[Forthcoming in *Gaiko Forum*, January 2007]

As Russia Looks East: Can It Manage Resources, Space, and People?

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The suddenness with which Russia has re-emerged as a global political and economic power has stunned observers. This time, its power rests not on tanks and nuclear arms but on oil and gas. Russia become a critical supplier of energy to a world whose demand is growing rapidly. At the same time, thanks to soaring prices for these commodities, both the Russian state and its big corporations have turned into financial powerhouses. Is Russia's new-found power only temporary, or will it last?

In the short to medium term, high world oil prices are likely to continue to bolster Russia's wealth, strength, and confidence. However, there are questions about the longer term. Russia has yet to address fundamental problems left behind by decades of Soviet mismanagement of its economy. Some of these problems directly affect the future of Russia's energy wealth. The oil and gas of the future lie in the vast, cold expanses of the eastern part of the country. In the earlier phase of great energy wealth — the 1970s and early 1980s — Soviet economic planners committed great mistakes by misdeveloping and overpopulating Siberia. To avoid repeating the same mistakes, Russian policymakers today need a comprehensive view to tackle the dual challenges of resource management and Siberian development. The issue is all the more important because today Russia faces a shortage of one asset that it has in the past possessed in abundance: human beings.

It is therefore worth examining Russia's future in terms of how it deals with the challenge of managing its resources, its space, and its people.

Managing Resources

The benefits of Russia's oil and gas abundance are easy to see. These resources turned Russia from a virtually bankrupt country after the 1998 financial crisis into one with real financial leverage today. The increase in wealth flowing into Russia from oil and gas is staggering. Consider the income from one component alone — crude oil exports. Revenues from foreign sales of crude in the four quarters prior to now-president Vladimir Putin's appointment as prime minister in August 1999 were $14 billion. For the most recent four quarters, the corresponding number is $140 billion. (Note that in 1999 Russia's total GDP in dollar terms was only $200 billion....)

The growth in the total market value of Russia's oil and gas is even more impressive. Figure 1 shows the value of these commodities produced on the territory of the present-day Russian Federation from 1970 to the present.

[Figure 1. Russia's Oil and Gas Rents, 1970-2006]

It is important to distinguish between the physical quantities of oil and gas Russia produces and exports, and the wealth that it generates from them. The wealth is due mainly to the increase in

world prices: from under $10 a barrel to over $60. The price increase overshadows the reality of physical production. Physical output grew strongly from 1999 through 2003. Since then, as shown in Figure 2, growth rates have dropped sharply.

[Figure 2. Russian Oil Output: Growth Rates, 1960-2005]

Russia is not likely to resume strong output growth. It is estimated that Russia invests only half as much in its oil and gas sectors as would be needed to sustain expansion of output over the longer term. Eventually output may decline. For those who rely on Russia as a supplier, the trend is disturbing. Over the past few years, Russia's increased oil production almost exactly matched the increase in demand from China. Without Russia, world oil prices would have been even higher. A fundamental question — especially for Japan and the other Asian countries that are or want to be Russia's customers — is whether Russia is able to, and whether it wants to, keep producing more. There are voices inside Russia that now argue explicitly that Russia should not continue to expand production of oil. It is better to keep this precious resource in the ground, they say, since it will only become more valuable as time passes.

But even if Russia does attempt to expand production, it will face challenges of a qualitatively new dimension than over the past few years. The increased oil that Russia pumped up between 1999 and 2005 was largely so-called "old oil" — that is, oil that had been left in the ground in mature fields. These are fields mainly in Western Siberia where infrastructure is already in place. The oil was there for two reasons. First, owing to the destructive extraction practices of the Soviet oil industry in the 1980s, the oil had been by-passed and left in "ruined wells". Second, in the chaos of the post-Soviet Russian economy of the early 1990s, there was no effort to return to those wells to recover the by-passed oil. Output on the territory of the Russian Federation dropped from a peak of 562 million tons per year (11.2 million barrels per day—mbd) to barely 300 million tons a year (6 mbd).

Managing Space

Since 1999, most of this old oil has been recovered. Oil producers in Russia will now have to shift increasingly to new regions of Siberia. This means Russia faces the challenges of Siberian development. Siberia represents a great boon in the form of resource wealth. However, it does have great associated costs. Cold temperatures add extra costs to all economic activity. In a normal market economy, these costs are weighed against the benefits. Patterns of population settlement and location of industrial activity evolve accordingly. However, the Soviet economic system largely ignored the issue of cost. Far too many people and too much manufacturing industry were moved to Siberia. As a result Russia was made "economically colder" than it needed to be.[1]

The cold is not the only disadvantage of Siberia. Remoteness, or distance, is also important. Distance is the most basic obstacle to all economic interaction in market economies. Transportation costs are only part of the problem. When potential exchange partners are separated from one another physically, they are less likely to know about each other, to know what goods and services they have to offer or that they demand. They are less likely to know the other's reputation. They are

[1] The cost to the Russian economy of overpopulation of Siberia was analyzed in detail in the book, *The Siberian Curse*, by Fiona Hill and Clifford Gaddy, published by the Brookings Institution Press in 2003.

less likely to share the same social networks. Therefore, the businesses that produce, buy, and sell in Siberia all have to overcome the obstacle of distance.

Spatial misallocation is an often underappreciated feature of the Soviet system. One way to recognize this is to imagine a counterfactual: suppose that the Bolshevik Revolution had taken place not in Russia but in Japan. Central planning under a "Japanese Stalin" would have done great damage to the economy. But it would not have accomplished as much spatial misallocation, simply because it would have had much less "room for error." Spatial misallocation may well be the most difficult part of the Soviet legacy to rectify, since decades of mistakes have to be corrected.

Has there been any corrective shift in the post-Soviet period? After the collapse of the command-administrative system of economic management in the early 1990s, free market forces in Russia began correcting the mistakes of the Soviet era. People migrated out of the coldest and most remote regions. However, that self-adjustment came to a halt in 1999. Now the trend has reversed. Plans for Siberian development and repopulation are back on the national agenda. In June 2006 President Putin announced a new migration program designed to attract ethnic Russians from abroad to return to Russia in order to repopulate Siberia and the East.

The sharp recent increase in eastern development is shown in Figure 3. The index plotted on the chart is the average January "temperature per square meter" of new housing. It takes into account both the volume of new housing built in various regions of Russia and the average January temperature of those regions. (If relatively more housing is built in warmer regions, the index rises, and vice versa.) That index had risen rose by two full degrees centigrade between 1991 and 1999. It then remained flat through 2005. But this year alone it has suddenly dropped by nearly half a degree.

[Figure 3. Average January Temperature of
New Housing Built in Russia, 1970-2006]

What explains the change since 1999? Refer to Figure 2. Russia again has the physical and financial resources to misallocate. And of course, the space is still there. This time around, though, the really scarce factor is labor, people.

Managing People

The main parameters of Russia's demographic crisis are well-known. The population is shrinking rapidly (considerably faster even than Japan's). On average, 840,000 more Russians have died than were born each year since 1993.

[Figure 4. Natural Population Increase/Decrease, 1960-2006]

There are only three basic ways to correct this: (1) increase births; (2) decrease deaths; (3) increase net immigration. The Russian government is aware of all three approaches but has focused its policies only on (1) and (3). However, (2) is the most important for Russia. Why? Because it is most directly concerned with the quality of the country's human capital. The biggest problem with Russia's death rate is that it is young men who die in such great numbers. Russian males in prime

working age — 25-55 — are dying at rates 7-11 times higher than Japanese men in that age range. Russian 26 year-old men die at the same rate as Japanese 56 year-olds. Figure 5 shows that the problem is getting worse.

[Figure 5. Death Rates for Men Age 30-34, Russia and Japan, 1960-2005]

The shrinking of Russia's population is inevitable. Even radical measures will not be able to prevent it. One logical conclusion is that the people — the human capital — needs to be regarded as a very precious asset. Clearly, this would dictate much more attention to the health of the population. (Russia's rampant alcoholism problem is a major reason for the high death rates among men.) Also, human capital needs to be located geographically where it can be most productive. Mobility should be facilitated to the greatest extent possible. But instead of becoming more mobile, Russians have become less so. Each year only one-third or one-fourth as many Russians move to a new city as do Americans or Canadians. In an economy that needs much more dynamism, this is not a good sign.

Unfortunately, to the extent that mobility is encouraged in Russia today, it is in the wrong direction. If people are precious, then moving more people to the east — as the government wants — is particularly wasteful. Instead, the goal ought to be to use as few people as possible to develop the resources of Siberia. The strong new policy statements by Russia's leadership to "repopulate the East" are alarming. Such statements typically include phrases such as: "Less than five percent of Russia's population lives in the region, which occupies 36 percent of the country's territory." In fact, if one makes an international comparison, one sees that Siberia and the Russian Far East are not underpopulated. Rather they are overpopulated. Compare Eastern Siberia and the Russian Far East with Alaska in terms of their relative shares of population and territory for Russia and the United States. If Alaska had been populated according to the Soviet model, it would have today not 650,000 residents, as it actually has today, but 9 million! Conversely, if Eastern Siberia and the RFE had followed the American pattern, they would in total have barely one million residents instead of their current 15 million.

Similarly erroneous is the argument that because Russia's East is so thinly populated and China's neighboring regions are densely populated, Russia risks being overrun by Chinese. All evidence from economics says that the natural tendency is for economic activity to concentrate, not disperse. People are not like a fluid or a gas: they do not flow to fill a vacuum. The Chinese immigrants in Russia — who in general are far fewer than some of the alarmist estimates — follow the laws of economics, not physics. They are not attracted to empty spaces in Siberia. They are attracted to cities where they find Russians with whom they can trade.

What to Do?

How might one then imagine a sensible policy of Russia's future development that adequately managed its resources, its space, and its people? This is a broad and complex question. But the general principle is clear. Siberia and its resources need to be developed as efficiently as possible. This means to produce the greatest amount of oil, gas, and other resources with the least possible financial and human costs.

This is not the way things work today. In Russia's current political economy, companies in the resource sectors are expected, even compelled, to keep costs high. High costs mean more orders for local industries, more jobs. Even private companies have to play this game because they do not have secure property rights. Their property rights are conditional on having good relations with federal and regional political officials. Companies "invest" in good relations by meeting the informal demands of officials to spend money locally. Not only Russian companies, but foreign companies as well, are expected to follow this model.

Another factor that is going to drive up costs is the attempt to move the focus of oil and gas production away from West Siberia to new regions of East Siberia. West Siberia has huge amounts of oil yet undeveloped. It is premature to shift investment from West Siberian production to the east. Costs now and for years to come will be lower in West Siberia than in East Siberia.

Another advantage of West Siberia is that it is more conducive to a pluralist, competitive — and therefore more cost-efficient — model of resource development. The infrastructure for production and transport is already in place. This means that there can be a greater number of small operators in addition to the big companies. Small operators are suited for risk-taking and innovation.[2] Development in East Siberia and the Russian Far East, in contrast, would require truly large-scale investments, big operators, and heavy state involvement.

To sum up: the Siberian challenge includes within it the challenges of managing resources and people. Russia needs to achieve efficient, clean, and humane development of the resources located on this vast territory. "Efficient" means to determine and implement an optimal current depletion rate and an optimal rate of investment for expanding the resource base for sustainable future growth. "Clean" means to protect the sensitive environment of Siberia and the far East. "Humane" means decent treatment of the people who currently live there. The three challenges of space, resources, and people interact. They must be addressed at same time and with recognition of their interdependence.

[2] Note that the United States has over 20,000 operating companies in its oil and gas industry. Canada has several thousand. Russia has fewer than 200.

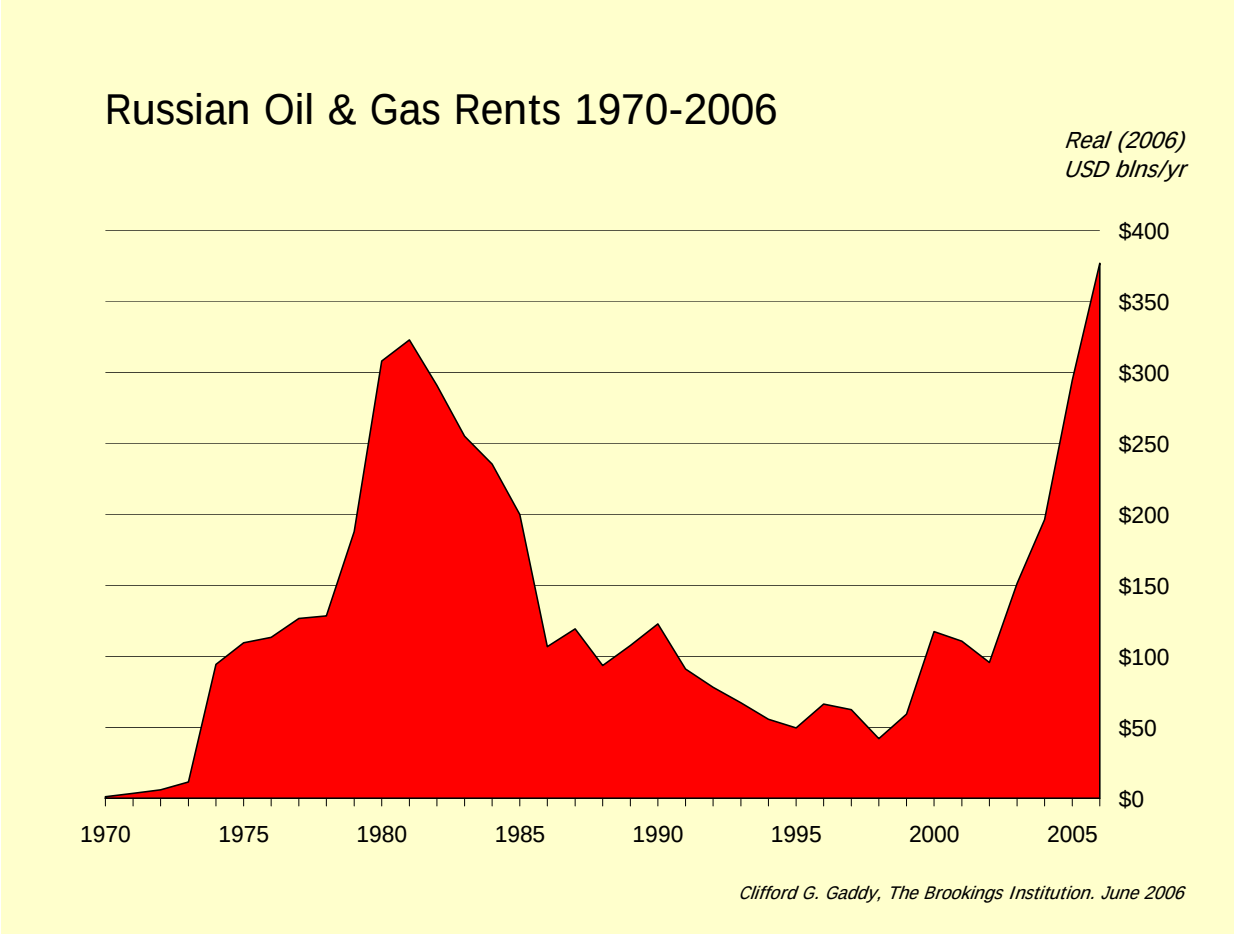
Russian Oil & Gas Rents 1970-2006
Real (2006)
USD blns/yr
$400
$350
$300
$250
$200
$150
$100
$50
$0
1970
1975
1980
1985
1990
1995
2000
2005
Clifford G. Gaddy, The Brookings Institution. June 2006

Figure 1

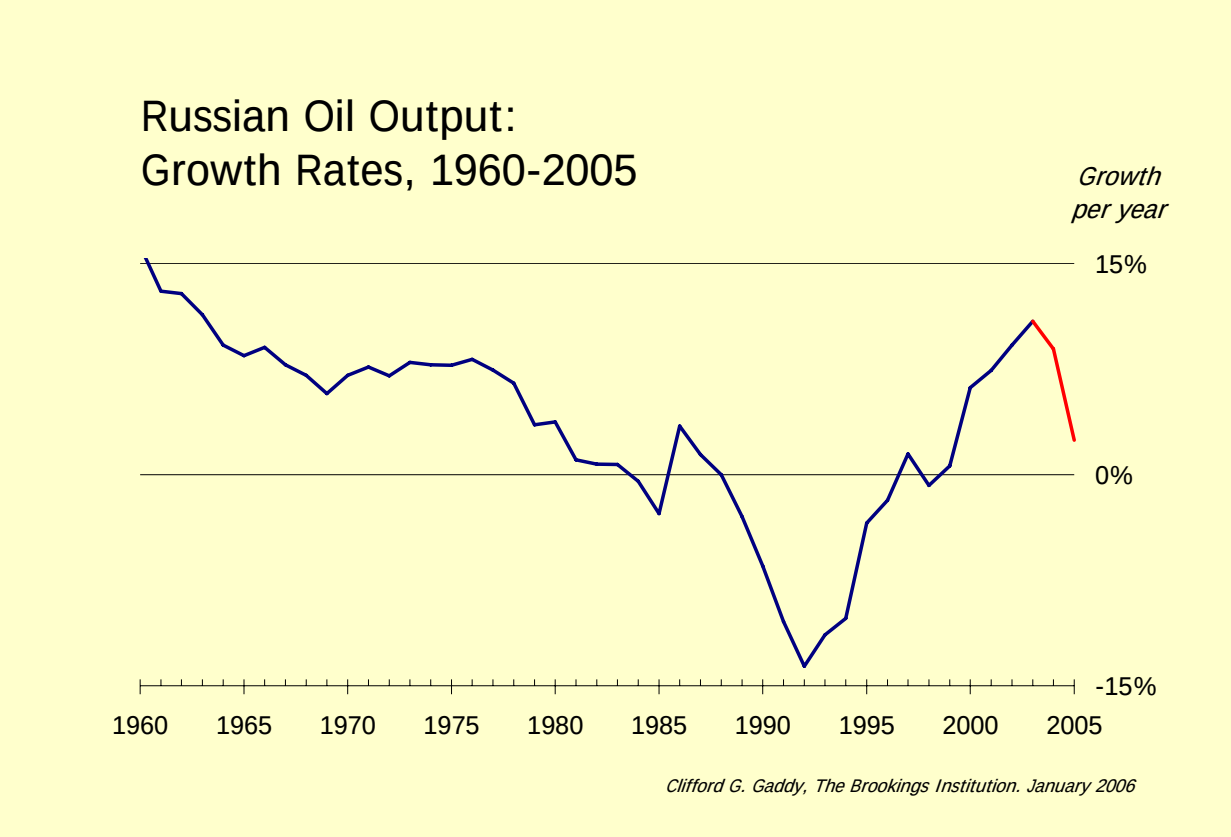
Russian Oil Output:
Growth Rates, 1960-2005
Growth per year
15%
0%
-15%
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
Clifford G. Gaddy, The Brookings Institution. January 2006

Figure 2.

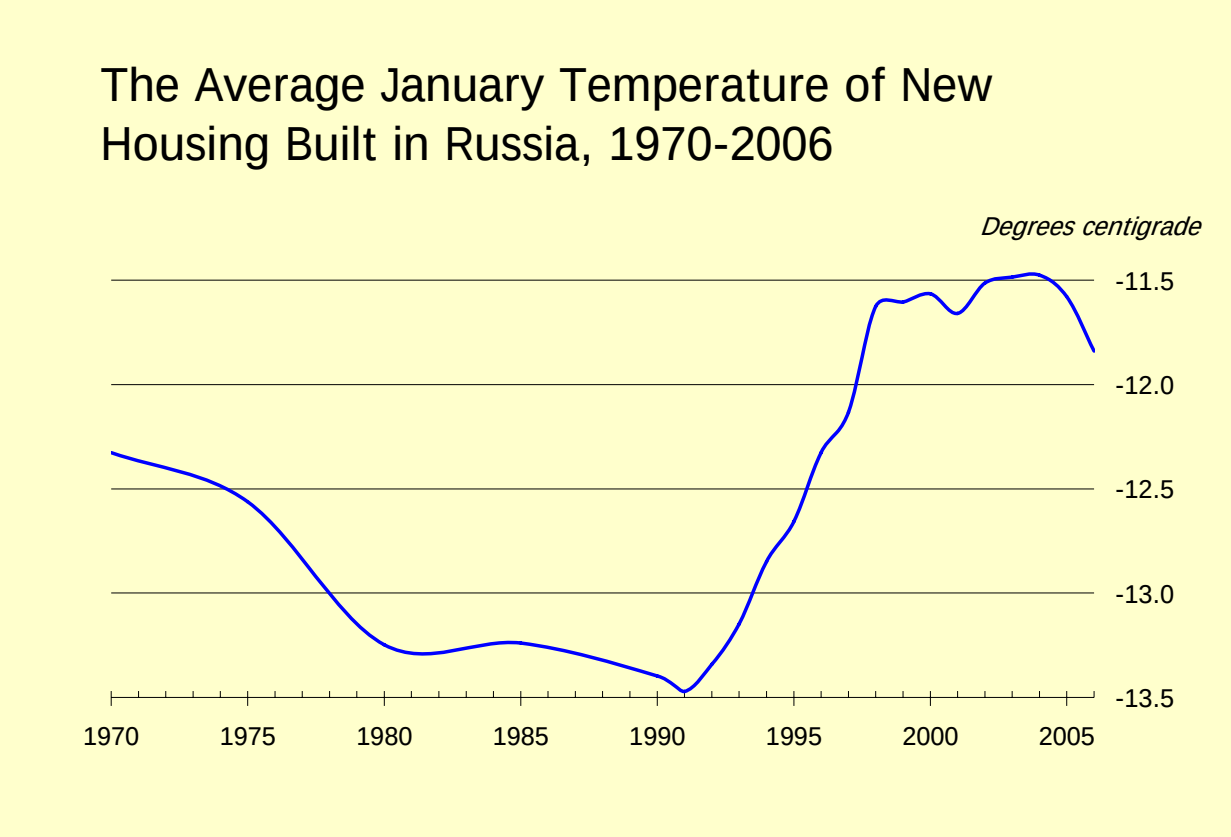
The Average January Temperature of New Housing Built in Russia, 1970-2006
Degrees centigrade
-11.5
-12.0
-12.5
-13.0
-13.5
1970
1975
1980
1985
1990
1995
2000
2005

Figure 3.

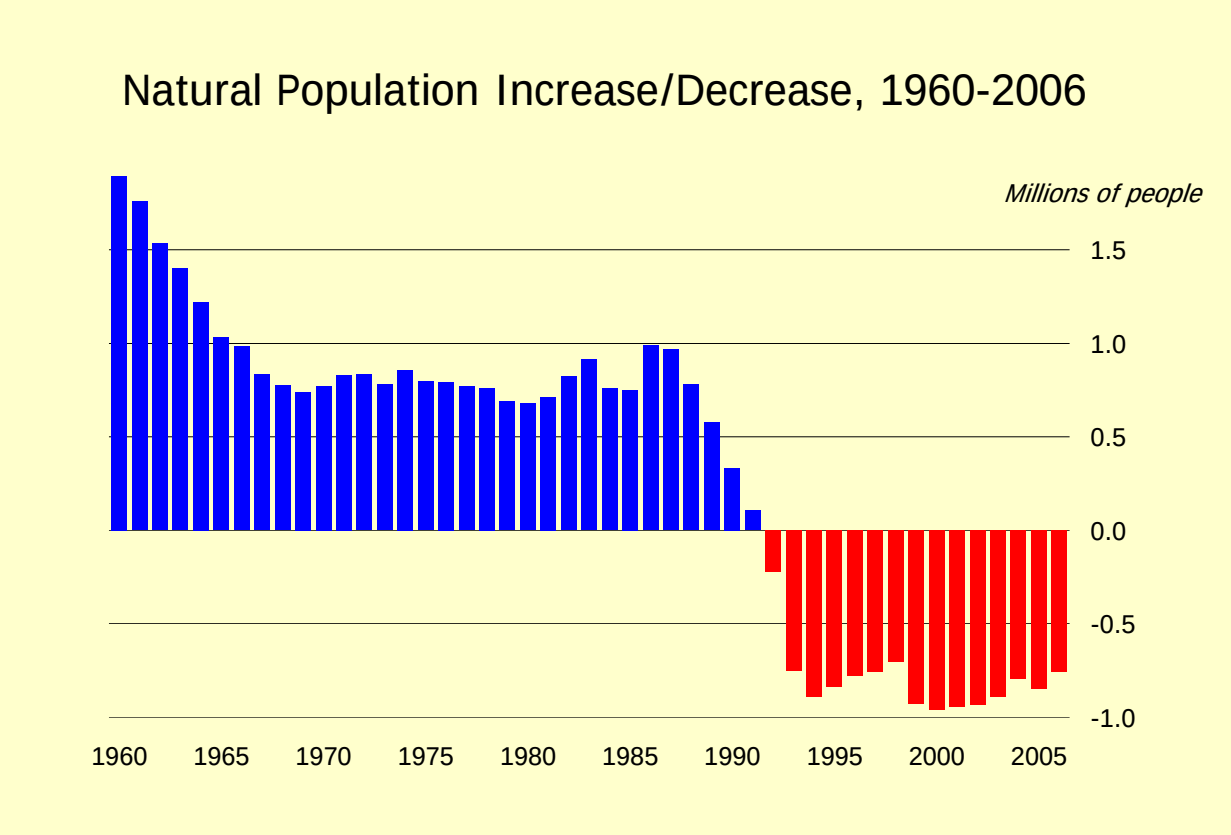
Natural Population Increase/Decrease, 1960-2006
Millions of people
1.5
1.0
0.5
0.0
-0.5
-1.0
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005

Figure 4.

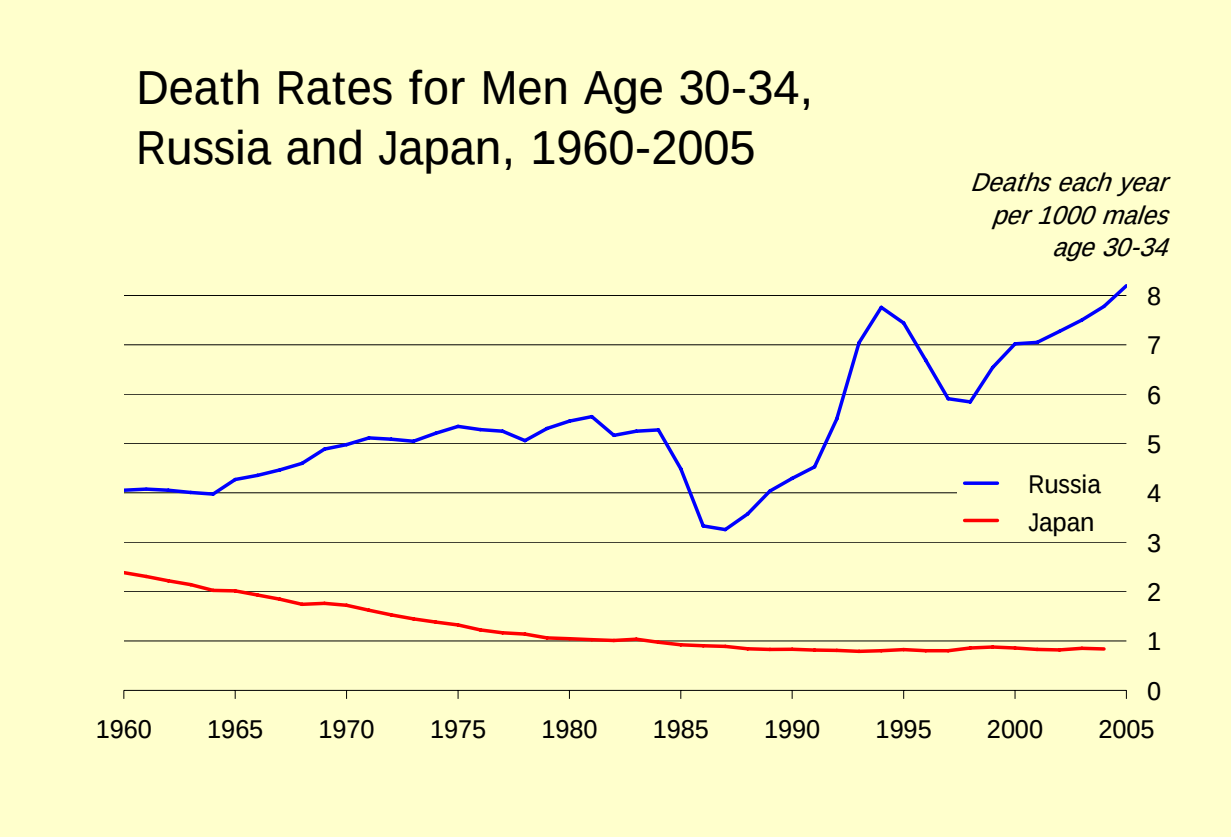
Death Rates for Men Age 30-34,
Russia and Japan, 1960-2005
Deaths each year
per 1000 males
age 30-34
8
7
6
5
4
3
2
1
0
Russia
Japan
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005

Figure 5.