

THE NEW YORK TIMES

Will Russia Bet on Its People or Its Oil Wells?

By THOMAS L. FRIEDMAN

February 16, 2007

In a high-rise building with a view of Lenin's Tomb, the U.S. aerospace giant Boeing is designing key parts of its new 787 Dreamliner, using hundreds of Russian aerospace engineers. Yes, President Putin may be talking cold-war tough, but down the street from the Kremlin, America's crown jewel industrial company is using Russia's crown jewel brainpower to design its next crown jewel jetliner.

Boeing's Moscow Design Center, which employs 1,400 Russian engineers (earning less than their U.S. counterparts) on various projects, symbolizes Russia's unique potential: Russia is that rare country that not only has a treasure trove of natural resources — oil, gas and mines — but also has a treasure trove of human talent: engineers, mathematicians and other valuable minds.

Most nations with highly developed human talent — like Singapore or Taiwan — have few natural resources, and those that are rich in natural resources — Venezuela or Sudan — tend not to develop their people's talents. The exceptions, like Norway, which is rich in both human and natural resources, usually built their democratic institutions before they got rich on oil, so the money was well spent.

The meta-question with Russia today is this: Will it become more like Norway, a democracy enriched by oil, or more like Venezuela, a democracy subverted by oil? Is the Boeing center Russia's future or its exception?

You see signs of both trends. On the positive side, Russia has been smarter than most petro-states. It has set up a rainy day fund and tucked away \$100 billion from its oil and gas windfall. Direct foreign investment in Russia hit \$30 billion last year, according to *The Economist*, and not all of it goes to the oil and gas sector anymore.

And then there's Boeing. Its impressive Moscow center operates two shifts of engineers: 7 a.m. until 3 p.m., and 3 p.m. until 11 p.m. — which is shortly before the workday begins in the United States. A Russian Boeing engineer might be designing part of the 787's nose during his day, and then initials and stores his work in the computer. A U.S. Boeing engineer, working on an identical computer, then picks it up during her day and engineers it some more. With regular teleconferences, it's as if they are in one virtual 24-hour office.

"There is no paper at all," said Sergei Korolev, the deputy head of Boeing Moscow. "We do the presentations electronically and have online sessions with Wichita and Seattle, and everyone looks at the same part and talks about it. Our center is the reason people are not emigrating."

But Russia has a unique legacy in aerospace from Soviet days, so the educational centers and talent were in place for Boeing to tap. What Russia still glaringly lacks is an ecosystem of secure property rights, venture capitalists and homegrown innovators, and universities and business schools churning out idea-entrepreneurs. "Made in Russia" will never be a global brand as long as research spending by Russian companies remains among the lowest in the world.

The Moscow Times recently reported that only two Russian colleges — Moscow State and St. Petersburg State — are listed among the world's top 500 universities. When you walk down the streets in Bangalore, India's high-tech capital, it feels as if there's a computer school or English-

language school on every street. You walk in Moscow, and it feels as if there is a new shoe store or beauty salon on every street.

A former top aide to President Putin remarked to me that Russia had a huge interest in building a postindustrial knowledge economy, not an energy-intensive industrial one, so it can export most of its oil and gas, not consume them at home. But that would take a big investment in education, which is not being done.

Noting that Russia today spends far less of its G.D.P. on higher education than Europe or America, Sergei Guriyev, rector of Russia's New Economic School, wrote in *The Moscow Times*, "Russians simply are not prepared to pay the taxes that would be necessary to finance science and education at Soviet-era levels, and no incentives have been created to attract more private funding."

So here's my prediction: You tell me the price of oil, and I'll tell you what kind of Russia you'll have. If the price stays at \$60 a barrel, it's going to be more like Venezuela, because its leaders will have plenty of money to indulge their worst instincts, with too few checks and balances. If the price falls to \$30, it will be more like Norway. If the price falls to \$15 a barrel, it could become more like America — with just enough money to provide a social safety net for its older generation, but with too little money to avoid developing the leaders and institutions to nurture the brainpower of its younger generation.