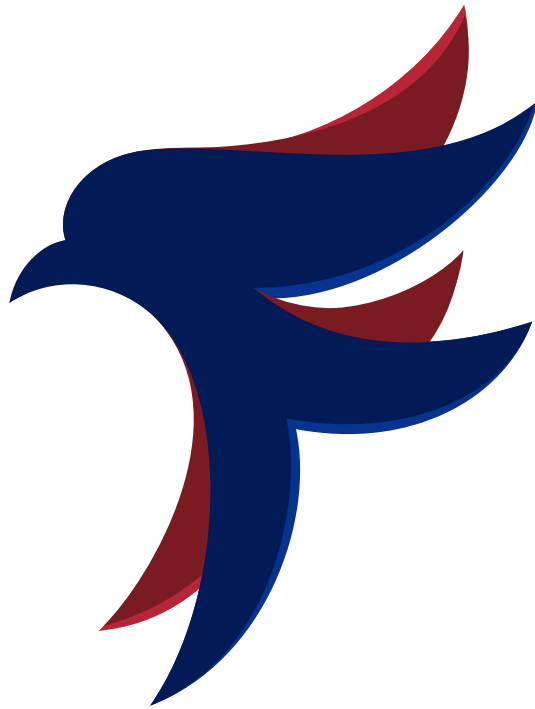


RUSSIA'S DEFENSE INDUSTRY: BETWEEN POLITICAL SIGNIFICANCE AND ECONOMIC INEFFICIENCY

Pavel Luzin





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RUSSIA'S DEFENSE INDUSTRY: BETWEEN POLITICAL SIGNIFICANCE AND ECONOMIC INEFFICIENCY

ABOUT THE AUTHOR



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EXECUTIVE SUMMARY

The Russian Federation's defense industry provides the authoritarian regime with military power that is used for maintaining its domestic and foreign legitimacy. The industry's top-management is a major part of Russia's governing establishment. Nevertheless, the industry suffers from economic inefficiency, lack of human capital and advanced technologies, and governmental over-regulation. These challenges are enhanced by confrontation with the West and efforts to maintain the stability of the regime, which spur Russia's leaders to rely on economic protectionism and self-isolation.

This trend means that Russia's political system will rely more on its military power than on diplomacy to achieve foreign policy goals. The Kremlin wants military power will be permanently maintained and developed. The defense industry has bolstered Russia's relatively high status in international affairs for now, but there is no guarantee that the industry can sustain this trajectory, given the vast problems it faces.

A DYSFUNCTIONAL RELATIONSHIP



Marines of the Baltic Fleet practice airdrops. (mil.ru)

The defense industry is an essential part of the political regime of the Russian Federation. The employees of the industry, about two million people, are a key group that benefits from the regime and, therefore, provides domestic legitimacy. The defense industry also allows Russia's leadership to maintain its military power, which is used as a source for Russia's foreign policy and claims to great power status. In addition to permanent membership at the United Nations Security Council and space cooperation with the West, Russia's role in international relations is based mostly on its military capabilities (both nuclear and conventional) and, consequently, relies on the concept of a foreign enemy that threatens the homeland. In return, this great power status helps sustain the authoritarian political system with its domestic and global legitimacy that dates to the Soviet era.

Nevertheless, Russia's defense industry suffers from economic inefficiency due to low profitability and lack of technologies and human capital. This inefficiency creates challenges for Russia's economics and politics. The Kremlin's ability to meet these challenges is limited. Faced with the choice of either spending more and more on

the defense industry or reforming it alongside the armed forces and security services, Russian leadership naturally chooses more spending. At the same time, it is trying to increase the manufacturing of civil products in defense industry up to 30% by 2025 and 50% by 2030.¹ For this purpose, Russia's government uses protectionist measures for these products in Russia's domestic market. However, this policy leads to further self-isolation in politics and economics and, in the long run, contradicts Russia's great power status. This essential paradox will heavily influence foreign behavior and foreign policy and may cause the country to use its armed forces more actively in overseas conflicts that are sensitive for the West, like the wars in Syria and Libya and instability in Central African Republic.

¹ "Путин рассказал о планах нарастить долю гражданской продукции в ОПК до 50% к 2030 году [Putin announced plans for increasing of share of civil products in defense industry to 50% in 2030]," TASS, January 24, 2018, <https://tass.ru/armiya-i-opk/4899582>.

DEFENSE INDUSTRY AS A PART OF THE AUTHORITARIAN SYSTEM

Russia's defense industry is a conglomerate of state-owned joint stock corporations and other types of state-owned enterprises interspersed with several formally private companies. The total number of entities within the industry exceeds 1,300 and employees number around two million people. Table 1 on the next page outlines the leading defense corporations (including subsidiaries) that dominate the industry.

How significant is the defense sector for a country with 145 million citizens and a gross domestic product (GDP) of less than USD 1.7 trillion? There are more than 82 million employed citizens in Russia, but the authoritarian base relies on only 24 million of them. This figure includes state and local civil officials (2.3 million); employees of social sectors like doctors, school teachers, etc. (5.8 million); officers and civil employees of armed forces, police and security services (about 3.5 million); and several million employees of state-owned companies, state unitary entities, and joint stock companies, where the authorities have stakes.² That means the employees of defense industry are a significant group of regime's beneficiaries, people whose livelihoods depend on Russia's political system and who prefer state paternalism to a free labor market. For instance, even if their salaries may be about USD 400-550 per month (the salary for engineers at rocket engine plants in Voronezh and Perm and a cruise missile plant in Yekaterinburg), these salaries are higher than median wage in most of Russian regions, but still not enough for providing high standards of living. However, these employees also get social protection—like discounted rates on mortgage loans, corporate housing subsidies, and sickness benefits—that many Russians who work in private commercial sectors do not receive.

Since 2011, when the State Armament Program 2020 was launched and Russia's authoritarianism shifted from a strategy of moderate modernization toward a unitary focus on the conservation of Vladimir Putin's power, the defense industry has received more than USD 280 billion from government procurement, measured by current prices. It has also received more than USD 130 billion in current prices from arms export, as of the beginning of 2020. For comparison, during the previous decade, 2001–2010, total arms procurements did not exceed USD 86 billion in current prices, and total arms export was about USD 67.5 billion in current prices. In 1992–2000, these numbers were about three times lower than 2001-2010.

Nevertheless, the consolidation of Russia's defense industry in the Kremlin's hands started in 2000 from the monopolization of arms export. The company Rosoboronexport, the only exporter of Russian arms, was established that year and headed by Sergey Chemezov, a close Putin confidante. Rosoboronexport controls all the financial flows in this field, so Russia's defense company are not able to sell arms directly to foreign customers. In 2011, Rosoboronexport became a subsidiary of Rostec, the largest of Russia's state-owned defense corporations—and also headed by Chemezov.

The period from 2011–2020 was a good one for Russia's defense industry, its best since the collapse of the Soviet Union. At the same time, Russia's authoritarian regime has consolidated and has started to project its military power abroad more actively.

The leadership of Russia's defense industry is part of the governing establishment, which crystallized as a closed network during the second half of the 2000s when the current state-owned defense corporations were established. This network

² Pavel Luzin, "Why Corporations Are the Kremlin's Best Friends," *Riddle*, August 29, 2019, <https://www.ridl.io/en/why-corporations-are-the-kremlin-s-best-friends/>.

Table 1: Russia's Key Defense Corporations: Number of Employees and Revenue in 2018

Corporation Name	Types of Weapons	Employees	Revenue* 2018 in USD billion	Share of Arms in Revenue
Rostec	Conventional arms, military equipment, aircraft and ship engines, helicopters	529,000	26.2	30%
United Shipbuilding Corp. (USC)	Surface ships, submarines	450,000	5.35	84%
Roscosmos	ICMBs, SLBMs, short-range ballistic missiles, satellites, launch vehicles	200,000	6.17	50%
Almaz-Antey	Air and missile defense systems, naval and ground-based cruise missiles	105,000	9.87	98%
United Aircraft Corp. (UAC)**	Jet and turboprop aircrafts	100,000	6.57	83%
Rosatom (division of nuclear arms only)	Nuclear warheads, reactors for submarines	93,000	NA	98%
Tactical Missiles Corp.	Different types of missiles (including air-based long-range cruise missiles) and torpedoes	60,000	3.67	98%

* The revenue includes both arms sales and sales of civil goods

** Merged into Rostec in 2018–2019

Source: Based on published annual reports of the companies, official statements, and SIPRI estimations.

Table 2: Russia’s Arms Procurements and Arms Exports in 2011–2019, USD billion

USD billion/ year	2011	2012	2013	2014	2015	2016	2017	2018	2019
Arms Procurements	24.2	29.6	40.2	43.7	28.9	31.4*	25	23.9	34*
Arms Exports	13.7	15.2	15.7	15.6	14.5	15	15	15	15

* The numbers involve defense industry’s debt repayments to Russian banks that were made by the government according to its assurances in December 2016 and January 2020 (for 2019), respectively.

Source: Based on estimations made by SIPRI (<https://www.sipri.org>); Center for Analysis of Strategies and Technologies (<http://cast.ru>); official statements; and author’s researches.

consists of people who share backgrounds: a career in the security services and intelligence, armed forces, or public service; parents who served in the Soviet military, security, and diplomatic elite; and loyalty to their bosses and to the whole system more generally. However, there are no sustainable groups or clans within the leadership of Russia’s defense industry or the establishment. Each corporate leader has his own relations with other members of the establishment, as well as with one’s subordinates. They demonstrate absolute loyalty to their bosses, but when they change their position within the system, they are no longer subordinates. These relations look like *nomenklatura*, the governing establishment of the Communist Party in the Soviet era. *Nomenklatura* means that person’s political obligations, political abilities, relations, and coalitions depend on the person’s formal position within the governing establishment. During long-term careers within the *nomenklatura*, its members get a lot of formal and informal horizontal and vertical ties with each other as well as common *esprit de corps*.

One prominent example is Sergey Abramov,³ a Rostec board member. Rostec is headed by Sergey Chemezov, a close Putin ally. Abramov previously worked at Russian Railways in 2007-

2014 when Vladimir Yakunin, another Putin ally, was the head of the company. Sergey Abramov even served as Minister of Finance and Prime Minister of Chechnya in 2001-2006 during the Second Chechen War. He has no deep connections to the defense industry; however, his career suggests deep connections to Russia’s security services. Another example is Denis Manturov,⁴ who has served as Minister of Industry and Trade since 2012 and is the Chairman of the Rostec Supervisory Board. He is considered one of Chemezov’s protégés because of his career in state-owned defense company Oboronprom in 2003-2007 before his move into government. The company was established in 2002 as a subsidiary of Rosoboronexport. Oboronprom consolidated assets in helicopter and aircraft engine manufacturing and existed as a Rostec subsidiary in 2007-2018, before it shut down. However, Manturov has engaged in the manufacturing and export of Russian helicopters since the beginning of the 1990s thanks to the support of his father Valentin Manturov, a high-ranking Soviet diplomat and an alleged intelligence officer.

Abramov’s and Manturov’s careers show how Russia’s political system works. High-ranking positions in defense companies serve as

³ “Сергей Борисович Абрамов [Sergey Borisovich Abramov],” Rostec, https://rostec.ru/about/controls/sergey_abramov/

⁴ “Денис Валентинович Мантуров [Denis Valentinovich Manturov],” Rostec, https://rostec.ru/about/controls/denis_manturov/



Military transport aviation crews conduct live-fire drills near Tver. (mil.ru)

steppingstones for further advancement in the governing establishment. Also, positions on corporate boards are used for Russia's heavy-weight political veterans who have a background in security and intelligence.

The defense industry's political role is to help Russia's leadership to maintain military power. Military power maintains Russia's great power status, which, in turn, always needs a concept of a foreign enemy that threatens Russia. The concept of the West as Russia's existential opponent and enemy was reinvented in 1999 when Russia's authorities feared the fate of Slobodan Milosevic's regime in Yugoslavia and when Putin first rose to power. It excuses the limitations of freedoms and human rights as well as the absence of democratic governance. Moreover, it allows the authorities to convert people's feelings of humiliation and inferiority into a sense of political satisfaction and pride because they belong to a great power. Great power status also bolsters the global legitimacy of Russia's political system, and its global influence in developing countries, which is substantially based on arms supplies.

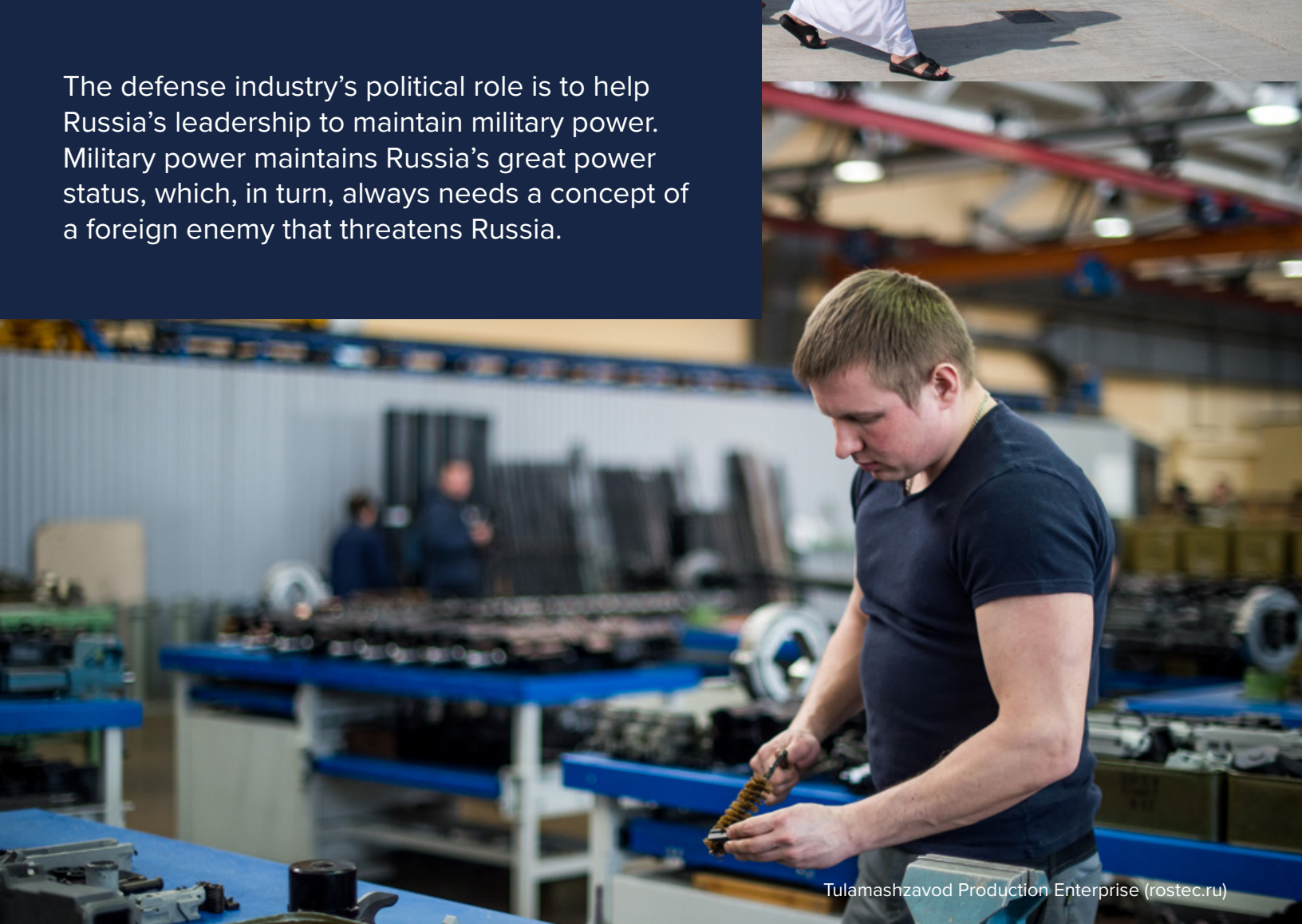
As Russia's leadership invested more into military capabilities, the defense industry consolidated into the hands of Putin's friends and allies. The main aim was to control financial flows created by governmental arms procurements and arms export. Russia's defense industry works not as a

business aiming to create profit, but as a system of redistribution of the national wealth. Within the system, it doesn't matter if every plant or/and company are profitable. What's more important is the scale of financing from arms contracts, governmental research and development, and investment programs, as well as the bank loans backed by governmental guarantees.

Soon after monopolizing arms exports the Kremlin began consolidating several large state-owned defense corporations: Tactical Missiles Corporation, Almaz-Antey, and Oboronprom all were established in 2002; UAC was established in 2006; USC, Rosatom (in place of the Federal Agency on Atomic Energy), and Rostec were established in 2007; and Roskosmos (in place of the Federal Space Agency) was established in 2015. The Kremlin wanted to integrate hundreds of factories and plants into a small number of well-controlled corporations to increase the efficiency of the post-Soviet defense sector. It also wanted to eliminate independent owners in such a strategic industry and competition among defense factories. The control over arms manufacturing as a main source of Russia's great power status became one of the essential priorities for Russia's political regime—one that is aimed to maintain domestic political monopoly and economic dominance of Kremlin.



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THE INEFFICIENCY OF RUSSIA'S DEFENSE INDUSTRY

The main problem is that the defense industry is economically ineffective. It struggles to work in a market economy and is unable to drive economic growth and technological development. Moreover, defense companies in Russia do not have enough funds or freedom to invest into new technologies, industrial equipment, and products. They always must rely on governmental investment and research and development programs.

Russia's defense industry emerged from its Soviet predecessor, inheriting all of its unsolved troubles. First, the industry suffers from excessive regulations and from a de facto non-market environment, with only one major customer. State ownership and the absence of competition are combined with a huge bureaucratic machine over the industry. This Byzantine system of governance consists of:

1. Deputy Prime Minister for the Defense Industry
2. Ministry of Industry and Trade
3. Collegium of the Defense Industrial Commission
4. Deputy Minister of Defense for the Defense Industry
5. Military representative offices in each defense company
6. Federal Antimonopoly Service, which is a main supervisor of arms procurements
7. Federal Security Service (FSB), which controls economic activity of every defense factory and manages counter-intelligence measures
8. Federal Service for Military-Technical Cooperation, which manages arms exports
9. Governmental Committee on the Prevention of Bankruptcy of Strategic and Defense Entities
10. State Corporation VEB.RF (formerly Vneshekonombank), which provides financial support for arms export

According to federal law N275-FZ, the government controls and regulates arms procurements.⁵ This regulation evaluates which bank will work with every defense contract, pricing, and transactions within supply chains. Before 2014, several Russian state-owned and private banks were able to work with defense companies. After the United States and European Union imposed sanctions, only eight banks were authorized to work with arms procurement contracts, and after U.S. President Donald Trump signed the Countering America's Adversaries Through Sanctions Act of 2017 (CAATSA), the list of the banks became secret.⁶

In December 2019, federal law N275-FZ was amended, and the previously nationalized bank Promsvyazbank was established as a special bank for arms procurement contracts. Currently, Russia's government decides what arms contracts should be funded through this bank. Before any arms contract is fulfilled, the defense company and its subcontractors are not allowed to use advance payments by the contract for other purposes, except the manufacturing of production that is contracted. At the same time, Russia's authorities are working on an information data system that is meant to give them control over pricing within the defense industry in real time. Now, pricing within each arms contract is a result of non-transparent bureaucratic bargaining between governmental agencies and defense monopolies, rather than market factors.

Consequently, the defense industry in Russia is sluggish, inflexible, and fully dependent on the government. However, this dynamic allows the Kremlin to avoid the erosion of its domestic and global legitimacy, which could result if defense industries shuttered under market competition. As a developing country, Russia has limited economic capabilities and human capital and

⁵ “Федеральный закон “О государственном оборонном заказе” от 29.12.2012 N 275-ФЗ [Federal law “On the state defense order” of 29.12.2012 N275-FZ],” *Consultant Plus*, December 29, 2012, http://www.consultant.ru/document/cons_doc_LAW_140175/.

⁶ “ЦБРФскрывает списокполномоченныхбанковвсферегособоронзаказа [Bank of Russia covered up the list of banks authorized for state defense order],” *Interfax*, December 6, 2017, <https://www.interfax.ru/business/590674>.

Table 3. The Efficiency of Labor in Rostec and Lockheed Martin, 2018

	Rostec	Lockheed Martin*
Revenue 2018, USD million	26,204	53,762
Employees	529,000	105,000
Revenue/Employees, USD	49,535	512,019

*Source: “Lockheed Martin Corporation 2018 Annual Report,” Lockheed Martin, <https://www.lockheedmartin.com/content/dam/lockheed-martin/eo/documents/annual-reports/2018-annual-report.pdf>.

faces a choice between people’s prosperity and great power status with outsized military power. Great power status requires bureaucratic, non-market measures because otherwise the existence of a defense industry that produces the full range of arms in an economic system like Russia’s would be impossible.

Russia’s defense industry suffers from inefficiency, and, here, the industry’s own financial reports are the best evidence. Even if some corporations hide their consolidated reports, we can examine the reports of their key subsidiaries, which allows us to extrapolate the conclusions on the whole bodies of such corporations:

The low profitability, high level of debt (usually short-term loans), and costs that grow as revenue grows are common for the Russian defense manufacturers. Moreover, labor efficiency within the industry is low. For example, Rostec’s employees produce more than ten times less than Lockheed Martin employees per person, when converting dollars to rubles at market rates.

These figures explain why the salary of employees in Russia’s defense industry can be USD 400-550 per month, and sometimes even less. This salary is higher than the median wage in most parts of Russia, but it is still lower than the salary in the oil and gas industry. Nevertheless, unlike during the Soviet era, Russian authorities today buy political loyalty not by paying comparatively high wages for the best workers and engineers,

but via guaranteed employment. Even in arms manufacturing, Russia’s authoritarian system relies on citizens who prefer state paternalism than personal and political freedoms and market economy—a point confirmed by one defense industry expert who says that the most motivated and educated graduates from technical universities choose to work for private and foreign companies in Russia or emigrate, rather than join the defense industry.⁷

There were, of course, attempts to modernize the defense industry via cooperation with European and American companies in 1990s-2000s, but the most of these efforts have been frozen since September 2011 when Russia’s political system turned toward deeper conservatism and Putin returned to the presidency. In 2011, Rostec bought out a 25% stake that Pratt & Whitney owned in Perm Engines company, a subsidiary of United Engines Corp. Another prominent example was in 2013 when EADS, now Airbus, sold its 10% share in Irkut Corp., a subsidiary of United Aircraft Corp. The last of the joint projects with foreign firms in the sector were stopped due to Russia’s annexation of Crimea and the war in Donbas.

As a result, the Kremlin decided to make the defense industry as self-sufficient as possible. The industry became isolated from ties with Western companies. At the same time, attempts to establish a sustainable cooperation with defense companies in India and China produced little.

⁷ “Учись со смыслом, работай с пользой, живи с удовольствием! Интервью с Арсением Брыкиным [Study with sense, work with profit, live with pleasure! Interview with Arseny Brykin],” *New Defence Order Journal*, May 29, 2019, <https://dfnc.ru/yandeks-novosti/uchis-so-smyslom-rabotaj-s-polzozj-zhivi-s-udovolstviem/>.

1. United Aircraft Corp., consolidated financial statement 2014-2018, USD million

	2014	2015	2016	2017	2018
Revenue	7,656	5,647	6,205	7,749	6,565
Net profit	-355	-1,794	-67	-45	-295
Liabilities	16,661	11,779	12,340	13,801	15,070
Accounts Receivable	4,177	4,680	4,858	5,206	5,597

Source: “Консолидированная отчетность по МСФО [Consolidated statements according international financial reporting standards],” United Aircraft Corporation, <https://www.uacrussia.ru/ru/investors/financial-information/IFRS-reporting/>.

2. United Shipbuilding Corp., consolidated financial statement 2014-2018, USD million

	2014	2015	2016	2017	2018
Revenue	6,166	4,556	4,494	5,587	5,364
Net profit	70	88	48	101	35
Liabilities	15,636	13,189	11,332	13,231	12,417
Accounts Receivable	963	778	714	1,077	1,141

Source: “АО ‘ОСК’ [Joint Stock Company ‘United Shipbuilding Corp.’],” *Interfax*, <http://www.e-disclosure.ru/portal/company.aspx?id=12347>.

3. NPO Almaz, subsidiary of Almaz-Antey, consolidated financial statement 2014-2018, USD million

	2014	2015	2016	2017	2018
Revenue	—	473	805	954	1,043
Net profit	—	0.064	7	2	23
Liabilities	—	1,749	1,585	1,850	1,572
Accounts Receivable	—	59	46	354	210

Source: “ПАО “НПОАлмаз” [Joint Stock Company “NPO Almaz”],” *Interfax*, <https://www.e-disclosure.ru/portal/files.aspx?id=8553&type=3>.

4. UEC Saturn,* subsidiary of United Engine Corp., Rostec, consolidated financial statement 2014-2018, USD million

	2014	2015	2016	2017	2018
Revenue	457	405	501	643	714
Net profit	-286	27	37	66	72
Liabilities	1,050	701	637	782	933
Accounts Receivable	189	160	186	190	346

* Key manufacturer of engines for military and civil aircrafts, surface ships, and cruise missiles

Source: “Бухгалтерская (финансовая) отчетность [Accounting information],” ODK-Saturn, <http://www.npo-saturn.ru/?lid=21&sat=38&slang=0>.

5. Uralvagonzavod,* subsidiary of Rostec, financial statement 2014-2018, USD million (Russian Accounting Standards)

	2014	2015	2016	2017	2018
Revenue	1,927	895	1,385	1,673	1,663
Net profit	-126	-164	23	11	115
Liabilities	2,867	2,309	2,126	2,924	2,449
Accounts Receivable	1,119	742	717	939	1,020

Source: “Финансовая отчетность – РСБУ [Financial reports – Russian accounting standards],” Uralvagonzavod, http://uralvagonzavod.ru/company/fin_r.

These two powers consider Russia a donor of manufacturing licenses and technologies. Rostec, for example, considers Chinese firm Huawei a supplier of some electronics and software that are used in communication networks at the defense factories and plants.⁸

Despite the course of economic self-sufficiency that the Kremlin adopted after the imposition of international sanctions in 2014, Russia is not able to produce everything it needs in arms manufacturing. Russia's defense industry produced 826 military items using foreign components before 2014. This number includes 186 items using Ukrainian components and 640 items using components from North Atlantic Treaty Organization (NATO) member-states and European Union member-states, especially in electronic and optical systems.⁹ In 2014, the government planned to be able to substitute these components with domestic production by 2020, but this has since been prolonged until 2025. In 2015-2018, the government spent almost USD 25 billion on this import substitution policy.¹⁰

Today, Russia can domestically produce the Ukrainian components, but it is still unknown whether Russian companies can produce the same volume of output, especially in manufacturing helicopter and naval engines. Moreover, Russia still does not produce the full range of aircraft engines that it wants to produce.

Russian authorities keep progress secret in the substitution of other imported components. However, the optimistic scenario in electronics is that Russian companies will be able to produce 94.6% of the baseline minimum of necessary electronic components by the end of 2020. The other 5.4% of baseline minimum electronic components are considered "non-

reproducible."¹¹ That is especially relevant for space, computing, and communication systems. So, until 2025, Russia will be unable to produce domestically the whole range of products and components that were previously imported for manufacturing military equipment. That means Russia must rely on purchasing components from Chinese, Taiwanese, and Malaysian companies, or on buying components secretly from the United States, Europe, and Japan. All these things increase the costs of Russia's defense manufacturing.

It is doubtful that these basic problems of the defense industry can be solved within the framework of Russia's political system and its economic model. The cost of the defense industry will increase for the Kremlin and Russian society, accelerating in coming years as Russia faces a deficit of technologies and modern industrial equipment.

8 "Отношения Ростеха и Huawei переходят на новый уровень [Relations between Rostec and Huawei move to the next level]," Rostec, May 29, 2015, <https://rostec.ru/media/pressrelease/4516612/>.

9 "Рогозин пообещал замещение украинских комплектующих в оборонке в 2018 [Rogozin promises substitution of Ukrainian made components in defense industry till 2018]," *Lenta*, July 1, 2015, <https://lenta.ru/news/2015/07/01/oboronka/>; and "Единый день приемки военной продукции [The day of acceptance of defense products delivery]," Office of the President of the Russian Federation, July 16, 2015, <http://kremlin.ru/events/president/news/50005>.

10 "На импортное замещение в России потратили 'огромную сумму' [Russia's authorities spent 'enormous amount of money' for substitution]," *Rosbalt*, December 10, 2019, <https://www.rosbalt.ru/business/2019/12/10/1817635.html>.

11 Е. Покатаева, Е. Петровская, [Е. Pokataeva, Е. Petrovskaya] "Импортозамещение и обеспечение качества [Substitution and quality assurance]," *Электроника: Наука, Технология, Бизнес*, [Electronica: Science, Technology, Business] No. 3, 2018, http://www.electronics.ru/files/article_pdf/6/article_6616_528.pdf.

HOW TO STAY A SELF-ISOLATED GREAT POWER

The Kremlin is unable to stabilize its spending on defense manufacturing. As shown above, Russia's defense industry received more than USD 400 billion from domestic and foreign arms sales in 2011-2019. This number includes loan repayments that the Russian government made to the Russian banks due to debt guarantees: more than USD 15 billion in 2016-2017 and more than USD 10 billion in January 2020 (for 2019). In other words, the defense industry generated net losses even though the Kremlin's arms procurements during the previous decade were at the highest level since the collapse of the USSR and arms exports exceeded the levels of 1990s-2000s.

Moreover, the Russian defense industry faces crucial challenges manufacturing advanced arms and military equipment that go beyond Soviet-era technologies, from the new main battle tank T-14 "Armata" and the fifth-generation fighter Su-57 (and especially its engines) to navigation and communication satellites. Some defense factories like Motovilikha Plants (artillery), Kurganmashzavod (infantry fighting vehicles), and Novosibirsk Aircraft Plant (Su-34 bombers) that fulfilled main arms contracts in previous years faced significant troubles in 2018-2019 when they were forced to decrease manufacturing and were not able to make loan repayments and pay salaries. Consequently, in the coming decade, the Russian government will be forced to increase appropriations for the defense industry even if the level of arms procurements in current prices stay roughly constant.

The main reason for this is that factories going bankrupt and mass layoffs are unacceptable for

the political system. For these reasons, Rostec implemented anti-crisis measures in the two previously mentioned plants. In the Motovilikha Plants, these measures involve contracts for maintenance and modernization of artillery systems instead of manufacturing the new ones because many of these weapons still can be modernized, and modernization is cheaper than manufacturing.¹² Additionally, Rostec, together with federal and regional administrations, provides dismissed employees with a new job.¹³ The Novosibirsk Aircraft Plant, meanwhile, was included in the research and development program for heavy combat unmanned aerial vehicles, and it will be provided with a new contract for additional Su-34 bombers.¹⁴ The contract for new bombers is a sort of bailout because, in previous years, Russian armed forces planned to get 150 Su-34, but, for now, they will receive 134. All these measures increase the cost of the defense industry, but do not solve its fundamental economic problems.

Russia's defense corporations and political leadership participate in permanent bureaucratic bargaining over the redistribution of industrial assets, governmental spending, and expenses. For example, the United Aircraft Corporation, suffering from substantial indebtedness, merged with Rostec in 2018-19. Rostec is obliged to conduct a financial restructuring of the aircraft industry and needs to improve its helicopter manufacturing that suffers declining demand. The whole industry is now concentrated under the leadership of one state-owned corporation. The same processes are occurring among other companies and sectors. For instance, in 2019, Granit-Electron company, the manufacturer of navy electronic warfare systems that also faced

¹² "Мотовилихинские заводы" завершили гособоронзаказ 2019 года [Motovilikha Plants completed state defense order of 2019]," *Kommersant*, December 4, 2019, <https://www.kommersant.ru/doc/4180709>.

¹³ "Новый министр экономики РФ поделился впечатлениями от курганских заводов [New minister of economics of Russia shared his impressions after the visiting of factories in Kurgan]," *Ura*, February 26, 2020, <https://ura.news/news/1052420342>.

¹⁴ "Минобороны планирует подписать контракт на поставку нескольких десятков Су-34 [Ministry of defense plans to sign contract for several tens of Su-34]," *TASS*, February 19, 2020, <https://tass.ru/armiya-i-opk/7792657>.



Russia's defense corporations and political leadership participate in permanent bureaucratic bargaining over the redistribution of industrial assets, governmental spending, and expenses.




economic troubles in previous years, merged with Tactical Missiles Corp.¹⁵

The Kremlin tries to share the burden of defense manufacturing among different groups of the political establishment via privatizing some defense firms.¹⁶ Even if any single defense company may be profitable in any single year, all firms have substantial debt burdens that require regular government bailouts. For example, in 2013-2018, Rostec sold 75% minus one share of Kalashnikov to a company owned by current Deputy Minister of Defense Responsible for Defense Industry Alexey Krivoruchko. Before November 2017, Krivoruchko shared a defense business with Andrey Bokarev, who acquired a fortune in the 1990s as oligarch Iskandar Makhmudov's partner in coal and copper companies. Makhmudov is alleged to have a background in intelligence and the Soviet Uzbek cotton mafia.¹⁷ Bokarev and Makhmudov withdrew from the company in 2017 after United States imposed sanctions against Kalashnikov. So, in 2017 and 2018, the company showed net profits of USD 48.1 million and USD 40.7 million, respectively, but its loan debt and liabilities grew up from USD 870.1 million in 2017 to USD 898.7 million in 2018.

Another example is that in 2019 RTI, a subsidiary company of AFK Sistema (owned by oligarch Vladimir Evtushenkov), and Rostec created a joint venture in microelectronics.¹⁸ RTI is the only Russian producer of early warning radars, and after the coming contract fulfillment for these radars, the owner is planning to sell the company to state-owned Almaz-Antey, the manufacturer of air and missile defense systems.¹⁹

Even private companies within Russia's defense industry remain under complete governmental control. Since the 2000s, the private ownership of any single defense company or plant is always the result of political bargains and political decisions. Only the Kremlin gives permission for any significant deal in the defense industry, and competition between potential buyers among Russian oligarchs never occurs.

Nevertheless, the Russian government is planning to share the burden of the defense industry's inefficiency with society. Currently, Russia's authorities are discussing measures that will allow defense companies to receive guaranteed demand for their civilian production. The government and defense companies are trying to create a framework of public procurements whereby all public authorities, state-owned, and regional and local entities will buy civilian products manufactured by Russian defense companies.²⁰ Further protectionism is inevitable as Russians are forced to buy higher cost, lower-quality goods from Russian defense firms, rather than from private or foreign firms.

This trend for further self-isolation means that Russia's political system will be forced to rely more on its military power than on diplomacy. The Kremlin wants its military power permanently maintained and developed. Despite that, Russia's defense industry has bolstered Russia's status in international affairs for now; there is no guarantee that the industry can sustain this trajectory, given the vast problems that it faces. 

15 "От мини-бомб до центра по гиперзвуку. Интервью с Борисом Обносовым [From mini-bombs to facility or hypersonic weapons. Interview with Boris Obnosov, head of Tactical Missiles Corp.],” *TASS*, February 14, 2020, <https://tass.ru/armiya-i-opk/7761011>.

16 "Ростехначал поиск инвестора для разработчика 'Панцирей' и 'Искандеров' [Rostec looks for investor for company that develops 'Pantsyr' and 'Iskander'],” *RBC*, November 7, 2017, <https://www.rbc.ru/politics/07/11/2017/59f6f61b9a79477d08e5324f>; and "Ростех начал подготовку к приватизации 49% акций Уралавгонзавода [Rostec started preparations for privatization of 49% share of Uralvagonzavod],” *RBC*, October 3, 2018, <https://www.rbc.ru/business/03/10/2018/5bb4af659a79472f82e8d553>.

17 "Ростех продал "Транскомплектхолдингу" 26% акций концерна "Калашников" [Rostec sold 26% of Kalashnikov to Transkomplekt holding],” *Interfax*, February 15, 2018, <https://tass.ru/forumsochi2018/articles/4959829>.

18 "АФК "Система" и Ростех завершили создание СП в области микроэлектроники [AFK Sistema and Rostec established joint venture in microelectronics],” *Interfax*, February 19, 2019, <https://www.interfax.ru/business/651247>.

19 "Евтушенков подтвердил возможную продажу РТИ "Алмаз-Антей" [Evtushenkov confirms that RTI possibly will be sold to Almaz-Antey],” *Interfax*, September 5, 2019, <https://www.interfax.ru/vef2019/675184>.

20 "Получай российское [Acquire Russia made products],” *RBC*, November 13, 2019, <https://www.rbc.ru/newspaper/2019/11/14/5dc8c8b39a794739ad53146c>.

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