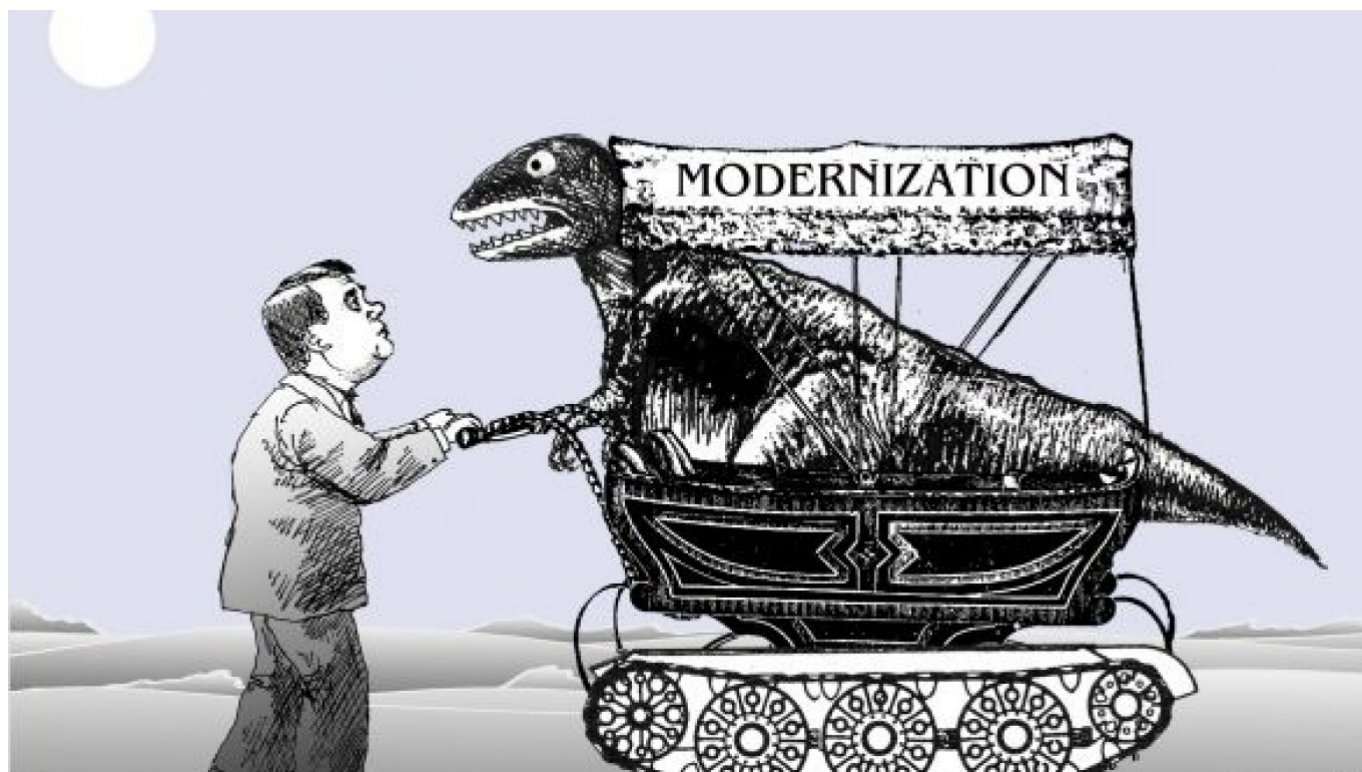


# Trickle-Down Modernization

By [Alexander Golts](#)

September 27, 2010



President Dmitry Medvedev made the same foolish mistake that Soviet leader Mikhail Gorbachev made 25 years earlier. He decided that his modernization drive should also apply to Russia's defense contractors, or what some Russians would like to believe is their military-industrial complex. During a visit last week to the Ramensky Instrument Engineering Plant in the Moscow region, Medvedev held another meeting of his Modernization and Technological Development Commission and announced that Russian defense firms should become a key driving force for the country's modernization.

In this respect, Medvedev is continuing a rich tradition. Every modernization campaign in the country's history was motivated by military defeats or the fear of lagging behind militarily with other leading nations. This includes the modernization campaigns of Peter the Great, Tsar Alexander II and Soviet leader Josef Stalin.

It also applies to Gorbachev, who was eager to breathe new life into the dying socialist economy. In the mid- to late-1980s, Gorbachev attempted to enlist the seemingly unlimited resources of the military-industrial complex. But instead of producing a trickle-down effect from modernization — that is, jump-starting the country's civilian modernization by

focusing first on modernizing the military — the most the country could show for itself was an overabundance of titanium shovels and cooking pots that few needed.

Despite the country's poor historical record of modernizing the military, it is understandable why Medvedev still wants to take another stab at it. Considering the fact that defense and security are not Medvedev's strongest points, perhaps he believes some of the cock-and-bull stories that defense firm directors love to tell about supermodern weapons systems and technologies that "are unmatched anywhere in the world." The armed forces and the defense firms they feed sense that they may have a sucker in charge. The financial stakes are higher than ever before. According to Deputy Prime Minister Sergei Ivanov, defense funding from 2011 to 2020 will total a record 22.5 trillion rubles (more than \$700 billion). This means that during this period, a lot of pockets will certainly be lined, while the military will make more confident claims that it is modernizing.

Although Medvedev probably understands more about the sorry state of the armed forces than many military leaders and defense contractors believe, he still adheres to the illusion that the Russian military can produce technologies that will have applications in the civilian sector.

Unfortunately, neither Medvedev nor Defense Minister Anatoly Serdyukov has addressed the real roadblocks to modernizing the military. One of main obstacles is Russia's inability to mass produce military equipment as a result of the country's de-industrialization after the Soviet collapse. The Soviet-era factories that produced the basic nuts and bolts — both literally and figuratively — upon which more complex equipment could be built have disappeared. Most of those products were manufactured at civilian plants. Many of these enterprises went belly-up in the 1990s, while others were completely refitted to manufacture other products. As a result, component parts are manufactured in the same plant responsible for final assembly. For example, state-owned Komsomolsk-on-Amur Aviation Production Plant received a large government order for the production of dozens of Su-34 and Su-35 combat aircraft and will spend the next year manufacturing the necessary parts. The plant will begin actually assembling the aircraft only afterward.

Instead of painstakingly restoring integrated production chains, Russian leaders are obsessed with a new administrative "silver bullet" — trying to create a Russian version of the U.S. Defense Advanced Research Projects Agency, or DARPA, founded in 1958 in response the Soviet launching of the Sputnik and charged with developing new technology breakthroughs for the military. This is a typical Russian approach to trying to solve the country's technological backwardness — create another bureaucratic agency or committee. If the U.S. military-industrial complex ultimately led to the development of GPS and the Internet, Medvedev reasons, why can't Russia achieve similar results? Unfortunately, what may have worked in the United States is more often than not ill-suited for Russia.

The biggest reason for this is that the bulk of the modernization process and technological breakthroughs takes place within private companies — that is, from the bottom up — and not from state agencies like DARPA. The state gives a defense contractor an order to develop a new weapon, thereby indirectly funding basic and applied research as well. And then that final product — with a minimal degree of bureaucracy — is passed to the civilian sector. At that point, both technical specialists and experts in marketing undertake the complex task of

converting military technologies into civilian products.

In Russia, a thick brick wall stands between military and civilian firms. There is nothing to motivate the director of a military research facility to waste time and money convincing first his customers and then his colleagues in the civilian sector that a new technology in development has applications in both spheres. In addition, the Federal Security Services can get in the way. All it takes is one FSB officer who perceives that a private company is disclosing state military secrets, and the defense contractor will be spending most of its time trying to disprove the charges instead of trying to convert military technology to civilian uses.

The entire system in which defense orders are fulfilled need to be reorganized and reformed along with the armed forces itself, but the authorities are not yet ready to take that step. If this doesn't happen, the huge black hole where billions of rubles allocated for military weapons programs disappear every year will get only larger and larger.

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