
Perspectives on the Potential of Russian Oil

Clifford G. Gaddy¹

Abstract: A prominent American specialist on the economy of the former USSR comments on Russian oil in light of a preceding paper on the subject. Noting the congruence of Russia's economic growth with world oil prices, the author points out that the country's growth is endangered by sharp declines in those prices. He also recalls how an oil windfall shaped Russian thinking in the 1970s, questions how long Russia can pump oil at its maximum level by invoking the American experience from 1859 through the peak in 1970 until the present, analyzes the two corporate models in the Russian oil sector, and briefly outlines Putin's new approach to foreign investment in the sector. *Journal of Economic Literature*, Classification Numbers: L71, O13, O18. 3 figures, 8 references.

[A] roaring boom was in progress in the stock market and, like all booms, it had to end.

— John Kenneth Galbraith,
The Great Crash 1929, p. 24 [emphasis added]

“Like all booms,” Russia’s oil boom has to end some day. The important questions are when, and how fast. Leslie Dienes (2004) does not give precise answers to these questions. That would be impossible. But he does offer a sound basis for answers.

It is becoming increasingly clear that Russia’s oil sector has been and will for the foreseeable future continue to be the key to the country’s economic performance. Since 1997 Russian GDP growth has moved nearly lock-step—first down, then up—with the level of world oil prices (see Fig. 1). This congruence is almost surely not accidental. No one doubts that recent years’ high oil prices have been a windfall for Russia, even though observers disagree about how much the high prices have contributed to growth.² Sometimes lost in the focus on the oil price impact, however, is the extent to which Russia has also gained by steep growth of oil output—nearly nine percent per year over the past five years (see Fig. 2). As one of the authors of the most recent OECD report on the Russian economy put it, Russia has been “pumping growth” (Ahrend, 2004).

That this growth is endangered by any sharp fall in oil prices is broadly acknowledged. Leslie Dienes’s article focuses on the other, more serious dimension of concern: Is Russia beginning to “run out of oil” at nearly any price?

¹Senior Fellow, The Brookings Institution, 1775 Massachusetts Avenue, NW, Washington, DC 20036-2188.

²Estimates of the oil price elasticity of Russian GDP growth vary widely. The World Bank (2003) estimated that Russian GDP growth rises by 0.7 percentage points for each 10 percent increase in the oil price. Rautava (2002) calculated that the effect is three times that much, while a recent OECD report (2004) cites research that puts the effect at only half the World Bank estimates.

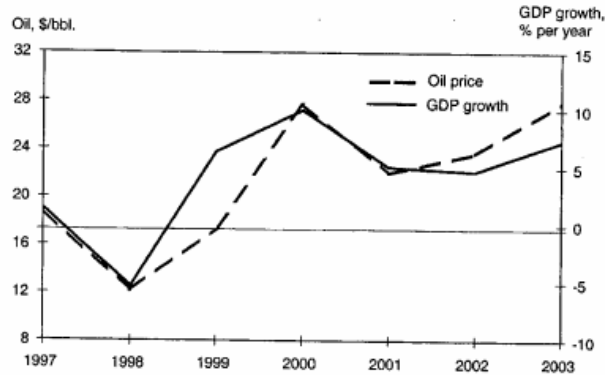


Fig. 1. World oil prices and Russia's economic growth, 1997–2003.

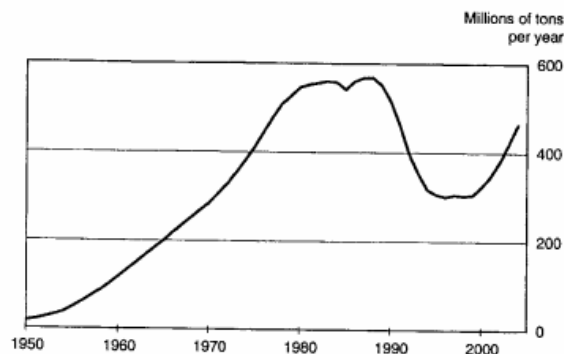


Fig. 2. Russian oil output, 1950–2003.

Dienes paints a bleak picture. He points out that most of the increased production since 1999 was “old oil”—that is, either oil that was simply not lifted during the 1990s owing to post-Soviet economic disarray or oil bypassed in the 1980s on account of ill-advised extraction practices in the late Soviet years. But the days of this relatively easy oil are over. Today, “geology and geography” conspire to trump improved technology and new market relations. Not only will new reserves be harder to recover, but they are also located in worse—i.e., colder and more remote—areas.

The current steep upward trend in Russian oil output is therefore temporary. Production levels will fall significantly short of their Soviet-era peak (569 million tons in 1987 and 1988), even with infusions of foreign capital and new technology. Such a projection has serious implications for Russia. Much has been accomplished in the past five years thanks to oil. But equally important is the way in which various interests and actors in the country have built hopes and expectations on the assumption that the current oil-based boom will continue indefinitely. The lofty economic aspirations are most obvious: witness President Putin's goal of doubling GDP in eight to ten years. But the ambitions extend far beyond the domestic economy. Fiona Hill argues persuasively that Russian leaders envision a new global role for the country as an “energy superpower” (Hill, 2004).

This is not the first time that an oil windfall has so shaped thinking in Russia. In the early 1970s, the combination of vast new Siberian oil reserves coming on line and the price shocks due to the 1973 Arab-Israeli war provided what one historian has called the “greatest economic boon the Soviet Union ever experienced” (Kotkin, 2001, p. 15). The new cash found a long and immediate list of claimants. The military embarked on an expensive new arms build-up, while Communist Party elites treated themselves (and to a lesser extent, their industrial working-class constituency) to increased consumer goods production at home. Abroad, the cash was earmarked for expanded subsidies to Eastern Europe and arms deliveries to new clients in more remote parts of the globe. By the beginning of the next decade, it would be used to pay for a costly war in Afghanistan.

Today’s aspirations are not quite as expansive. Still, a lot depends on oil, and the stakes are high if the bubble bursts.

PEAKS, PLATEAUS, AND DESCENTS

Dienes’s work addresses two big questions about the current oil boom. The first is, how much oil is there really? That is, how much can be pumped and at what cost (both current operating costs for extraction and transport and capital investment costs)? A second question is equally important: What is the timeline? That is, when will output peak; how long can it stay at that peak level; and how steep will the ensuing decline be?

To these questions of the peak, the plateau, and the descent, Dienes answers the first two rather loosely but is quiet on the third. He says (p. 341) that Russia’s production curve will soon peak at 450–500 million tons per year and then likely turn downward. But how soon is “soon”? Perhaps as early as a year or two. Given where Russia was at the beginning of 2004, and assuming continued growth at current rates, it will reach an annual production level of 450 million tons already by the end of this year and 500 million tons by the end of 2005.³

What then? How long could Russia expect to remain at its maximum level? Consider the experience of a country that has already experienced a peak, plateau, and decline—the United States. The U.S. has been an oil producer since 1859. It increased its output almost continuously each year thereafter for over 100 years, reaching an absolute peak in 1970. Thanks to its Alaskan fields, the United States was able to extend its plateau for 15 years. By 1985 even that new Alaskan oil could not compensate for declining output in the continental 48 states. Total U.S. production then began a steady downward slide that has continued until the present (where it is only half of the 1970 peak and lower than it was in 1950), as shown in Figure 3.

Alaskan oil extended the U.S. plateau. Could something similar happen for Russia with new fields in Eastern Siberia and the Russian Far East? It is on this point that Dienes is most pessimistic. There is virtually no chance of enough new oil coming on line in the next decade to offset the drying up of the pool of left-over oil from the late Soviet and immediate post-Soviet periods. What this suggests is a very narrow plateau. Once Russia does reach its peak output level, the decrease in output could be steep.⁴

³Output in 2003 was 421 million tons. The average annual rate of growth from 2000 through 2003 was 8.4 percent. Growth in the first half of 2004 was 10.3 percent.

⁴What does that mean concretely? The U.S. lost more output in the 15 years after its “Alaskan” peak in 1985 than it had gained in the 15 years prior to the 1970 peak. For Russia that would mean dropping below 300 million tons—the low point of the 1990s—by 2020. If Russia’s output were to decline as much as it grew in the 1970s and early 1980s, it would fall below 300 million tons by 2016.

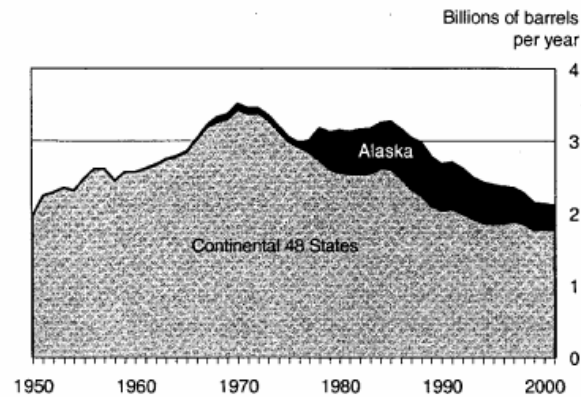


Fig. 3. United States oil output, 1950–2002.

All of what Dienes presents suggests that the real issue is not so much the total amount of oil that can be profitably extracted in Russia, but rather the timeline. This is, in Dienes's words, the steepness of "the negative slope of the entropy continuum" (p. 320). A higher peak is possible in the short term, but it will come at the expense of a narrower plateau and steeper downward slide afterwards. Ultimately, the timeline depends less on technological issues than on what Dienes calls the institutional and political environment—in short, the relationship between the Russian state and Russian (and foreign) oil companies.

TWO CORPORATE MODELS

In effect, two different corporate models have been tested in the Russian oil sector in the past five years. One is that of a group of oil insider-controlled companies represented by Surgutneftegaz and Lukoil. The second is that of financier-controlled and managed companies, most notably Yukos and Sibneft'. The latter group pursued a policy of maximizing current output. They concentrated on pumping up the oil left behind during the 1992–1999 period of "chaos in the industry," while ignoring expenses on development for the future. Yukos is a near-pure practitioner of the "current output" approach. The scant attention Yukos gave to new development is striking. Of total Russian oil production in 2000, new oil from Yukos accounted for only 0.3%.⁵

The first group of companies did invest for the future in exploration and development of new fields. But they, on the other hand, increased output to a much smaller degree. Moreover, they did little to restructure themselves and reduce costs. They continue to assume the heavy costs of paternalistic Soviet-era company-town practices—employment and social services structures.

The two groups' approaches were thus radically different.⁶ One could argue, however, that neither approach alone was ideal for Russia under the circumstances of the past five

⁵I.e., the 922,657 tons of new oil from Table 1 of Dienes (p. 322) divided by the total Russian oil output of 323.5 million tons in 2000.

⁶Space does not permit thorough discussion of the interesting question of why the two groups of companies behaved so differently. But a brief note is in order. Dienes attributes Yukos's shortsightedness to (*footnote continues*)

years. Rather, it was precisely the combination of the two that was optimal. Had not Yukos been so successful in maximizing current output, Putin's central government would not have been able to collect as much of the windfall as it did. On the other hand, if all the companies had followed the example of Yukos, there would have been quite literally no replacement of reserves for the future—thus dictating a much steeper downward slide of the post-peak output curve.

Now, however, the situation has changed. The era of simply lifting the bypassed oil of previous years is over. And if, in the view of the Kremlin, Yukos and other private companies are only good for that, then perhaps it is perfectly rational to remove them from the scene now that they have finished the task they were suited to do. It does seem likely that not only Khodorkovsky, but possibly all of the financial group-controlled companies, will soon be out of the picture. But what next? Can the state and "quasi-state" companies, with their relatively greater emphasis on future development, now take over and save the industry for the longer term? Dienes suggests that this will not be enough. Rather, "substantial participation" (p. 336) by foreign oil companies will be needed.

FOREIGN INVESTORS IN PUTIN'S "MANAGED CAPITALISM"

This may in fact be exactly the model President Putin strives for. When he took over in 2000, he had the idea that he could strike a deal with the leading domestic oligarchs. He could persuade them to continue to manage the assets in ways that were consistent with his vision of Russia. They would clear all important strategic corporate decisions with him. They would not attempt to set the agenda, either through corporate channels or through influence in politics. In return, they could keep the businesses and continue to derive profits from them.

Mikhail Khodorkovsky was not merely a willing participant in this arrangement. He was supposed to play a leading role; he would be the new poster boy. Khodorkovsky's subsequent behavior seems to have ruined this scheme. He did not clear his important decisions with the Kremlin. He even went so far as to buy influence in the Duma to shape energy-sector legislation independently of the Kremlin.

After the Khodorkovsky debacle, it now seems that Putin may have come up with a new preferred design for his "managed capitalism." Instead of relying entirely on frequently untrustworthy Russian oligarchs who want to pursue their own political and economic agendas, there are signs that Putin may be seeking certain foreign companies (like BP) as stewards of the commanding heights of the economy. The ground rules for the foreign companies will be very much the same as they were for the domestic Russian oligarchs: increase

(footnote continued) its single-minded focus on stock market valuation. But in the oil industry in the West, at least, stock market value does not come from maximizing rates of current production. It is all about maximizing the size of future reserves (even to the point of fudging the statistics). Reserve replacement ratios are more important than current production rates. A more credible explanation for Yukos's failure to invest in development was uncertainty of property rights. Why invest for the sake of future profits if they are not secure? In contrast, the "insiders"—the owners and managers of Surgutneftegaz and Lukoil—could feel more secure thanks to their special relationships with government officials. These relationships represent a particular kind of asset that Barry Ickes and I call "relational capital" (Gaddy and Ickes, 2002). In Russia today, no one has truly secure property rights. To ensure ownership of the fruits of investment in physical and financial capital, the owner needs also to possess and invest in relational capital. The difference in the behavior of Lukoil and Yukos stems from the fact that their owners had different endowments of relational capital. With equal rationality, their managers pursued different policies to the same end: maximizing profits.

efficiency and profitability in the industry, but stay out of politics, and put the interests of the Russian state (as defined by the Kremlin) first, above private and corporate interests.⁷

Putin is not rejecting the original model of a domestic Russian corporatist system. He is only adjusting it. The loyal and reliable domestic oligarchs will continue to play their role, although even they will be held by tighter reins.⁸ To what extent foreign companies will be willing to play by these rules remains to be seen. One thing is clear, however. Leslie Dienes's analysis of Russia's oil future makes the recent battles between the Russian state and its business community, especially the Yukos affair, seem particularly tragic. For all the damage the affair has caused to Putin's (and Russia's) image abroad, not least in the business and investment community, the image is a particularly messy version of the proverbial rearranging of the deck chairs on the *Titanic*. Dispossessing Khodorkovsky cannot change geology and geography.

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⁷Interestingly, the closest historical parallel to Putin's model is one proposed by the early Bolshevik Yuriy Larin. Larin, the man whom Richard Pipes has called the "founder of the Soviet planned economy," initially urged Lenin to adopt the system of economic management in Germany in World War I. Larin dubbed it "state capitalism." The creator of that German system, Walther Rathenau, faced exactly the same dilemma as Putin: How do you create a system that combines the maximum efficiency of private management with overall state control? Direct state ownership and government micro-management of industry are counterproductive. With the proper balance of persuasion and coercion, private owners have to be induced to do the right thing.

Lenin, of course, rejected Larin's idea (although not without giving it some consideration). What Larin had proposed for the early Soviet economy was, however, successfully implemented in Germany itself 25 years later. When Hitler appointed Albert Speer as minister of armaments to replace Bormann and negate Goering's role, Speer's plan of action—as he claims in his later, self-serving letters from Spandau prison—was to revive the scheme developed for the German World War I economy by Rathenau. He got rid of the notion of highly centralized, top-down control and instead went over to coordination of industry by joint government-industry bodies. The industrialists would receive the strategic orders, but they would be responsible for making them work. Speer called it "self-responsibility" of industry. Putin's model today is very similar.

⁸Witness the recent decision to radically diminish the independence of the Union of Industrialists and Entrepreneurs. It will be more directly an instrument of the Kremlin.