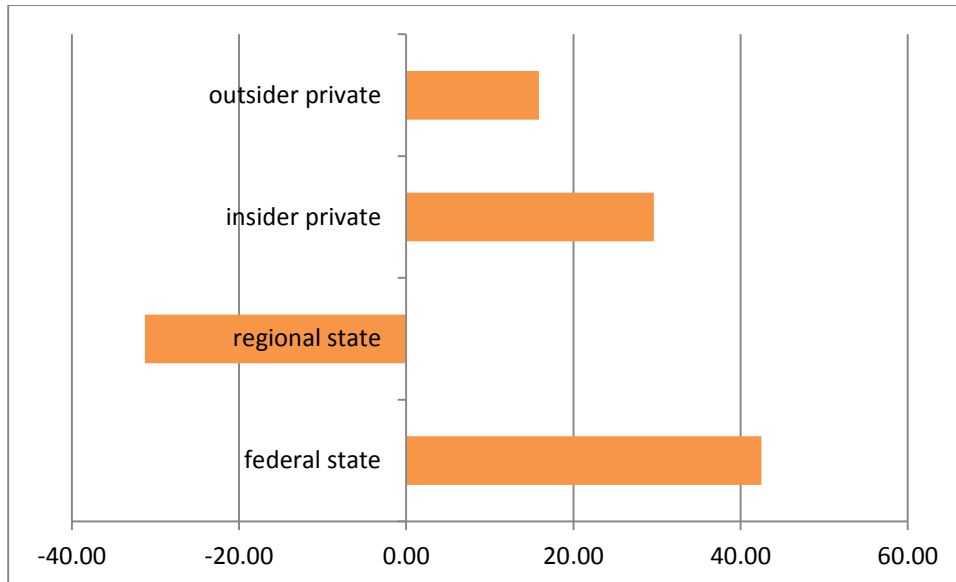
Figure 7, below shows Russian oil production by company between 1992 and 2004 (1992 = 100), and Figure 8 shows the average percentage change in production between 1992 and 2004 by ownership type.

Figure 7: Russian oil production by company 1992-2004 (1992 = 100)



Source: author’s calculations from data in Energy Intelligence Group, *Almanac of Russian and Caspian Petroleum* (New York: EI Research, 2002), pp.197, 209, 225, 237, 243, 250, 258, 265, 271, 274, 279; and Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2003), p.15; Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2008), p.25.

Figure 8: Change in production between 1992 and 2004 by ownership type (%)



Note: ‘outsider private’ consists of Yukos, TNK and Sibneft; ‘insider private’ consists of LUKoil and Surgut; ‘regional state’ consists of Tatneft and Bashneft; ‘federal state’ consists of Rosneft. Slavneft excluded as experiences a change in ownership type.

Source: author’s calculations from data in Energy Intelligence Group, *Almanac of Russian and Caspian Petroleum* (New York: EI Research, 2002), pp.197, 209, 225, 237, 243, 250, 258, 265, 271, 274, 279; and Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2003), p.15; Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2008), p.25.

Figure 7 shows that over the longer 12 year period 1992 – 2004 the best performing companies were Slavneft, Rosneft and Surgut, while the worst-performing were Bashneft, Tatneft and TNK. In terms of type of owner, as can be seen in Figure 8, the federal state performed best with average growth of approx 40%, followed by the insider private companies with 30%. The outsider private companies followed with approx 15% growth, and by the worst performing companies were the regional state companies with an average fall in output of approx 30%.

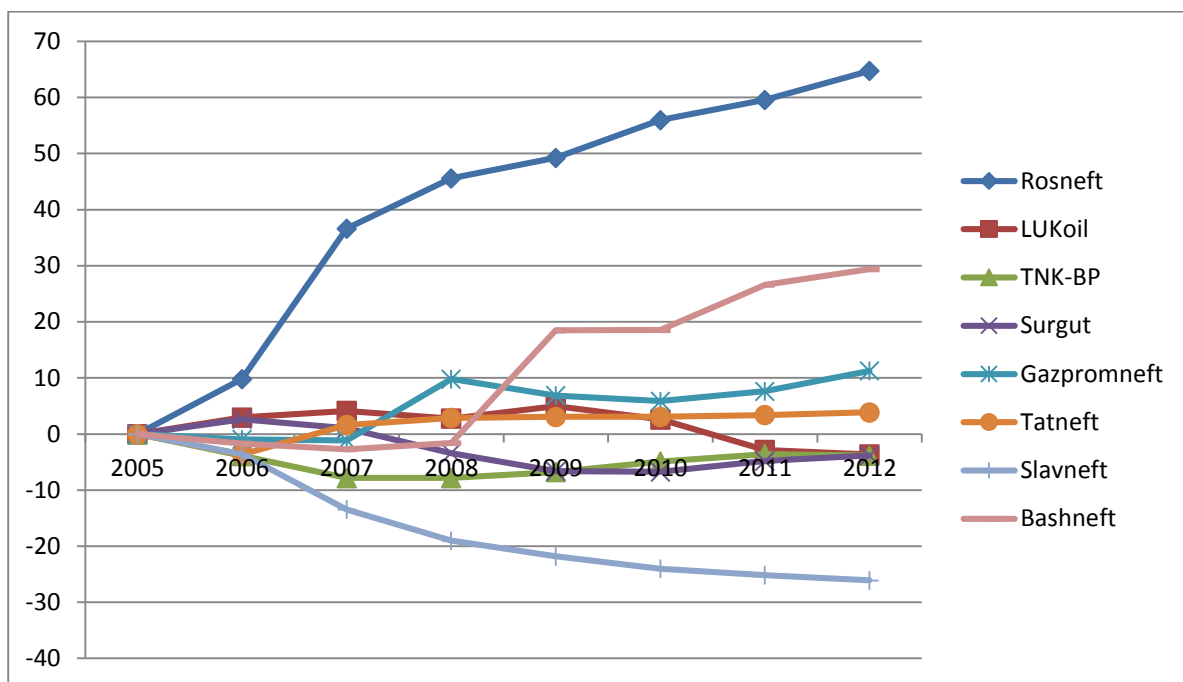
The longer period 1992-2004 indicates that outsider private companies did not perform as well comparatively against other types of owners as the literature which concentrated on the shorter period 1999-2004 portrays. A couple of specific cases help to emphasize this point: Sibneft the best-performing company in 1999-2004 when it doubled output, over the longer period 1992-2004 increased output by a far less stellar 14%; likewise TNK, which increased output by three-quarters in

1999-2004, over the longer period 1992-2004 actually saw output fall marginally, by 1%. In comparison federal state company Rosneft and insider private company Surgut both increased output over the longer period by more than 40%. Figure 8 shows that during the longer period 1992-2004 both federal state and insider private companies actually outperformed their outsider private peers.

7. Enterprise performance 2005-2012

Figure 8, below shows Russian oil production by company between 2005 and 2012 (2005 = 100)⁹, and Figure 9 shows the average percentage change in output by ownership type between 2005 and 2012.

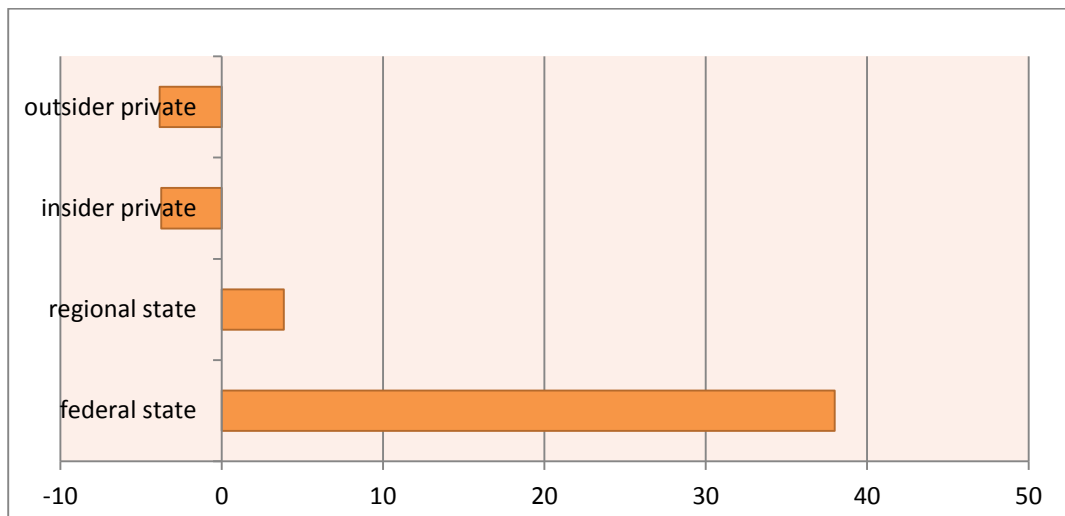
Figure 9: Russian oil production by company 2005-2012 (2005 = 100)



Source: authors calculations from: Renaissance Capital, *Oil & Gas Yearbook* (Moscow, 2008), p.25; Otkritie Capital, *Oil & Gas Yearbook* (Moscow, 2013), p.16.

⁹ The period 2004-2005 is omitted due to the distortion that would result from including Rosneft’s windfall acquisition – through an uncontested auction – of Yukos’ main assets Yuganskneftegas after Yukos’ bankruptcy in 2004. This acquisition alone more than tripled Rosneft’s oil output.

Figure 10: Change in production between 2005 and 2012 by ownership type (%)



Note: 'outsider private' consists of TNK-BP; 'insider private' consists of LUKoil and Surgut; 'regional state' consists of Tatneft; and 'federal state' consists of Rosneft and Gazpromneft. Bashneft and Slavneft both excluded as experience a change in ownership type.

Source: authors calculations from: Renaissance Capital, *Oil & Gas Yearbooks* (Moscow: 2006-2008); Otkritie, *Oil & Gas Yearbook* (Moscow, 2012).

As was shown in Figure 2 above, in aggregate terms the rate of growth of output during the period 2005-2011 halved from 5% or more per annum during 1999-2004 to around 2.5% per annum in 2005-2007, fell in absolute terms slightly in 2008, and then resumed growing at a modest 1-2% per annum in 2008-2011.

Figure 9 shows that Rosneft was by far the best performing company during the period 2005-2012, expanding output by 65%, followed by Bashneft with output growth of 30%, and Gazpromneft with 11%. Tatneft also achieved output growth though only of a few percentage points, while elsewhere, the story was one of output decline, by a few percentage points at LUKoil, the newly formed TNK-BP, and Surgut, and more substantially at Slavneft where production fell by 26%. Figure 10 shows that in terms of the performance of different types of owners, federal state owned companies performed best achieving close to 40% growth, followed by regional state companies with 4% growth, and the worst performing type of owners were outsider and insider private, which both suffered a contraction in output of approx. 4%.

The outperformance of federal state company Rosneft between 2005 and 2012 was as a result of a number of advantages the company had in comparison with its peers after 2004. Output growth in

2005-2007 was boosted by acquiring a number of Yukos assets – in addition to Yuganskneftegaz which had been acquired in 2004. The company further benefited from preferential access to new licences and assets, notably in East Siberia, and from tax ‘holidays’ on those new licences in East Siberia. Separately from this the company’s good performance arguably also resulted from the disciplining factors of a high debt load and a partial listing of the company’s shares on international markets, the hiring of outside expertise, and strong leadership by successive chief executives Sergei Bogdanchikov and Igor Sechin, whose track records in terms of work ethic and attention to detail stand-up in a comparison with their private sector counterparts.

The lack of output growth at the outsider and insider private companies can be explained by a number of factors. Firstly, diminishing returns on improvements in production approaches which had been successfully applied during 1999-2004. Secondly, a fiscal regime which resulted in most of the profit from oil sales – both export and domestic - accruing to the government in spite of a high oil price¹⁰ – acted as a disincentive to raising output. Thirdly, the arrest and imprisonment of Mikhail Khodorkovsky, and subsequent state investigations into Yukos management raised concerns about property rights which discouraged investment in expanding output. Fourthly, restrictions on non-Russian companies acquiring ‘strategic’ fields,¹¹ which impacted TNK-BP in particular as the only (half) foreign company, and limited its scope for expansion within Russia. This appears to have contributed to AAR and BP, the owners of TNK-BP, pursuing a course of taking a significant portion of profits out of the company through high dividend payment to themselves, rather than investing it into increasing output.

8. Conclusion

In conclusion, this paper suggests a more complicated relationship between ownership and enterprise performance than previous studies of the Russian oil sector which focused on the narrower period 1999-2004. Three of its key findings are the following: firstly, whilst it confirms that outsider private owned oil companies performed best in terms of output growth in the period 1999-2004, over the longer periods 1992-2004 and 1992-2012 outsider private companies actually trailed federal state and insider private forms of ownership; secondly, the outperformance of outsider private companies in 1999-2004 looks less impressive when set in the context of their underperformance in 1992-1999 – a portion of the gains in the latter period likely resulted from capturing the gains from reversing poor

¹⁰ The oil price averaged approximately \$80 per barrel during this period.

¹¹ Defined as more than 70 million tons (500 million barrels) of proven reserves in size.

performance in the earlier period; thirdly, the performance of state companies in 1999-2004 looks better when you separate out federal and regional state companies. The regional state companies produced oil from inferior quality fields, so there is a factor completely independent from ownership – namely geology - which contributed to their underperformance.

The explanation for the difference in performance of the different types of owners in the different periods can be seen to lie in the role of ‘institutions’ and the business environment in determining economic behaviour. Outsider private companies were more sensitive to changes in these than insider private or state owned ones. Thus, when the ‘institutional’ and business environment was favourable - as it was in 1999-2004 - with relatively secure property rights, rapidly increasing oil prices and manageable levels of tax, outsider private companies outperformed. And when the environment was less favourable - as was the case in 1992-1999 and 2005-2012 - with insecurity of property rights, and either low oil prices or very high taxes, outsider private companies underperformed.

The lesson for the Russian government is that if Russia is to benefit from dynamic outsider owned private oil companies it needs to improve the ‘institutional’ and business environment. Alternatively, if it continues with the current policies of high taxes and an unfair ‘playing-field’ for companies, there will be a continuation of the post-2005 trend of contracting and underperforming outsider owned private oil companies. Whilst the current policy may well ensure a greater proportion of oil wealth accrues to the state, and is preserved to be developed by future generations, it comes at a clear cost of not tapping Russia’s full hydrocarbon potential in the present day.

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