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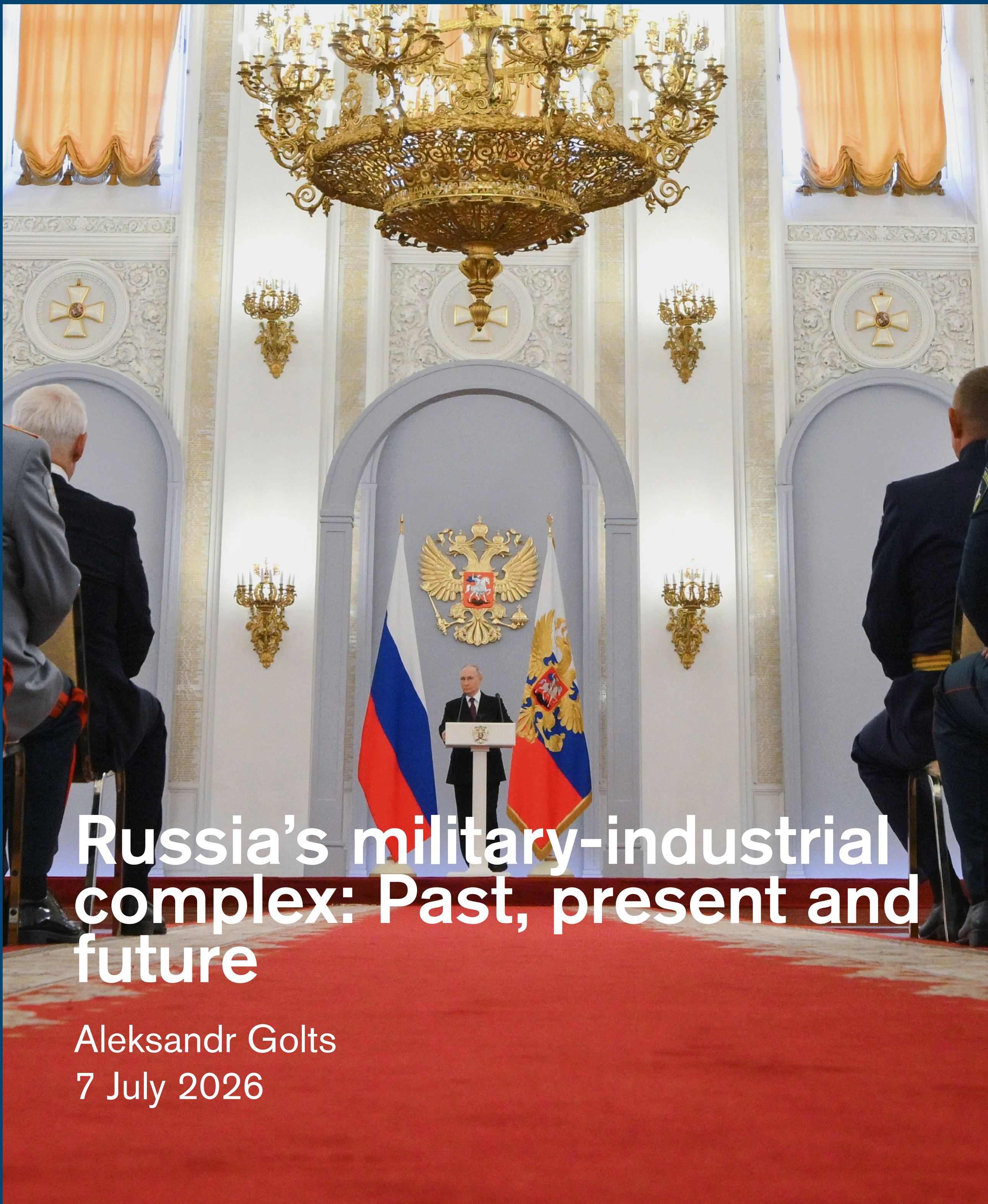

Russia's military-industrial complex: Past, present and future

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Executive Summary

The continuing militarisation of Russia and the possibility of new waves of mass mobilisation will force Vladimir Putin to take new, radical measures. The arms stockpiles created during the Soviet era are close to exhaustion. The existing system of arms production has reached its peak and requires change. Putin must either start construction of specialised military plants or return to the mobilisation economy of the Soviet Union.

Russia's war against Ukraine has become a war of attrition, requiring a massive increase in arms production. The problem was initially solved by restoring Soviet-era weapons that had been stored in warehouses for decades. Over the past four years, however, these stocks have been significantly depleted.

A full-scale arms production cycle will need to be established and the production of components and spare parts will need to be expanded. The most practical choice would be to return to the Soviet system of industrial mobilisation. A planned economy is a direct consequence of a mobilisation economy as a market economy is incompatible. A return to a mobilisation economy makes the renationalisation of industry inevitable.

Renationalisation has already begun. Between 2023 and 2025, more than 400 large enterprises were transferred to state control.[1] Thus far, however, this has mainly been of companies that maintain the current production cycle and not extensive enough for a transition to a Soviet-style mobilisation economy. Putin is obviously aware that such a transition will lead to systemic problems. In addition, it will take 5–8 years to roll out the large-scale production necessary to arm the much larger fighting force demanded by the Kremlin. Putin's economic advisors will try to steer him towards an economic model that combines mobilisation and a market economy but it cannot be done.

1 Za tri goda v Rossii nacionalizirovali 411 kompanij s aktivami na 2,6 trln rublej За три года в России национализировали 411 компаний с активами на 2,6 трлн рублей. 26.03.2025 https://dzen.ru/a/Z-OX4n-OJXIlyPRv?ysclid=mmexa1udzx603996679

The mobilisation economy of the Soviet Union

Only an economy and industry organised in a certain way can provide a mass mobilisation army with the huge amount of armaments and military equipment it needs. The clearest example of such organisation of production is the autarkic Soviet planned economy. Soviet industrialisation in the 1930s, during which more than 2,000 factories were built, initially took place under conditions of military mobilisation of the state and society. Stalin's rationale for modernisation was marked by pronounced militarism: "We are lagging behind developed countries by 50 to100 years. We need to cover this distance within 10 years. Either we do it, or they will smash us".[1] The industrialisation of the country in the 1930s had one major objective: to reorient industry towards preparations for war.

1 I. Stalin. *Voprosy leninizma.* Izd. 11-e.(M. 1947). p. 329.

At the time, the Soviet dictator refused to concentrate all resources on creating a specialised military industry. Preference was given to enterprises that manufactured "peaceful" goods in peacetime but were ready to switch to military production at short notice. The characteristics of this model were a focus on heavy industry, the defensive nature of production, over-centralisation and command-and-control management methods. During the 1930s, the Soviet Union produced more tanks than the rest of the world put together – around 2,000–3,000 annually.[2] This concept brilliantly justified itself during World War II. By the beginning of 1942, despite the loss of production capacity across a significant part of the Soviet Union, the production of military equipment equalled that of Germany.

The experience of World War II was idealised in the Soviet Union. The Soviet leadership focused on preparing for war against NATO, an adversary significantly stronger than the Soviet Union. The response was to organise production based on the so-called planned economy and on autarky. The Cold War period saw preservation of the main elements of a mobilisation economy: prioritisation of development of the military-industrial complex, maintenance of excess production capacity, the accumulation of strategic reserves and the continuation of centralised planning. In peacetime, this model was no longer efficient, leading to structural imbalances. Ultimately, this was one of the main reasons for the collapse of the Soviet economy. There was no distinction between the civilian and military sectors of industry in the Soviet Union. The vast majority of components for military production were manufactured in "civilian" factories.[3] Each non-military factory had dormant facilities ready for rapid conversion to military production. This affected the quality and cost of consumer goods, which did not bother the regime but made it important for it to prevent cheaper and better-quality products from entering the domestic market. This kind of economy could only exist in conditions of complete isolation under an economic regime of self-sufficiency that minimised international trade.

Under this system, the civilian sector was needed only to switch to military production at short notice and in peacetime to consume the surplus resources that the economy did not need. The Soviet Union, for example, produced 4 million tonnes of aluminium annually, only around 10 percent of which went into military production. Soviet planners did not know what to do with the rest except to make spoons and plates.

This absurd system impeded the quality of life in every possible way but was a balanced economy in at least one sense. The balance was achieved by removing a huge part of GDP from the economy to prevent the planned economy from falling apart. It was obvious that the Soviet defence industry could only function under the all-powerful Gosplan (State Planning), which allocated all funds and set all prices, whether for raw materials or components, thereby guaranteeing cost-effectiveness.

Despite the structural militarisation of the Soviet economy in the post-war period, the leaders of the Soviet Union were not confident in the ability of industry to meet the needs of a prolonged conventional war with NATO, as planned by the General Staff. Soviet-era leaders were well aware that western military equipment was far more advanced than Soviet-made equivalents.

2 Simonov N.S. Voenno-promy`shlenny`j kompleks SSSR v 1920-1950-e gody`: tempy` e`konomicheskogo rosta, struktura, organizaciya proizvodstva i upravlenie. — M.: «Rossijskaya politicheskaya e`nciklopediya» (ROSSPE`N)Симонов Н.С. Военно-промышленный комплекс СССР в 1920-1950-е годы: темпы экономического роста, структура, организация производства и управление. — М.: «Российская политическая энциклопедия» (РОССПЭН), 1996. p120

3 V. Shly`kov. Chto pogubilo Sovetskij Soyuz? Genshtab i e`konomika. Voenny`j vestnik №9. Mezhregional`ny`j fond informacionny`x texnologij В. Шлыков. Что погубило Советский Союз? Генштаб и экономика. Военный вестник №9. Межрегиональный фонд информационных технологий. М. 2002 p.110-122 https://svop.ru/wp-content/uploads/2018/10/Voenny_Vestnik_MFIT_No9__%D0%A1H%D0%A2%D0%9E-POGUBILO-SSSR_-GENSHTAB-I-EKONOMIKA.pdf?ysclid=mkph2fdkop254417938

They also knew that the productivity of NATO countries' military industries was significantly higher. Their answer was to produce and stockpile the maximum amount of equipment and armaments in peacetime in case of war. The Soviet armed forces were equipped with 63,900 tanks, 66,880 artillery pieces and mortars, 76,520 infantry fighting vehicles (IFV) and armoured personnel carriers (APC), 12,200 combat aircraft and helicopters, and 435 warships.[4] By 1990, the Soviet Union had as many tanks, APCs and IFVs as all the other countries in the world combined, and three times more than the United States.

Such an economic model could not exist for long without the authorities resorting to repression. In the 1970s and 1980s, the model also relied on revenues from oil and gas supplies to the West as a supplement.

After break-up of the Soviet Union

Abandoning the mobilisation economy in the 1990s led to the collapse of most of Soviet industry. The new owners of privatised enterprises did not need defence orders but orders from the Ministry of Defence also plummeted. The military industry survived on foreign contracts. At the same time, attempts to implement defence orders inevitably made their civilian products more expensive, of lower quality and less competitive. The huge drop in defence orders made it impossible to retain mobilisation capacity at civilian companies. In the 1990s, production in the leading sectors of the military-industrial complex fell by 60–80 per cent. When Putin increased the military budget in the early 2000s, the military industry could not ramp up production. Civilian companies could not – and did not want to – supply the military-industrial complex with components. To resolve the problem, a federal target programme, "Reform and Development of the Defence-Industrial Complex for 2002–2006", was adopted, creating 31 large vertically integrated holding companies to bring state-owned enterprises together into a single production chain. This was a parody of the famous nine Soviet military-industrial ministries of aviation, shipbuilding, and so on, in which one efficient enterprise feeds a dozen others on the verge of bankruptcy. The bureaucrats in charge of these corporations were eager to include as many enterprises as they could without ever considering their efficiency or ability to produce arms. Thus, Sergey Chemizov, who was appointed by Putin to manage most of the military industry, consolidated almost 1,500 enterprises in Rostechnologiia (now Rostec), of which at least a quarter were on the verge of bankruptcy.

The heads of military-industrial enterprises periodically announced the creation of supposedly state-of-the-art weapon systems, such as the Su-57 fighter jet, the Armata tank and the Sarmat intercontinental ballistic missile, but mass production of these weapons never took place. In a market economy, military production organised along Soviet lines proved ineffective. Arms production costs continued to rise and so there was no mass production until 2023. In the absence of civilian subcontractors to ensure the continuous production of any type of weapon, managers were faced with two options. The first was to create separate specialised enterprises to produce components from scratch – the path taken by Almaz-Antey for example, which built three factories. The second was to set up component production at final assembly plants – as per the Aviation Production Association in Komsomolsk-on-Amur (KnAAPO). Having received an order to produce 50 fighter jets, it stopped production for two years in order to manufacture the component base.

4 Istoriya voennoj strategii Rossii/ Otv.red V.A. Zolotarev. M. Kuchkovo pole; Poligrafresursy; 2000 p.414

The production growth reported by military-industrial complex chiefs and the Ministry of Defence conceivably did occur, but was due to increasing expenditure, not output. Most military products were manufactured by enterprises that had a monopoly, so they had no scruples about overpricing. Without a chain of industrial cooperation, manufacturers were unable to start mass production to obtain economies of scale. Orders were too small and therefore not cost-effective.

The increase in production costs not covered by state funding forced military enterprises to take out bank loans at high interest rates. As a result, between 2016 and 2020, the state was forced to cut the military industry's debts by 700–800 billion roubles.[5] At the same time, the volume of military production was modest. State armament programmes were not completed. To avoid having to self-report failures to the authorities, a new programme was adopted two or three years before the completion date of the previous one. Thus, instead of the 2001–2010 armament programme, a 2006–2015 programme was adopted, which was, in turn, replaced by a 2011–2020 programme that was then followed by a 2016–2025 programme, which is reported to have been successfully implemented. In the latter case, the programme was implemented thanks to a sharp rise in production volumes following the start of the full-scale invasion. Before the 2022 war, reports periodically appeared in the press about delayed wages, personnel cuts, reduced working weeks and forced furloughs. The true cost of this failure became clear when the invasion of Ukraine began in 2022.

Aggression against Ukraine

After the failure of the initial blitzkrieg and the return to a mobilisation model of the armed forces in 2022, it became clear that the Russian army was severely lacking in the weaponry required to wage a protracted conventional war. This led to so-called shell hunger, which caused the conflict between the leadership of the Ministry of Defence and Yevgeny Prigozhin, owner of the private military company, Vagner, that resulted in an attempted mutiny. Russia had to resort to purchasing shells from North Korea. In addition, Russia had virtually no domestic production of unmanned aerial vehicles (UAVs), which came to play a key role on the battlefield, and had to procure them urgently from Iran.

Restructuring and financial injections were required to increase output. New management bodies were created.[6] The sharp increase in military production required enormous financial expenditure. In 2025, 13.5 trillion roubles (€150 billion), or 32.5% of all budget expenditure, was designated for military purposes.[7] However, this is likely to be significantly exceeded. In the first three quarters of 2025, investment in manufacturing industries grew by 23 per cent, approximately 5 trillion roubles[8] (€55.5 billion). In addition to budgetary funding, the military-industrial complex receives funds through special investment programmes, bank loans, the

5 Pravitel`stvo razrabotalo plan finozdorovleniya po dolgam rossijskogo OPK. TASS Правительство разработало план финоздоровления по долгам российского ОПК. ТАСС 27.12. 2019. https://tass.ru/ekonomika/7435681

6 In order to increase production, the Kremlin established a Coordination Council under the Government of the Russian Federation to meet the needs of the Armed Forces of the Russian Federation, other troops, military formations and bodies, as well as three operational headquarters for the supply of components, units and assemblies, for the procurement of electronic components for particularly sought-after models of weapons, military and special equipment, and for the procurement of raw materials and supplies. (К. K.A. Ly`sogorskij, A.Yu. Mushkov, Ya.I. Teryuxov. Sovershenstvovanie sistemy` upravleniya sozdaniya VVST i razvitiem OPK v usloviyax provedeniya SVO. Aktual`ny`e problemy` zashhity` i bezopasnosti. Plenarny`e doklady` XXVIII Vserossijskoj nauchno-prakticheskoj konferencii RARAN. A. Лысогорский, А.Ю. Мушков, Я.И. Терюхов. Совершенствование системы управления создания ВВСТ и развитием ОПК в условиях проведения СВО. Актуальные проблемы защиты и безопасности. Пленарные доклады XXVIII Всероссийской научно-практической конференции РАРАН. Sankt-Peterburg — 2025. P96-100) https://elibrary.ru/download/elibrary_82478580_21608102.pdf)

7 Putin nazval traty` Rossii na oboronu.. Путин назвал траты России на оборону. RBC. 27 .06.2025. https://www.rbc.ru/rbcfreenews/685eaf519a79478c73d4276c?ysclid=ml6n2x2wqy962493643

8 Vstrecha s Pervy`m zamestitelem Predsedatelya Pravitel`stva Denisom Manturovy`m. Встреча с Первым заместителем Председателя Правительства Денисом Мантуровым. www.kremlin.ru 12.01. 2026 http://kremlin.ru/events/president/news/79001

Industry Development Fund and the National Welfare Fund.[9] The Ministry of Defence has significantly reduced its attempts to control pricing. It has tried to set so-called limit prices for military products, and 60% of contracts are currently subject to these limits.[10] In the Russian military economy, however, a limit price is understood to mean "the expenditure incurred by the customer, beyond which the financing and procurement of products are irrational from a military-economic point of view".[11] In other words, to maximise military production, the Ministry of Defence sets the highest possible price.

All these measures have caused military production to increase sharply. According to Putin, "by comparison with 2022, the production of products and goods in high demand during the special military operation increased exponentially in 2025....The production of armoured weapons increased 2.2 times, light armoured vehicles (i.e. APCs and IFVs) 3.7 times, military aircraft 4.6 times, motor vehicles 5.7 times, missile artillery weapons increased 9.6 times, communications and electronic warfare equipment increased 12.5 times, personal armour protection increased almost 18 times (17.9 times), and weapons and ammunition increased more than 22 times".[12] This is confirmed by data from the Federal State Statistics Service (Rosstat) on manufacturing industry, most of which represents the military-industrial complex. Between 2022 and 2024, there was 18% growth.[13] In 2025, however, military production grew by only 3 per cent, which indicates that it has reached its peak. These figures generally coincide with the calculations of western analysts.[14] At the same time, it cannot be ruled out that the figures showing massive growth in military production are a result of statistical manipulation. It is likely that the economists who express doubts about these figures are correct, and that military production growth in the period 2022–2025 was only around 60%.[15]

Mention should be made of the expansion of drone production. Russia started by assembling Iranian 'Shahed 131' and 'Shahed 136' drones at a factory in Elabuga, Tatarstan, but has since improved designs and established its own production facilities. The factory currently produces over 10,000 drones a month.[16] Mass production of drones is also taking place at a plant in Dubna in the Moscow Region, Kalashnikov company, Zala Group. A major problem is that defence industry leaders have failed to achieve standardisation, which prevents mass production. The current range of UAVs comprises 28 models. Only the Geran, Kub and Lancet UAVs are produced in large numbers (in the thousands). As a result, Russia does not have an advantage over Ukraine in this category of weaponry.

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9 Ibid

10 Rasshirennoe zasedanie kollegii Minoborony`. Расширенное заседание коллегии Минобороны. 17. 12.2025. http://www.kremlin.ru/events/president/transcripts/comminity_meetings/78801

11 A. Podol`skij. Limitnaya cena — kompleksny`j pokazatel`, xarakterizuyushhij voenno-e`konomicheskuyu cennost` produkcii. Voennaya my`sl` А. Подольский. Лимитная цена — комплексный показатель, характеризующий военно-экономическую ценность продукции. Voennaya my`sl`. №10. 2020. p 114

12 Soveshhanie po rassmotreniyu osnovny`x parametrov proekta gosudarstvennoj programmy` vooruzheniya na 2027–2036 gody`. Совещание по рассмотрению основных параметров проекта государственной программы вооружения на 2027–2036 годы. 26.12 2025. http://kremlin.ru/events/president/news/78866

13 Rost, spad ili stagnaciya: chto s rossijskoj promy`shlennost`yu v 2025 godu? Texnologicheskaya birzha. `. Рост, спад или стагнация: что с российской промышленностью в 2025 году? Технологическая биржа. 26.08.2025. https://techexchange.ru/start/news/83/

14 Guntram B. Wolff, Alexandr Burilkov, Katelyn Bushnell, Ivan Kharitonov. Fit for war in decades: Europe's and Germany's slow rearmament vis-à-vis Russia. Kiel Institute for the World Economy.https://www.kielinstitut.de/fileadmin/Dateiverwaltung/IfW-Publications/fis-import/235e4c1f-f771-4183-915d-6c38d62d5d6b-Kiel_Report_no1.pdf

15 Pawel Luzin. Rosyjski przemysł zbrojeniowy w czwartym roku wojny totalnej. Pavel Luzin. The Russian arms industry in the fourth year of Total War. Ukladsil.20.10.2025 https://ukladsil.pl/perspektywy-wschodnie/rosyjski-przemysl-zbrojeniowy-w-czwartym-roku-wojny-totalnej

16 Joseph S. Bermudez Jr., Victor Cha and Jennifer Jun A Closer Look at the Yelabuga UAV Factory March 9, 2026, https://beyondparallel.csis.org/a-closer-look-at-the-yelabuga-uav-factory/#:~:text=Key%20Findings,in%20the%20war%20against%20Ukraine; Yelabuga drone factory. https://en.wikipedia.org/wiki/Yelabuga_drone_factory

The sharp increase in military production during the war years led to economic growth of 3.5% in 2023 and 4.3% in 2024, leading some economists to talk of "military Keynesianism",[17] where increased military spending creates orders and jobs, employee and contractor spending boosts consumer demand, and increased demand contributes to the growth of the entire economy, even in civilian sectors. In official statements, Russian economic leaders reject the idea that military spending has been the main driver of GDP growth in recent years. Clearly, they would prefer not to link the prospects for economic development directly to an increase in military production, as this would suggest that the Kremlin is keen to pursue an aggressive foreign policy. Furthermore, they do not wish to discuss the potential economic consequences of a slowdown in arms production should hostilities come to an end. Economists warn that a decline in military production will lead to a significant economic downturn and even crisis.[18]

The unsolved problems of the military-industrial complex

Component failures, equipment wear and tear, low levels of labour productivity and a shortage of labour resources are chronic problems. A significant part of the2023–2024 growth in military production was achieved by putting Soviet weapons stored in warehouses in working order. Of the 1,200 tanks needed to replenish losses each year of the war so far, no more than 300 per year were produced new. The rest came from storage. IFVs and APCs, artillery and ammunition were replenished in approximately the same proportions.19 After four years of war, Soviet reserves are close to depletion. In 2022, there were 10,500 tanks in storage.[20] By the end of 2025, there were just 2,100.21 There is a similar picture for armoured vehicles and artillery. Even if the amount of equipment losses has fallen due to the stalemate that has set in, Soviet reserves will last for no more than two years of hostilities. This, and not just the changed nature of combat operations, explains the reduction in the use of armoured vehicles on the battlefield. In order to produce weapons from scratch, it is necessary to create production chains for the manufacture of components on a much larger scale than is currently the case. In 2019, for all types of military equipment in service, 12,000 variants of spare parts and components were needed.[22]

The increase in military output is hampered by labour shortages. Labour productivity in Technodinamika, a holding company for Russian enterprises that manufacture ammunition, is about 2.3 million roubles by revenue per employee per year (less than $32,000). This is 9–10 times lower than that of US ammunition manufacturers.[23] Other data suggests that

17 Pushki, maslo i voennoe kejnsianstvo. E`ksperty` o «modeli rosta» dlya Rossii. RBC.Пушки, масло и военное кейнсианство. Эксперты о «модели роста» для России.16 .05 2024. RBC. https://www.rbc.ru/economics/16/05/2024/6644a9f89a794748d72c03e9?ysclid=mlaubjsl8z55900445

18 "Slozhnosti budut. Pochemu razognavshijsya VPK predstavlyaet problemu dlya perexoda k miru Zapadny`e analitiki predrekayut krax rossijskoj e`konomiki po zavershenii SVO, chinovniki obeshhayut popolnyat` arsenaly`.Сложности будут". Почему разогнавшийся ВПК представляет проблему для перехода к миру. Западные аналитики предрекают крах российской экономики по завершении СВО, чиновники обещают пополнять арсеналы.10.12. 2025, IA Amitel. https://www.amic.ru/news/slozhnosti-budut-pochemu-razognavshiysya-vpk-predstavlyaet-problemu-dlya-perehoda-k-miru-574122?ysclid=mktoyiye2b590484453

19 https://sceeus.se/publikationer/strategic-positional-deadlock-is-there-a-way-out/

20 Military Balance 2022, p. 194

21 Military Balance 2026, p. 190

22 Katalog predmetov snabzheniya Vooruzhenny`x Sil Rossii kak ob``ekt mezhvedomstvennogo informacionnogo vzaimodejstviya. Novy`j oboronny`j zakaz: strategii Каталог предметов снабжения Вооруженных Сил России как объект межведомственного информационного взаимодействия. Новый оборонный заказ: стратегии. 2019, №5 (58) https://dfnc.ru/oboronzakaz/katalog-predmetov-snabzheniya-vooruzhennyh-sil-rossijskoj-federatsii-kak-obekt-mezhvedomstvennogo-informatsionnogo-vzaimodejstviya/?ysclid=mmevyy98om672453944

23 Proskal`zy`vaet, chto my` rejdery`…: gendirektor Texnodinamiki ob interesax v oboronke Tatarstana. "Проскальзывает, что мы рейдеры…": гендиректор "Технодинамики" об интересах в оборонке Татарстана. AviaPort. September 8,

Russia lags behind developed countries in terms of labour productivity by 25–30%.[24] Labour productivity has not increased significantly over the course of the war. According to Pavel Luzin's calculations, labour productivity at Rostec has increased by only 7%.[25] In the Russian political, economic and technological reality, it is only possible to increase output by increasing the number of companies, the workforce and working hours. The Kremlin has taken precisely this path. According the Ministry of Industry, 1,353 enterprises and organisations were included in the military-industrial complex before the war.[26] At the beginning of 2024, Putin announced 6,000 military-industrial complex enterprises. This data is likely to have been manipulated, but it can be assumed that significantly more production capacity is involved in military production today than before the war. This is seen in the rapid increase in employee numbers. In the first three years of the war, according to the Ministry of Industry, the number of employees in the military-industrial complex increased more than fivefold from 700,000 to 3.8 million.[27] At the same time, there was a labour shortage of between 160,000 and 400,000.28 Working hours have increased significantly. Instead of the standard 40-hour working week, 8 hours a day, 5 days a week, employees now work between 48 and 68 hours a week – an increase of 20–70%.[29] This "extensive" production-driven growth has its limits, and these limits have already been reached.

The future of the military-industrial complex

Russian officials argue that military production should still be significantly expanded even if hostilities in Ukraine were to be suspended. Defence Minister Belousov has said that a military conflict with NATO is possible within the current decade.[30]

In preparation for such a war, the Kremlin must replenish its weapon stocks. The Russian leadership will almost certainly attempt to prolong its "military Keynesianism". The Kremlin would not risk a large-scale conversion of the military industry in these conditions, given past failures and the potential for social instability. Genuine reform of the defence industry, based on market principles and privatisation, is impossible under the current regime. Such reform would be directly linked to military reform, which in turn is linked to a rejection of state militarism and attempts to resolve any conflict through the use of military force. Meanwhile, military production volumes have reached their limit. The shift to mass mobilisation will require a commensurate mobilisation of industry and the economy as a whole.

2021 . https://www.aviaport.ru/digest/2021/09/08/688455.html

24 Boris Petrov. Rossijskim promy`shlennikam propisali e`ffektivnost`Борис Петров. Российским промышленникам прописали эффективность Vedomosti 28.11. 2024 https://www.vedomosti.ru/ideas/development/articles/2024/11/28/1077724-rossiiskim-promishlennikam-propisali-effektivnost

25 Pawel Luzin. Rosyjski przemysł zbrojeniowy w czwartym roku wojny totalnej. Pavel Luzin. The Russian arms industry in the fourth year of Total War. Ukladsil.20.10.2025 https://ukladsil.pl/perspektywy-wschodnie/rosyjski-przemysl-zbrojeniowy-w-czwartym-roku-wojny-totalnej

26 S.F. Vikulov, E.V. Gorgola, V.L. Glady`shevskij, S.A. Zvyagincev, V.A.Kvasha, D.V. Xudyakov, S.R. Cyrendorzhiev. Nekotory`e makroe`konomicheskie osobennosti obespecheniya oboronosposobnosti strany` v sovremenny`x usloviyax – Yaroslavl`: OOO «PKF «SOYuZ-PRESS», 2024 С.Ф. Викулов, Е.В. Горгола, В.Л. Гладышевский, С.А. Звягинцев, В.А.Кваша, Д.В. Худяков, С.Р. Цырендоржиев. Некоторые макроэкономические особенности обеспечения обороноспособности страны в современных условиях – Ярославль: ООО «ПКФ «СОЮЗ-ПРЕСС», 2024

27 Anton Alikhanov: 3.8 million people work in the defence industry, Expert. August 12 , 2024, https://expert.ru/news/anton-alikhanov-v-opk-rabotayut-3-i-8-mln-chelovek/

28 Eva Vishnevskaya. Deficit kadrov — 2,5 mln chelovek. Ева Вишневская. Дефицит кадров — 2,5 млн человек. Gazeta.ru 27.11. 2024. https://www.gazeta.ru/economics/2024/11/27/20147317.shtml?ysclid=mlaylb005744846397&utm_auth=false

29 Pavel Luzin

30 Rasshirennoe zasedanie kollegii Minoborony`. 17 dekabrya 2025 goda. Расширенное заседание коллегии Минобороны. 17ю12. 2025.http://www.kremlin.ru/events/president/transcripts/comminity_meetings/78801

Most Russian economists have no doubt that the country has become a mobilisation economy, defined as: “a special form of national economic functioning in which priority is given to the rapid concentration and redistribution of material, labour and financial resources for the purpose of countering significant external and internal threats. The defining feature of this model is the dominance of the military-industrial complex and related sectors over other sectors, which leads to a structural imbalance in economic development and a temporary decline in the potential of civilian industries”. [31] It is telling that while some Russian economists see mobilisation as a necessary measure, but insist that it should be temporary while maintaining a certain degree of decentralisation, those with a more pro-Kremlin bent argue that mobilisation is inherent in the country’s economic model.

It is clear that economic mobilisation is directly linked to the return to a planned economy and a rejection of liberal approaches to economics. This approach makes inevitable the introduction of a system of state planning based on an updated model of the State Planning Committee. A new Gosplan will have to reform pricing in favour of manufacturing industries. In doing so, the planned economy must ensure not only the continuation of hostilities against Ukraine, but also preparations for a future large-scale and protracted war against the West.

The well-known economist, Dmitry Belousov, the brother of the current Minister of Defence, proposes a return to a slightly modernised Soviet model of industrial organisation: “The general-purpose industrial base must be capable of producing military goods when necessary. Defence enterprises must maintain their capabilities through civilian products. In modern warfare, it is not the stockpile of last-generation equipment that proves decisive, but the sustainability of new production flows”.[32] Other economists make no secret of the fact that this mobilisation model assumes “the preparedness of the entire military-economic support system for the state and the armed forces to conduct preventive operations and deliver preventive strikes,[33] that is, for a war of aggression.

At the beginning of the war against Ukraine, government officials in the economic sector were sceptical about economic mobilisation. As the war progressed, however, increasing shortages of military equipment and ammunition led Russian leaders to gradually change their approach. They began to talk about the need to revive the Gosplan. Deputy Prime Minister Denis Manturov called for market-based industrial policy to be abandoned to ensure industrial sovereignty: “under today’s extraordinary conditions, Gosplan 2.0 can be limited to the tasks of the state defence order and, more broadly, to ensuring the needs of special operations in the short term or state security in the long term”.[34]

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31 R.Shxagoshev, A. Solodkova. Mobilizacionnaya e`konomika v kontekste global`ny`x vy`zovov: uroki proshlogo i strategii budushhego. Mobilizacionnaya e`konomika: istoricheskij opy`t i sovremenny`e trendy`» Rostov-na-Donu: Izd-vo YuRIU RANXiGS, 2025 Р.Шхагошев, А. Солодкова. Мобилизационная экономика в контексте глобальных вызовов: уроки прошлого и стратегии будущего. Мобилизационная экономика: исторический опыт и современные тренды» Ростов-на-Дону: Изд-во ЮРИУ РАНХиГС, 2025 p 328

32 Voennaya e`konomika kak resurs ustojchivosti || Itogi vtory`x Shly`kovskix chtenij. Военная экономика как ресурс устойчивости || Итоги вторых Шлыковских чтений. Sovet po vneshnej i oboronnoj politike. 25.05.2026. https://svop.ru/news/65804/

33 E.V. Gorgola, V.A. Kvasha, S.R. Cyrendorzhiev, V.L. Glady`shevskij, S.E. Zakutnev.Voennaya e`konomika: dialektika razvitiya sposobov e`konomicheskogo obespecheniya vojn i metodologii voenno-e`konomicheskoj nauki Е.В. Горгола, В.А. Кваша, С.Р. Цырендоржиев, В.Л. Гладышевский, С.Е. Закутнев.Военная экономика: диалектика развития способов экономического обеспечения войн и методологии военно-экономической науки. Yaroslavl`: ООО «PKF «SOYuZ-PRESS», 2025 p129

34 Denis Manturov: «Gosplan 2.0 mozhet by`t` ogranichen zadachami gosoboronzakaza»Денис Мантуров: «Госплан 2.0 может быть ограничен задачами гособоронзаказа». Vedomosti. 22.12. 2022. https://www.vedomosti.ru/politics/characters/2022/12/22/956468-gosplan-mozhet-bit-ogranichen-zadachami-gosoboronzakaza?ysclid= llwbrybjpf503598548

There had been proposals to force private sector manufacturers to produce military products even before the war. In the spring of 2022, however, just after Russia launched its invasion, a special law stated that owners "regardless of the organizational and legal form and form of ownership may not refuse state contracts". In addition, "upon the submission of security agencies, the government may increase or decrease the quantity of goods, scope of work or services under the State Defence Order".[35]

Currently, only isolated features of economic mobilisation can be seen in the Russian economy. These include the concentration of financial resources in the military-industrial complex, attempts to organise production cooperation, the threat of criminal punishment for insufficiently effective fulfilment of defence orders and the expropriation of certain private companies by the state. This is not enough to maintain the current level of military production. In addition, even if the hostilities in Ukraine end, the Kremlin will try to produce the same amount of weapons as during the war. To do this, however, the Kremlin will need to overcome the three obstacles of low labour productivity, labour shortages and lack of components.

While the Kremlin has so far managed to maintain and expand production despite low productivity and labour shortages, the situation with components could become critical. Soviet weapon stocks have been depleted. To manufacture new weapons, many more components are required. This necessitates a significant increase in the number of factories and the number of people working in them, which will be difficult to achieve.

Mass production of weapons requires a return to the Soviet economic model, when virtually all industrial enterprises produced military products. The most convenient choice for Putin would be to return to the Soviet system of full-scale industrial mobilisation and repurpose existing production facilities with the workers already employed there. This would mean a fundamental change in the economic organisation of the whole of society – in essence, a return to a planned economy. In this case, production loses its economic meaning and the nationalisation of industry is inevitable.

Creeping renationalisation has already begun. As noted above, more than 400 large companies were transferred to state control in 2023–2025.[36] All these companies were nationalised[37] on flimsy pretexts: the privatisations of the early 1990s were allegedly illegal, their owners held foreign citizenship or these companies are vital to defence and security. Sergei Chemizov spoke directly about the need to take away from "inefficient owners" enterprises that are essential to producing weapons: "We first take companies that are involved in the defence industry….If private owners are unable to meet the necessary needs and at the same time are monopolists in some segment, in this case, of course, the state decides to seize them, to nationalise them."[38]

35 "On Amending Certain Legislative Acts of the Russian Federation". Parlamentskaya Gazeta July 14, 2022 https://sozd.duma.gov.ru/bill/155680-8

36 Za tri goda v Rossii nacionalizirovali 411 kompanij s aktivami na 2,6 trln rublej За три года в России национализировали 411 компаний с активами на 2,6 трлн рублей. 26.03.2025 https://dzen.ru/a/Z-OX4n-OJXIlyPRv?ysclid=mmexa1udzx603996679

37 The state has acquired ownership of the Volzhsky Orgsintez plant (one of the largest chemical enterprises in Europe), Metafraks Kemikals, the former Gubakhinsky Chemical Plant, Hajdel'bergCement Rus ,Tsesla Slate Cement Plant , Raw Materials Company (part of Bashkir Soda Company), and Gurovo-Beton , - Kuchuksulfat (Russia's only producer of sodium sulphate), the Kaliningrad Commercial Sea Port, the Solikamsk Magnesium Plant, the country's largest producer of magnesium, niobium and tantalum. energy company SIBECO,, Dalnegorsk Mining and Processing Plant (Russia's only boric acid producer), Novosibirsk plant "Sibselmash",, the Rostov Optical and Mechanical Plant, JSC Makfa, largest pasta producer, t Far Eastern fishing companies the Ivanovo Heavy Machine Tool Plant , the Chelyabinsk Electrometallurgical Plant, Kuznetsk and Serov Ferroalloy Plants , Domodedovo, one of the largest airports in Russia. the assets of the Raven Russia group of companies - the largest owner of warehouse real estate , KIMP holding company, which manufactures bearings, including for the Russian Armed Forces

38 Chemezov — RBK: «E`konomika dlya voenny`x — delo desyatoe». Чемезов — РБК: «Экономика для военных — дело десятое»" RBC , May 17, 2024 https://www.rbc.ru/interview/economics/17/05/2024/664215389a7947dc93772782?ysclid=m6qgdgb9wy871647533

Law enforcement leaders are even more blunt. “We are talking, in fact, about economic security in war conditions.... And then the next step: let’s go down the path of nationalisation of the main branches of our economy”.[39] Since 2022, assets worth approximately 6.5 trillion roubles (€77 billion) have been transferred to the state.[40] The supposition that companies are being seized so that they can later be transferred to owners loyal to Putin is, in most cases, inaccurate. The reality is that most seized assets remain in state ownership. In 2025, only about 30 billion roubles (€330 million) was received by the budget from the subsequent sale of companies transferred to state ownership. This is hundreds of times less than what has been seized.[41]

It is well known that the failure of the state to effectively manage industry ultimately led to the collapse of the Soviet economy. There is no reason to believe that it will be any different this time. Any attempt to recreate a mass mobilisation army in modern conditions means an attempt to recreate the Soviet economic and political model. History has shown that this leads to social and economic chaos, and ultimately to collapse.

A “People’s Defence Industry”

Putin’s economic advisers understand that going forward to the past would be catastrophic. They try to avoid mentioning mobilisation economics and military Keynesianism in their official statements and probably want to limit the mobilisation planning component to military production,[42] which this paper finds will be impossible. Some economists emphasise that one solution might be to involve small and medium-sized businesses in military production, as they “could become innovators and reliable suppliers of high-tech components”.[43] However, there are problems with this too. Defence contracts require secrecy-heavy procedures and an ability to comply with standards set by the Ministry of Defence. Attempting to meet these criteria means a manifold increase in overheads, which small businesses cannot cope with.

The proposed solution comes in the form of a “people’s defence industry”(narodny OPK). Officials claim that “volunteer inventors” acting on their own initiative are creating weapons, primarily drones, which the official military-industrial complex cannot produce in sufficient quantities. Putin has repeatedly supported such initiatives, calling for the removal of bureaucratic restrictions. Belousov credibly claims the people’s defence industry has supplied the Russian armed forces with over 65 types of military product, while also criticising the over-regulated process of development, testing and production.

39 . Bastry`kin predlozhil nacionalizirovat` osnovny`e otrasli e`konomiki. Бастрыкин предложил национализировать основные отрасли экономики.. RIA Novosti .13.05.2023 . https://ria.ru/20230513/ekonomika-1871508432.html?ysclid=lm69ce3v7v697401424

40 M.Perevoshhikova. Novaya volna: kak nacionalizaciya stala odnim iz glavny`x e`konomicheskix trendov v Rossii. М.Перевощикова. Новая волна: как национализация стала одним из главных экономических трендов в России. Forbes. 22.12. 2025. https://www.forbes.ru/finansy/552362-novaa-volna-kak-nacionalizacia-stala-odnim-iz-glavnyh-ekonomiceskih-trendov-v-rossii?ysclid=mlduq1xgun24967471

41 Siluanov ocenil vy`polnenie plana po prodazhe iz``yaty`x gosudarstvom aktivov Силуанов оценил выполнение плана по продаже изъятых государством активов. RBC. 03.12.2025 https://www.rbc.ru/economics/03/12/2025/692f33549a79470f4055e3ea

42 Shkodinskij S.V., Prodchenko I.A. Mobilizacionnaya e`konomika: eyo vozmozhnosti i ogranicheniya v obespechenii ustojchivogo razvitiya Rossii v usloviyax sankcionny`x vy`zovov kollektivnogo Zapada // Problemy` ry`nochnoj e`konomiki.Шкодинский С.В., Продченко И.А. Мобилизационная экономика: её возможности и ограничения в обеспечении устойчивого развития России в условиях санкционных вызовов коллективного Запада. Проблемы рыночной экономики. – 2023. – № 1.

43 D. Akimkina. Vovlechenie malogo i srednego biznesa v OPK. Strategicheskoe planirovanie i razvitie predpriyatij. Federal`noe gosudarstvennoe byudzhetnoe uchrezhdenie nauki Central`ny`j e`konomiko-matematicheskij institut RAN. mkina. Vovlechenie malogo i srednego biznesa v OPK. Д. Акимкина. Вовлечение малого и среднего бизнеса в ОПК. Стратегическое планирование и развитие предприятий. Федеральное государственное бюджетное учреждение науки Центральный экономико-математический институт РАН. 2023

However, despite the Kremlin's explicit demands, the bureaucrats at the huge state-owned military corporations are in no hurry to sign contracts with representatives of the "grassroots defence industry" or to replicate their experience. It is also highly likely that under the guise of a people's defence industry, large military enterprises will try to legalise a criminal system of supplying components from small private enterprises whose products cannot pass usual quality control systems. Imports from China are another source of components. However, it is clear that these imports combined with components from a people's defence industry will not be sufficient to maintain current rates of production.

Conclusions

- The militaristic regime established by Putin can only exist in a state of preparation for war or during actual warfare. Even if hostilities in Ukraine were to cease, military production would not be scaled back. It is most likely that the Kremlin would attempt to ramp it up in preparation for a conflict with NATO, while also seeking to maintain economic growth and fearing social instability.

- However, maintaining and expanding military production is fraught with difficulty. The depletion of Soviet-era arms stockpiles, low labour productivity and a severe labour shortage have led to attempts to establish military production using existing civilian production facilities. This makes a return to a planned mobilisation economy inevitable. This will lead to renationalisation and the state's expropriation of private property, which is already under way. It is possible, however, that Putin's economic advisers will attempt to combine the principles of a mobilisation economy with those of a market economy.

- The future of the Russian military-industrial complex depends on the type of conflict the Kremlin and the Ministry of Defence are intending to fight. If they are unwilling to make substantial changes to how the military industry is organised, they will need to prepare for a war similar to the one with Ukraine. In this scenario, the military-industrial complex will remain divided into two parts. The first, a reasonably high-tech one, engaged in the production of robotic systems, high-precision weapons, electronic warfare systems and, to some extent, aviation will be completely dependent on supplies of electronic components from abroad, primarily China. The second part, producing traditional weapons – armoured vehicles, artillery and small arms – designed 50 years ago, will focus on the mass production of the simplest possible military equipment designed for use by poorly trained military personnel. This part of the military-industrial complex will experience increasing problems with machine tools, which only China can supply, and with components.

The information in this report is based on an analysis and distillation of 76 articles and monographs on the state of the Russian military-industrial complex by Russian experts, largely still living and working in Russia. The author has also taken from his own conversations with fellow experts, as well as from his own previous writing.

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