

Russian Military Might: Recovery is Sooner Than We Think

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Abstract

Russian aggression against Ukraine has put its military might to the test, resulting in substantial losses and setbacks for Moscow during the war. This article will explore the prospects for the Russian military to recovery and replenish its lost capabilities in the face of economic scarcity and sanctions. It will look at how Russia and other major powers were able to modernise and build up their military power in the past, and whether this phenomenon could be replicated in the future. The article will look at a few preconditions for military recovery deriving from lost legacy equipment as well as many unknowns for the West in terms of Russia's future military trajectory. Through an analysis of these trends and tendencies, the article will estimate the possible return of Russian military capabilities.

Key words: Russian Military, Ukraine, Sanctions, Economic Scarcity, Autarky, Recovery, Modernisation

Introduction

The prelude to Russian aggression against Ukraine hinted at the powerful military under Moscow's command. The use of Russia's military might against Ukraine revealed the limits of this ostensibly powerful army. The perceived might of Russia's military heralded a predicament for any opponent in Europe, as one of the legitimate nuclear powers, a country with its own military industry, and numerically the largest army in terms of manpower in Europe.

Nonetheless, the Ukrainian military has put Russia's military might to a test that no expert, military or civilian, would have predicted. The Russian military has suffered significant losses and setbacks just a few weeks into the

war. A few months into the war, the Russian military has suffered significant territorial and military losses in occupied territories, as well as the loss of some of its best naval, land, and air military equipment. All of these trends indicate that the Russian military will not be able to recover anytime soon. While Russia's aggression against Ukraine continues in ways that no one questions Russia's status as a terrorist state, experts are conducting thorough investigations into Moscow's potential military recovery and replenishment of lost and missing capabilities.

Multiple experts predict that Russia will regain its military capabilities in five years, with many predicting that it will take even longer to replace lost military equipment, personnel, or modern hardware. To assess these conditions, the authors of this article will investigate what prospects Russia has for regaining military power in the face of significant sanctions and economic scarcity (if Moscow would have to rely on the military autarky). On the other hand, the authors will focus on key moments when Russia was effectively modernising and expanding its military power. These main patterns will allow us to forecast the possible return of Russian military power.

Sanctions and Isolation

Research from before Russia's full-scale invasion in 2022 suggests that sanctions have had a small negative effect on the Russian economy in general. To this point, Gurvich (2015) found that sanctions have a negative effect on the Russian economy, but that this effect is 3.3 times lower than the estimated effects of the oil price shock. Pestova and Mamonov (2019) found that sanctions caused a decrease in the amount of outstanding Russian corporate external debt, but that the effect is modest and uncertain. Kholodilin and Netšunajev (2018) 2014 found that sanctions are unlikely to trigger a profound change in Russian foreign policy. However, the current political tensions have had an impact on financial and non-financial indicators, including a possibly persistent effect on government bond yields. In total, even though sanctions were meant to act as a deterrent by punishment to dissuade Russia from committing any other unacceptable actions (Gould-Davies 2020), the Kremlin still calculated this from these previous paradigm, the effects would be minimal enough to endure.

In the post-2014 sanctions regime, unilateral technological sanctions from the United States, EU, and Canada focused primarily on the restriction

of export and re-export of technologies tied to the defence and resource extraction sectors, albeit in somewhat vague terms. Nonetheless, such actions led to problems in the planned military modernisation plans, especially regarding T-14 Armata tanks and the Su-57 fighters (Veebel 2020), that envisioned a technological transformation of the Russian armed forces, a belated and botched introduction of Serdyukov's "new look" through Shoigu's implementation and interpretation, which should have boosted its production of anti-ship missiles, increased the efficiency of its electronic warfare projects and air defences and helped Russia come to parity in the production of drones and precision-guided munitions (Gorenburg 2017).

Nonetheless, import substitution as a holistic policy regarding the technological needs of the military failed in this context, while some workarounds have been found, especially in third countries and jurisdictions outside of the sanctions regime. Nonetheless, some of these products that use sanctioned technological materials are the Iskander 9M727, the Zarya Radar Process, Baget Computing Machine, and the Kh-101 Cruise Missile (Byrne et al. 2022), together using over 80 sanctioned components that Russia is unable to produce domestically. The stricter post-2022 sanctions regime, although more encompassing, will therefore face many of the same issues of the previous sanctions regime. Therefore, it is exactly through these third countries Russia can continue to try to work around the extant sanctions regime.

Russian wishful thinking has already centred on China as one of these possible third parties through which sanctions could be contravened. Russia has directly stated China as a friendly state from the 2016 state security doctrine onward, and the renewal of Treaty of Good-Neighbourliness and Friendly Cooperation in 2021, as well as the statements and meetings during the 2022 Winter Olympics seemed to confirm this deepening collaboration. However, the war in Ukraine has underlined some fissures in this partnership, with the most exemplary situation being the recognised "concerns" from the Xi-Putin meeting in Samarkand.

In the context of the current war, Beijing has mostly balanced its relations with both Moscow and Kyiv through 'distance diplomacy,' neither fully supporting nor fully denouncing the 'Special Military Operation' of Russia against Ukraine. A Russia that is weak and on the verge of collapse is not advantageous for China, but neither is complete chaos and collapse of the European market space, which China sees as an important zone of economic development, the terminus of the Belt and Road project. In this case,

an immediate ceasefire would be the ideal situation for China, as it leaves a militarily depleted Russia more dependent on China but still with its own agency in its own neighbourhood and European markets would stabilise as a result of lessened tensions.

On the technological front, as China is a net oil and gas importer, it has not developed nor can provide the tech in this field. Although China does have the capability to produce some of the necessary computer parts for Russia, it has been reticent to offer anything other than lukewarm verbal support of Russian policy in Ukraine. The main sources for microchips needed for precision missiles and other modernised equipment would come primarily from Japan, South Korea, and Taiwan. As a grey zone in its own right, Hong Kong has previously acted as an area in which Russia was able to work around technological sanctions in the post-2014 context, but due to the political pressures of the One China policy and ensuing social turmoil, this status as a liminal area for sanctions implementation becomes less and less pronounced. This is where Iran, not China, becomes more crucial for Russia to contravene the post-2022 sanctions regime.

It is not only due to the current tensions that Russia and Iran have found themselves closer together. The Russian “turn to the South” had been part of a wider foreign policy strategy to limit the influence of the United States and Turkey in Central Asia, and it had been solidified by the 2014 sanctions causing economic insecurities (Abassy, Krzywdzińska, and Kosowska 2021). Iran additionally has shown other states who have become subject to Western sanctions how to contravene them, which makes Iran an especially interesting case for forming stronger sanctions against Russia (Meister and Jalilvand 2022). Especially after the current war and protests in Iran, Moscow and Tehran have become more intertwined in their marriage of convenience.

The most exemplary part of this cooperation has been the Russian use of *Shahed* drones against civilian populations and military targets in Ukraine, paired with Iranian personnel who have come to train the Russian military how to use them. These drones, most interestingly, contained sanctioned technology that both Russia and Iran should not have been able to procure (Ismay 2022). Although at a slower rate, Iran therefore can act as a front through which to procure sanctioned technologies, and unlike the case of China, there is something that Russia can offer to Iran: expertise in nuclear sciences and weaponry. In this way, Russia and Iran have a sustained reason

to continue their partnership through any systemic shocks and additional hardships.

Nonetheless, it is not only the technologies that Russia needs for its munitions and other systems that are crucial for it to be able to sustain a warfighting force; the logistics of moving this materiel across the wide territorial expanses of Russia are entirely dependent on the railway system, as it has been since its construction. In the same way that the Russian military industry is dependent on import to keep itself technologically advanced and functional, civilian machinery and transport is equally dependent. Rail is dependent on cassette bearings that are only produced externally, so as these bearings begin to degrade due to normal wear and tear, even the ability to transport materiel and soldiers to the frontlines will become more and more paralysed.

Russia's Leaps with the Military Advancement

Major powers have always advanced their military might during wars or in preparation for special operations or full-scale wars to support their geopolitical ambitions (like Russia in the case of limited warfare since the seizing of Crimea and hybrid warfare against Ukraine since 2014 or full-scale war since February of 2022 at the end of its military modernization). Russia's military modernisation and advancement has always occurred in an attempt to make its defence capabilities more relevant for the contemporary security environment, despite the fact that all other major powers have reduced their military spending and capability roster (Renz & Thornton, 2012). The Russian leadership has always adjusted their military needs to the Kremlin's political and ideological ambitions, rather than defensive or offensive ambitions. Furthermore, Russia's military adventurism always implies a need to replenish lost military capabilities with new equipment, making Moscow's military mightier during combat. In similar circumstances, all major powers would share this profound goal.

Military modernisation has never been easy, especially under harsh sanctions. Furthermore, due to domestic structural interests and corruption, any military reform (and not just military) has not been simple. For example, former Defense Minister Anatoliy Serdyukov wished to enact quite radical reforms but was frequently stymied, particularly during the implementation phase, by the general staff and the officer corps' blocking power (Renz

and Thornton 2012). There were efforts to modernise the military during Boris Yeltsin's reign, but it was not until Putin's first eight years in office that military modernisation became a top priority (Mäkinen, Smith, & Forsberg, 2016). This military reform in Russia resulted in the little war that shook the world in August 2008 to support Moscow's international ambitions against Georgia. This was one of the painful lessons learned when Russia's poor performance in the 2008 Georgia war forced an urgent realisation that re-equipment was required if the military was to be transformed into a modern and effective fighting force (Bukkvoll, 2009; McDermott, 2009; Renz and Thornton, 2012; Trenin, 2016).

Despite vested interests, corruption, and a variety of obstacles encountered by Serdyukov during the Russian military's transformation, Sergei Shoigu continued the reform. Despite obstacles such as recruitment, equipment, and funding shortages, the military underwent significant reform to become a modern fighting force, even though it was never a match for such dominant powers as the United States. Russia could project its power in Europe, particularly in the post-Soviet space, allowing Putin to bring this geopolitical region closer to Moscow (Klein & Pester, 2014). If not for conventional forces, the modernisation of nuclear strategic and non-strategic forces has always raised concerns about Russia's intentions and ambitions, all of which run counter to Western European and US efforts to limit nuclear military arsenals (Kristensen & Norris, 2017). Military modernisation within Russia has always been possible when there is political will and ambition. This was especially visible in the aftermath of the war against Georgia (2008), since Russia's entry into the Syrian civilian war in 2015 was intended not only to gain new clients in the MENA region, but also to ensure the testing and modernisation of its latest military equipment. The end of this modernisation at the beginning of 2022 marked the beginning of Russia's unprovoked aggression against Ukraine, which continues to this day.

Another factor, no less important than military ambition, is the resilience of society and the need for the military to support the elites' ambitions. The Second World War was one of the most vivid periods for military modernisation. From 1939 to 1944, Nazi Germany underwent the most significant modernisation of its air force (four, two, and one engine places experienced 4422 percent point change with their speed, range, and weight qualities). In contrast, despite receiving Allied support to fight Hitler's armies, the Soviet Union's aircraft modernisation in the same time period and categories was only 215 percent points (around 20 times lower). Nazi Germany, particularly

in the final years of the war, had the most isolated and sanctioned military, whereas Soviet Russia had the support of the Allies (See Table 1).¹

The same thing happened with the tank upgrades. Despite the fact that Soviet Russia is a land power and that tanks were crucial during WWII, Nazi Germany improved their tanks by 670 percent points, the United Kingdom by 228, Japan by 333, but the United States and the Soviet Union only increased their capabilities by 115-120 from 1939 to 1944. Despite the sanctions and isolation, Nazi Germany advanced its military might by better utilising domestic resources (see Table 2).² The evidence from the Second World War allows us to conclude that military advancement can occur even when any military power is rapidly losing equipment and even during isolation/sanctions.

¹ For detailed information about World War 2 planes, see Military Factory (visited 28.11.2022, <http://www.militaryfactory.com/aircraft/ww2-aircraft.asp>)

² For detailed information about World War 2 tanks, see Military Factory (visited 28.11.2022, World War II Tanks <https://www.militaryfactory.com/armor/ww2-tanks.php>)

Table 1: The Advancement of Aircraft, 1939–1944

GERMANY						USSR					
Planes	Model A	Model B	A	B	% Change	Planes	Model A	Model B	A	B	% Change
Speed						Speed					
4-engine	Dornier Do 24T-1 (3-engine), 1937	Arado Ar 232 Tausendfussler (Millipede), 1941	211	211	0.00%	4-engine	Petyakov Pe-8 (AM-35A), 1940	Petyakov Pe-8 (AM-35A), 1940	277	277	0.00%
2-engine	Focke-Wulf Fw 187A-0Falke (Falcon), 1937	Arado Ar 234B-2 (Blitz), 1944	329	461	40.12%	2-engine	Tupolev SB-2, 1936	Petyakov Pe-2 (Pawm), 1941	255	336	31.76%
1-engine	Arado AR 68G, 1934	Focke-Wulf Ta 152H-1, 1945	190	472	148.42%	1-engine	Sukhoi Su-1, 1940	Yakovlev Yak-3, 1944	398	407	2.26%
Range						Range					
4-engine	Dornier Do 24T-1 (3-engine), 1937	Arado Ar 232 Tausendfussler (Millipede), 1941	2952	830	-71.88%	4-engine	Petyakov Pe-8 (AM-35A), 1940	Petyakov Pe-8 (AM-35A), 1940	2299	2299	0.00%
2-engine	Focke-Wulf Fw 187A-0Falke (Falcon), 1937	Arado Ar E. 381 (Kleinstjager), 1944	519	967	86.32%	2-engine	Tupolev SB-2, 1936	Petyakov Pe-2 (Pawm), 1941	746	932	24.93%
1-engine	Arado AR 68G, 1934	Focke-Wulf Ta 152H-1, 1945	258	1243	381.78%	1-engine	Sukhoi Su-1, 1940	Yakovlev Yak-3, 1944	447	559	25.06%
Weight						Weight					
4-engine	Dornier Do 24T-1 (3-engine), 1937	Arado Ar 232 Tausendfussler (Millipede), 1941	1320	21000	1490.91%	4-engine	Petyakov Pe-8 (AM-35A), 1940	Petyakov Pe-8 (AM-35A), 1940	11000	11000	0.00%
2-engine	Focke-Wulf Fw 187A-0Falke (Falcon), 1937	Arado Ar 234B-2 (Blitz), 1944	3000	3300	10.00%	2-engine	Tupolev SB-2, 1936	Petyakov Pe-2 (Pawm), 1941	2205	3520	59.64%
1-engine	Arado AR 68G, 1934	Focke-Wulf Ta 152H-1, 1945	0	0	0.00%	1-engine	Sukhoi Su-1, 1940	Yakovlev Yak-3, 1944	700	1200	71.43%

Table 2: The Advancement of Tanks, 1939–1944

Germany (1939–1944 Tank power development index)				USSR (1939–1944 Tank power development index)							
Tanks	Model A	Model B	A	B	% Change	Tanks	Model A	Model B	A	B	% Change
Speed											
Light tank	SdKfz 101 Panzerkampfwagen I (PzKpfW I) / Panzer 1, 1935	SdKfz 141 Panzerkampfwagen III (PzKpfW III) / Panzer 3, 1939	25	25	0.00%	Light tank	BT-7 (Bystrochodnij Tankov), 1934	T-70, 1942	32	28	-12.50%
Heavy tank	Panzerkampfwagen Neubaufahrzeug (PzKpfW NbFz V / VI), 1934	SdKfz 182 Panzerkampfwagen VIB Tiger II / King Tiger (PzKpfw VIB) / Panzer VIB, 1944	16	24	50.00%	Heavy tank	KV-1 (Kliment Voroshilov), 1939	KV-85 (Kliment Voroshilov), 1943	22	22	0.00%
Weight											
Light tank	SdKfz 101 Panzerkampfwagen I (PzKpfW I) / Panzer 1, 1935	SdKfz 141 Panzerkampfwagen III (PzKpfW III) / Panzer 3, 1939	6.6	25	272.73%	Light tank	BT-7 (Bystrochodnij Tankov), 1934	T-70, 1942	15	14	-6.67%
Heavy tank	Panzerkampfwagen Neubaufahrzeug (PzKpfW NbFz V / VI), 1934	SdKfz 182 Panzerkampfwagen VIB Tiger II / King Tiger (PzKpfw VIB) / Panzer VIB, 1944	26	77	197.67%	Heavy tank	KV-1 (Kliment Voroshilov), 1939	KV-85 (Kliment Voroshilov), 1943	49.6	52.2	5.24%
Range											
Light tank	SdKfz 101 Panzerkampfwagen I (PzKpfW I) / Panzer 1, 1935	SdKfz 141 Panzerkampfwagen III (PzKpfW III) / Panzer 3, 1939	84	106	26.19% ³	Light tank	BT-7 (Bystrochodnij Tankov), 1934	T-70, 1942	217	224	3.23%
Heavy tank	Panzerkampfwagen Neubaufahrzeug (PzKpfW NbFz V / VI), 1934	SdKfz 182 Panzerkampfwagen VIB Tiger II / King Tiger (PzKpfw VIB) / Panzer VIB, 1944	75	68	-9.33%	Heavy tank	KV-1 (Kliment Voroshilov), 1939	KV-85 (Kliment Voroshilov), 1943	208	93	-55.29%
Crew											
Light tank	SdKfz 101 Panzerkampfwagen I (PzKpfW I) / Panzer 1, 1935	SdKfz 141 Panzerkampfwagen III (PzKpfW III) / Panzer 3, 1939	2	5	150.00%	Light tank	BT-7 (Bystrochodnij Tankov), 1934	T-70, 1942	3	2	-33.33%

Germany (1939–1944 Tank power development index)				USSR (1939–1944 Tank power development index)			
Tanks	Model A	Model B	% Change	Tanks	Model A	Model B	% Change
Heavy tank	Panzerkampfwagen Neubaufahrzeug (PzKpfw NbFz V / VI), 1934	SdKfz 182 Panzerkampfwagen VIB Tiger II / King Tiger (PzKpfw VIB) / Panzer VIB, 1944	-16.67%	Heavy tank	KV-1 (Kliment Voroshilov), 1939	KV-85 (Kliment Voroshilov), 1943	-20.00%

Aside from evidence that major powers (such as Nazi Germany) were able to adjust to changing war requirements and dynamics, we must consider two additional factors when assessing Russia's ability to recover as a major military power. The first is the elimination and loss of obsolete (legacy) military equipment during entrenched warfare (such as Russia's current war against Ukraine), but the second is a lack of information about what Russia has and does not have in its military arsenal. Furthermore, the uncertainty and lack of information about Russian military capabilities, resources, and plans add to the uncertainty and thus risks. The war is still going on, and Russia's military development and plans are certainly not static.

Moscow's military strategy, like that of any other major power, is constantly evolving as new technology and tactics are developed. It is not only technological advancement, but also the ability to replace old versus new military equipment during wartime and thus operationalise resources for the aggregate military might. Novel technologies that advance targeted capabilities, such as Iranian drones, can be used for asymmetrical or unconventional warfare (Freedman, 2013). Many countries, for example, are improving their strategies through the use of artificial intelligence, robotics, and cyber warfare. Russia has previously used disruptive technologies and has been one of the powers advancing such capabilities (which are also less costly).

With significant battlefield losses against a Ukrainian army supplied with Western intelligence and technology, Russia may refocus and adjust to expeditionary operations. If Ukraine does not have the full capability for pre-emptive strikes, such a possibility must always be considered. To achieve the Kremlin's goals, this strategy employs forward-deployed forces (already present along NATO's borders), special operations teams, and intelligence networks. Finally, militaries are using predictive analytics to identify potential threats and develop counter-strategies. If Russia does not engage in detailed analytics, it will undoubtedly learn during the war. The challenge for Ukraine and the West is that there are far too many unknowns about Russia's potential military development pivots.

Conclusion

The prospects for Russian military recovery are difficult to predict. According to one point of view, the harsh sanction regime is depriving the Russian military industry of cutting-edge technology (something that could be supplied by the West, South Korea, Japan or Taiwan). The Russian military lacks the technological edge and sophistication without these significant components. Nonetheless, we must consider the gaps in sanction regimes as well as the Western experience from WWII. During the last war, Switzerland provided financial and trade conditions not only for the German Reich, but also for the Soviet Union (Sraders, 2021). When there are significant needs within Russia, the search for loopholes and few partnerships will be even more intense (like in the case of Iran where Russia is receiving drones from Tehran).

On the other hand, the experience of the German Reich during the Second World War suggests the possibilities for military industry advancement during the conflict. During the previous war, the Allies helped Stalin defeat Hitler. This isolation of the German Reich (with few loopholes and opportunities to trade through centres like Switzerland) did not preclude the German Reich from making robust military adjustments, as seen with planes and tanks. Not only did the German Reich succeed, but its adjustment efforts were far greater than those of any other Axis or Allied power.

It is also important to note Russia's critical need to replace lost equipment and personnel. When the Russian military has performed poorly in the past, such modernisation has always been an answer (after Russian aggression against Georgia in 2008, or change of strategy against Ukraine, for example, opting for atrocious and unjust missile and drone strikes against such urban centres as Kyiv). Such a military approach allows Russia to buy time to recover or completely adjust its military strategy as Russia's sense of impunity grows. The West is not doing enough to avert the impending humanitarian disaster, but Ukraine cannot defend itself against indiscriminate strikes against civilians without substantial Western military support. Ukraine requires military supplies and assistance in order to retaliate against Russian Federation targets and neutralise the ground-based heavy artillery, missiles, and rockets that are destroying Ukrainian cities and killing women and children.

The West is currently allowing the Kremlin the luxury of changing its military strategy for missile and drone strikes that are beyond the reach of

the Ukrainian military (if the previous military strategy did not work, this causes more casualties, and a war of attrition is the way for the Kremlin to pursue its political objectives). The lack of an appropriate Western strategy or self-deterrence in terms of direct and overt support for Ukraine allows Russia to assault Ukraine while imposing red lines on US and NATO military support for Ukraine, allowing Putin to rattle his nuclear sabre or keep the option of using chemical weapons on the table without fear of retaliation. Ukraine should be permitted and given the means to launch counter-attacks against the sites used by the Kremlin for large-scale missile and drone strikes (Straus, 2022). As a result, Russia's geopolitical goals of deterring Western support for Ukraine have already been met. The modernization of Russian military power extends beyond new hardware to methods of atrociously terrorising Ukraine and its people with complete impunity. This period of time, as well as the West's self-deterrence, allows Russia to look for loopholes and ways to modernise its military. Russia will return sooner than we expect.

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