Russian Military Capabilities at War:

Reflections on Methodology and Sources Post-2022

Maria Engqvist (ed.)

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Bild/Cover: Rank of Russian soldiers av DIMUSE via Getty Images.

Preface and acknowledgements

At the end of 2022, two reports were commissioned from FOI's Russia and Eurasia Studies Programme by the Swedish Ministry of Defence. The first report, *Russia's War Against Ukraine and the West: The First Year*, was published in June 2023, and aimed at identifying the most important political, economic, and military consequences of the first year of Russia's war against Ukraine. The present report, *Russian Military Capability at War: Reflections on Methodology and Sources Post-2022*, is the second one. As the title indicates, this report is somewhat unconventional. Generally, few reports published by members of the Russia and Eurasia Studies Programme focus exclusively on questions of methodology and how to approach sources in the Russian information landscape. Consequently, the report is a direct result of the war and the general development that can now be observed inside Russia. It would be foolish to disregard the current development and ignore the changes that are taking place, since they fundamentally affect the research conducted in the Russia and Eurasia Studies Programme. This report is as much an attempt at an introspective reflection on possible ways to develop our work in the Programme when assessing Russia's military capability, as it is an attempt to engage in the ongoing debate within the research community. It is ultimately the result of a team effort over several months' time.

The editor and the authors wish to extend their warmest thanks to Julian Cooper, Johan Engvall (Swedish Institute of International Affairs), Pär Gustafsson Kurki, Ismail Khan, Stefan Meister (DGAP), and Gudrun Persson for contributing wise and insightful comments, which have improved the quality of the respective chapters, during the process of compiling this report. A special thanks is dedicated to Richard Langlais, who proofread the report with great attentiveness. We are all indebted to Karin Blext, administrator at the Department for Security Policy and Strategic Studies, who designed the layout of the report, for her great patience with us all.

Maria Engqvist (editor)
Stockholm, 28 February 2024

Summary

For more than twenty years, the Russia and Eurasia Studies Programme at FOI has sought to gauge, from a ten-year perspective, what Russia could muster in terms of military capability. Although the Russian information landscape has undergone several periods of transformation since the fall of the Soviet Union in 1991, the task of assessing a country's military capability has always come with inherent challenges in terms of sources and methodology. In 2022, the Russian invasion of Ukraine ushered in a wave of censorship and repressive measures unprecedented in the history of the Russian Federation. This, and the fact that the war has made the object of study into a moving target, has fundamentally affected the research field.

In the first five independent chapters, authors Jonas Kjellén, Johan Norberg, Tomas Malmlöf, Kristina Melin, Carolina Vendil Pallin, and Emil Wannheden outline the opportunities and challenges presented by studying Russia's military capabilities as consequences of the Russo-Ukrainian War. This was undertaken to establish a fresh foundation, one that delineates the necessary prerequisites for studying Russian military capabilities both during wartime and in the future. In the sixth and final chapter, Maria Engqvist and Carolina Vendil Pallin summarise and analyse the volume's key takeaways. They conclude that the need to understand the preconditions for Russia's political, financial, societal, cultural, and military trajectories remains vital, if not crucial.

The way ahead for the study of Russia's military capabilities is more resource-intensive than before the start of the war. Both accessing and compiling sources have become more laborious. In addition, since the war defines the dimensions of Russia's policy choices, the lifespan of sources is often more limited. It is necessary to delve into untested methods and conduct cross-disciplinary research, as well as deepen and expand international cooperation between researchers with a genuine interest in the research field.

Sammanfattning

I över tjugo år har Rysslands- och Eurasienprojektet (RUFS) vid FOI försökt bedöma vad Ryssland kan uppbåda av militär förmåga i ett tioårsperspektiv. Även om det ryska informationslandskapet har genomgått flera avgörande förändringar sedan Sovjetunionens upplösning 1991, har det alltid varit en komplex analytisk uppgift att bedöma ett lands militära förmåga. Rysslands invasion av Ukraina år 2022 medförde en i den Ryska federationens historia ej tidigare skådad våg av censur och repressiva åtgärder. Detta, liksom det faktum att kriget har gjort studiet av rysk militär förmåga till ett rörligt mål, har påverkat forskningsfältet i grunden.

I syfte att utforska förutsättningarna för att studera rysk militär förmåga, både i krigstid och i framtiden, analyserar Jonas Kjellén, Johan Norberg, Tomas Malmlöf, Kristina Melin, Carolina Vendil Pallin och Emil Wannheden möjligheter och utmaningar med att studera Rysslands militära förmåga efter februari 2022, i fem fristående kapitel. I det sjätte och sista kapitlet sammanfattar och analyserar Maria Engqvist och Carolina Vendil Pallin slutsatser från de föregående kapitlen. En av slutsatserna är att behovet av att förstå förutsättningarna för Rysslands politiska, finansiella, samhälleliga, kulturella och militära utvecklingsriktningar består, och fortfarande är avgörande.

Vägen framåt för studiet av Rysslands militära förmåga har blivit mer resurskrävande. Att söka efter och värdera källor har blivit en särskild utmaning. Kriget dimensionerar alltmer i Ryssland och det har gjort att källornas livslängd ofta är begränsad, då den ryska planeringshorisonten är kortare än tidigare. Det är nödvändigt att framöver undersöka fler metoder, fördjupa tvärvetenskapligt samarbete, samt utöka det internationella samarbetet mellan forskare och institutioner med ett genuint intresse för forskningsområdet.

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Introduction

Maria Engqvist

The Russo-Ukrainian War has had a significant impact on research and analysis on Russia, particularly the study of topics directly or indirectly linked to its military capabilities. The Russia and Eurasia Studies Programme at FOI has a tradition of over two decades of studying and analysing Russian military capabilities. Therefore, similar to other scholars active in this particular research field, it needs to reflect on the war's impact.[1] This report aims to outline how the Russian information landscape has changed, from the authors' point of view, since the start of the war. The essays forming this anthology also aim to contribute to the discussion in the respective research fields, as well as prepare the way for future research on the various aspects of Russian military capability conducted in FOI's Russia and Eurasia Studies Programme.

As concluded in the report, *Russia's War Against Ukraine and the West: The First Year,* published during the spring of 2023 by the Russia and Eurasia Studies Programme, it has become more difficult to assess the trajectories of Russia's military capabilities post-2022.[2] On the other hand, the war has produced an abundance of information about both military and other matters, and it continues to provide answers to Russian military performance *a posteriori*. Paradoxically, the available information is often elusive. This paradox and its possible effects are carefully scrutinised by the contributors to this report. The analysis is guided by the overarching research question: What are the main challenges and opportunities when analysing Russia and its military capabilities post-2022?

The purpose of this report is not to evaluate whether previous analysis conducted by FOI's Russia and Eurasia Studies Programme has been right or wrong when it comes to predicting the outcomes of Russia's ongoing war against Ukraine or of future wars that Russia may choose to engage in. Rather, this is an attempt to map existing challenges and future requirements for studying Russia and what its leadership calls its "sphere of interest," as well as outline the preconditions for studying Russian military capabilities during wartime.

In the first chapter, Jonas Kjellén and Johan Norberg reflects on the potential development of analysis of Russian military capability against the background of the analysis made in the 2019 report, *Russian Military Capability in a Ten-Year Perspective*. They note that the war has provided not only an abundance of new, sad

[1] Renz, Bettina, "Western Estimates of Russian Military Capabilities and the Invasion of Ukraine", *Problems of Post-Communism*, 2023, p.7.

[2] Engqvist, Maria and Wannheden, Emil (eds.), *Russia's War Against Ukraine: The First Year*, FOI-R--5479--SE, (Stockholm: Swedish Defence Research Agency), 2023, p.iii.

source material, but also a number of potential challenges in estimating Russian military capability in the years to come.

In the second chapter, Carolina Vendil Pallin discusses the implications that have arisen for the study of Russian security and domestic policy. Apart from difficulties stemming from restricted access to sources, she notes that the current situation calls for more rigour and effort in studying Russia, not sloppy guessing.

In the third chapter, Emil Wannheden elaborates on methodological and source criticism issues relating to military expenditure. He describes some of the pitfalls that remain important to avoid when estimating Russian military spending, and goes on to suggest that an understanding of the increased militarisation of the economy might yield important clues about the future challenges for the Russian economy and society.

In the fourth chapter, Tomas Malmlöf focuses on the challenges and opportunities of analysing defence procurement and Russia's defence industrial complex. He underlines that exploring the known unknowns might go some way towards closing identified gaps and suggests a number of innovative methodologies for future studies of the Russian defence industry.

In chapter five, Kristina Melin discusses the prospects of conducting analysis with an outlook from Russia's neighbouring countries. While underscoring that we need to study these countries' security policy goals and domestic politics as individual subjects rather than merely objects of Russian policy, she also points to how Moscow's future trajectory in this region will have decisive consequences.

All of the authors conclude that future research will not only demand innovative approaches, but also become more time- and resource-consuming.

The previous nine iterations of *Russian Military Capability in a Ten-Year Perspective*, as well as *Russia's War Against Ukraine and the West: The First Year*, from 2023, have all been based on open-source material. In general, the use of open sources emanating from a country entrenched in war is inevitably beset with a broad spectrum of inherent challenges related to authenticity, dependency, and closeness of sources, as well as different types of biases. However, this does not mean that the issues at hand are impossible to overcome, define, or map out; in fact, the challenge has only intensified, prompting a need to refine our methodology and analytical frameworks.

1. And Now What? Reflections on Assessing Russia's Future Military Capability

Jonas Kjellén and Johan Norberg

Over the course of more than two decades, the Russia and Eurasia Studies Programme at FOI has produced numerous analyses with the objective of outlining Russia's military organisation and assessing its military capability. The Programme's production ranges from brief memos and briefings to publications with a more comprehensive approach. The main examples of the latter are the military chapters of the *Russian Military Capability in a Ten-Years Perspective* series, of which FOI has published nine iterations in the years 1999–2019. The ambition, approach and method used has evolved over time.[1]

Russia's war against Ukraine sparked reflection about how to assess Russian military capability, mainly for two reasons. First, the war presented an opportunity to evaluate previous assessment approaches. Second, given the new circumstances, it was necessary to contemplate to what degree Russian military capabilities could be analysed in a similar fashion in the coming years. To contribute to that discussion, this essay contemplates future directions for the study of Russian military capability, drawing on more than two decades of experience.

After this general introduction, we outline how our assessments evolved, with an emphasis on our last pre-war assessment of Russia's Armed Forces in 2019. We then elaborate on how well that assessment faired against how Russia's Armed Forces actually performed in the war. Finally, we discuss lessons and suggestions for future analysis of Russian military capability and connect to the wider questions framing this entire anthology.

The post-1991 period was, in hindsight, remarkable for studying the Russian military on the basis of publicly available information. The fall of the Soviet Union ended the Cold War's ideological confrontation. With that, the distrust and threat of a nuclear war between the superpowers receded, which facilitated a relaxation of military secrecy in Russia. Democratic transition in the '90s entailed a more open public debate and journalistic freedoms that fostered a generation of Russian military journalists. As procurement of domestic defence equipment dwindled, Russian defence manufacturers, in search of new markets, detailed Soviet state-of-the-art

[1] Ismail Khan and Maria Engqvist have made valuable contributions to the process of writing this essay.

weaponry to potential foreign customers. Russian civilian and military archives opened up, revealing half a decade of Soviet military thinking to both Russian and foreign researchers.

The gradually increasing authoritarian rule under President Vladimir Putin did not immediately affect access to open information about the Russian military for two main reasons. First, military reform required openness. The 2008 Russo-Georgian war proved the Russian Armed Forces inadequate for warfighting and prompted a need for change. In the ensuing reform, transparency and public exposure of absurd and costly conditions in the military served as impetus for change in face of stiff organisational resistance. Another reason for openness was the professionalisation of non-commissioned officers and enlisted soldiers. These *kontraktniki* were to supplement conscripts to increase combat readiness. To attract the youth, the Armed Forces had to be more open about what a military career entailed. Yet another reason was the outsourcing of logistics and repairs. State tenders announced on the internet included details that would probably be classified today.

Second, the 2010's introduced social media to many Russians. Smartphones became affordable, which increased both the availability and spread of information about Russia's military (just as for military forces elsewhere). Ex-servicemen ran social media accounts revealing their knowledge and skills accumulated during their service. Active personnel posted pictures and video clips from their service on Russian social media platforms, such as *Odnoklassniki* and *Vkontakte*, with impunity.

1.1 Studying the Russian Armed Forces Before 2022

Nourished by the amount of highly accessible information, the quantity, magnitude, and, indeed, quality of both Russian and international publications regarding military affairs in Russia increased. This included, to mention a few, the data from the IISS' studies, *The Military Balance*, and reports from well-established research institutions such as RAND Corporation. Russian publications included both official ones, such as defence-related periodical journals (*Krasnaia Zvezda, Voennaia Mysl)* of the Ministry of Defence (MoD), *Voenno-Promyshlennyi Kurier, Nezavisimoe Voennoe Obozrenie,* and books, for example, *Novaia Armia Rossii* (Russia's New Army), from 2008. Most Russian and international publications relied, in the end, on information from the *Minoborony*.

Looking back, the open and honest tone in Russian official military publications in the early 2010s receded after Sergei Shoigu became defence minister in 2012. Instead, information emanating from the Russian Ministry of Defence and its media outlets was intended to depict an ever-increasing military prowess. Against this backdrop, informal sources, such as blogs and individuals' social media posts, which initially played a small role in our research, became more important. True,

the reliability of such sources was debatable, but considering that military information in all states is habitually shrouded in secrecy, the material at our disposal about Russia's military organisation was surprisingly good. It was at least good enough to assess military potential on the right order of magnitude.

In the earliest iterations (1999–2008) of *Russian Military Capability in a Ten-Year Perspective*, our approach to assessing military capability was descriptive in nature, with the primary focus on outlining trends and anticipating future developments. As the sources improved, so did our description of the armed forces organisation. That was a good start, but organisational charts and the modernity level of military hardware are only a part of understanding Russian military capability from a more practical perspective.

Analytically, it was therefore imperative to not only settle what Russia *had* in terms of military forces, but also to address what Russia could potentially *do*. That meant looking beyond what they were able to do in unopposed exercises, as depicted in the Russian military press. This became even more urgent as the war in Georgia (2008) and Russia's annexation of Crimea (2014) prompted us to consider the prospect of large-scale war in Europe. Improved knowledge about Russia's military organisation facilitated the development of the methods needed to assess Russian military capability. Trying to address what Russia could do with its military forces in war opened up a wide array of contingencies, which revealed the need for delimitations.

Aiming to be as much à la Russe as possible, Russian military notions and concepts underpinned an evolving framework to describe potential military operations with adequate delimitations. First, we established that it was Russia's combined military potential that we wanted to assess – hence, a totality, and not individual services, arms, formations, or units. Second, leaning on how Russia's Military Doctrine describes military threats, our main interest was the maximum output, in terms of the conventional military power that Russia could deploy within a certain timeframe.[2] Third, we sought to assess with what military force Russia could start war, not how it would endure whatever the adversary did to ground down its forces. Fourth, we also assumed that the Armed Forces under Russia's MoD was the key component of Russia's warfighting potential, and thus paid less attention to its paramilitary forces.

The four FOI assessments in the 2010s showed that the potential of the Russian Armed Forces in 2011 was more suitable for an armed conflict or a local war against

[2] See Westerlund, Fredrik and Oxenstierna, Susanne (eds.), *Russian Military Capability in a Ten-Year Perspective – 2019* (Stockholm: Swedish Defence Research Agency), 2019, p.65, for an outline of the four types of military conflicts stipulated in both the 2010 and 2014 versions of Russia's Military Doctrine, and to which the armed forces must be ready to respond: armed conflict – local war – regional war – large-scale war.

adversaries smaller than Russia.[3] However, by 2019, it had grown to pertain to fighting regional wars against peer adversaries.[4]

In 2011, we assessed that newly reformed Russian ground forces and airborne brigades could operate in Russia or along its borders within days, with additional forces arriving in weeks.[5] The assessment was a one-size-fits-all for all of Russia's regions, general in nature, and not resting on a specific analytical framework. Later assessments would both have a more coherent analytical approach and address regional specifics.

The 2013 assessment was a first step to addressing more explicitly what Russian forces could potentially do. Each of the four military districts (MD) could launch combined arms operations in a week with three manoeuvre brigades on or near its respective territory with (unspecified) air and naval support as well as tactical nuclear weapons. Each MD could double that in a month on its own and get reinforcements from other MDs, with times depending on distances. Airborne Forces support was tentatively one brigade in a week, a division in a month, and another two divisions in six months.[6] We factored in distance and time, but only detailed ground forces. Hitherto, our analysis had assumed that Russia was responding to an external attack. After Russia's attacks on Crimea and on Donbas in 2014, we assumed that it was Russia that started a war.

The 2016 assessment expanded the analysis to address a joint interservice operation with some 150,000 men in three or four combined-arms armies with the support of Navy and Aerospace Forces. The analysis used the Russian notion of theatre of military action (*Teatr Voennykh Deistvii, TVD*) to frame the potential to launch warfighting operations in different regions. The assessment detailed Russian standoff strike assets, but only west of the Urals.[7] For the first time, in two chapters, we separated the description of what Russia has in terms of military power from what it can do.

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[3] See Vendil Pallin, Carolina (ed.), *Russian Military Capability in a Ten-Year Perspective – 2011* (Stockholm: Swedish Defence Research Agency), 2012, (FOI published the Swedish version in 2011; Hedenskog, Jakob and Vendil Pallin, Carolina (eds.), *Russian Military Capability in a Ten-Year Perspective – 2013* (Stockholm: Swedish Defence Research Agency) 2013; Persson, Gudrun (ed.), *Russian Military Capability in a Ten-Year Perspective – 2016* (Stockholm: Swedish Defence Research Agency) 2016, and Westerlund, Fredrik and Oxenstierna, Susanne (eds.), *Russian Military Capability in a Ten-Year Perspective – 2019* (Stockholm: Swedish Defence Research Agency) 2019.

[4] Norberg, Johan and Goliath, Martin, "The fighting power of Russia's Armed Forces in 2019," in Westerlund, Fredrik and Oxenstierna, Susanne (eds.), *Russian Military Capability in a Ten-Year Perspective – 2019* (Stockholm: Swedish Defence Research Agency), 2019, pp.59–78, pp.73–74.

[5] Carlsson, Märta and Norberg, Johan, "The Armed Forces" in Carolina Vendil Pallin (ed.), *Russian Military Capability in a Ten-Year Perspective – 2011* (Stockholm, Swedish Defence Research Agency) 2012, pp.97–133, p.125.

[6] Carlsson et al.: "The Military Capability of Russia's Armed Forces in 2013", pp.23–70; p.51.

[7] Westerlund, Fredrik and Norberg, Johan: "The Fighting Power of Russia's Armed Forces in 2016," in Gudrun Persson (ed.), *Russian Military Capability in a Ten-Year Perspective – 2016* (Stockholm: Swedish Defence Research Agency), 2016, pp.67–97, pp.73—92.

In 2019, we let Russian notions refine our framework of potential actions since we lacked examples of Russian operational plans. Ongoing Russian operations in Syria and Donbas involved only a fraction of the Armed Forces and could not underpin analysis of the use of military force on a wider scale. The notion of an operation (*operatsia*), a series of battles and strikes under one intention to carry out a mission at war-theatre level, helped select which forces to analyse. Battles were the task of a group of forces, (GOF, *gruppirovka voisk*), combined ground, air, and naval units tailored to carry out a specific operation.[8] Strikes were the realm of land-attack cruise and surface-to-surface missiles. The 2019 assessment had three other novelties. First, factoring in infrastructure and geography in Russia's regions helped in describing how far various forces could reach outside Russia.[9] Second, the assessment discussed the potential use of conventional forces and standoff assets and their initial effects on peer adversaries.[10] Third, a Russian outline of the scale and scope of military conflicts (armed conflict, local war, regional war, and large-scale war) facilitated the description of which wars Russia's military could fight and the forces they would need to carry out those missions.[11]

1.2 Past Assessments in the Light of Russia's War in Ukraine

At the outset of the war, the forces Russia had at its disposal, i.e., in terms of quantity, were relatively well described by the Russia and Eurasia Studies Programme at FOI and others.[12] The question of force quality was more elusive and, therefore, less studied. Nevertheless, what may be intangible in times of peace becomes palpable in times of war. Leaving out intangibles partly explains why our pre-war assessments did not materialise in Russia's invasion of Ukraine.[13] Unquantifiable factors, such as soldier morale, corruption and cheating, leadership, and conducting offensive operations on foreign soil (as opposed to defending the motherland)

[8] Norberg, Johan and Goliath, Martin, "The fighting power of Russia's Armed Forces in 2019," in Westerlund, Fredrik and Oxenstierna, Susanne (eds.), *Russian Military Capability in a Ten-Year Perspective – 2019* (Stockholm: Swedish Defence Research Agency), 2019, pp.57–79, pp.60 – 65.

[9] Ibid. and p.72.

[10] Ibid. pp.59–78, pp.65–72.

[11] Ibid. pp.59–78, p.65.

[12] Ibid. pp.23–58.

[13] To be useful, the notion of intangibles needs elaboration. FOI's efforts, in 2023, to study intangibles more systematically include addressing Russian military manning and Russian ideas on soldier morale. See Kjellén, Jonas " *Bringing the Soldier back in"* (Stockholm: Swedish Defence Research Agency), 2023, and Gustafsson Kurki, Pär, "The Russian Understanding of Soldier Morale Essentials of key ideas from the 1990s to 2022" (Stockholm: Swedish Defence Research Agency) 2023.

are all examples of what seemed to have significance at the time. This deficiency was not solely ours; Russia's military-political leadership also made this mistake.

Another descriptive aspect that we could have included was an emphasis on what Russia's Armed Forces no longer had. More than a decade of substantial military spending might have led many to erroneously believe that Russia had rebuilt the Soviet Armed Forces, a belief likely reinforced by the fact that the armed forces' technical modernisation was based on Soviet legacy platforms. However, in reality, Russia's reformed Armed Forces had more in common with most European reformed post-Cold War military organisations, emphasising small, high-readiness forces over scalability. Hence, with better awareness of how Russia dismantled the Soviet mass-mobilisation system in 2009–10, both Russia's manpower predicament and problems related to Russia's mobilisation in late 2022 could have been anticipated.

Our ambition to address what Russia could do with its military force meant saying something general and hypothetical about Russian military capability. In contrast, Russia's war of 2022 and onwards was a specific case. Nonetheless, in some respects, our general assessment was roughly correct. The assessed scope before the war was that Russia's Armed Forces could launch a strategic operation, a joint interservice conventional-forces effort with 5 GOFs (each with some 100,000 men, one from each of Russia's 5 MDs) in a TVD against a military peer adversary, 1–2 months after a political decision to do so. Russia launched the war with four military-district-based GOFs on main axes of advance from Belarus, Kursk, Donbass, and Crimea. Estimates of when Russia's political leadership opted for an invasion vary between 3 and 12 months before the invasion. Thus, the assessment was roughly right about the use of MD-based GOF, but it got the timelines wrong.

We argue that what went wrong in our assessments of what Russia can do with its military forces was neither due to flawed logic nor lack of knowledge about the Armed Forces, but unfortunate and erroneous delimitations. Looking at the war today, we see that omitting paramilitary forces from our assessment was a mistake. In fact, a wide range of Russian non-military uniformed forces, various militias (in Donbas), and ethnically or culturally based units (Chechens, Cossacks) made up a substantial share of Russia's invasion force. Later, as Russia's manpower problems worsened, private military companies (viz., Wagner Group) and various volunteer units increased the Russian ranks, and in substantial numbers.

On one hand, the analytical lesson learned is that in times of war, a country may use all available assets, regardless of their suitability for the intended purpose. On the other, this contradicts Russia's unwillingness to deploy conscripts to the war. This, however, has little to do with the delimitations of past research but leads to a third point: that it is not sufficient to analyse what forces Moscow has at its disposal or assess what it can do with them. Ultimately, going to war is a political decision; thus, political considerations, as opposed to military, will infallibly twist military plans. Hence, it matters what the political leadership is *willing to do* with its military muscle.

In size and scope, the state of Russia's war in Ukraine in 2022 was analogous with our 2019 assessment that Russia could "launch [offensive] operations on war-theatre level in [one] regional war(s)" and that the available forces and enabling infrastructure are particularly favourable west of the Urals.[14] Nonetheless, for both domestic and foreign political reasons, Russia has gone to great lengths to depict the war as something else, as a "special military operation." This has not merely been a way for Russia to frame the war in a certain fashion, but has affected warfighting in the most real manner.

The 2019 assessment assumed that half of the forces in a GOF of 100,000 would consist of contract soldiers in high-readiness battalion tactical groups, the other half implicitly being conscripts.[15] Having four full GOFs would have meant some 400,000 soldiers. Russia's invading force, some 150,000 men, was comprised almost only of *kontraktniki*, leaving conscripts at garrisons in Russia. Indeed, from 2012 onwards, the Russian leadership had assured itself that it would refrain from the use of conscripts in circumstances barring outright war. However, we must confess that it was beyond our imagination or belief that political considerations would be so significant as to potentially jeopardise Russia's military objectives in Ukraine by deploying an insufficient number of soldiers. Such a scenario, driven by political concerns, while attempting to subdue one of the larger countries in Europe, was unforeseen due to its gravity.

Similarly, contrary to both doctrine and expectations, Russia did not prepare the ground force invasion with days or weeks of air- and standoff missile attacks to degrade for example Ukrainian air defences, logistics, or command and control, but instead emphasised speed and initiative. Perhaps this reflected a mistaken belief among the Russian political leadership that the Ukrainian armed forces would soon be defeated and the operation would rapidly transition to one of occupation. Hence, the lesson learned is that neither the description of what Russia has in terms of military forces, nor an accurate assessment of what they can theoretically do, is sufficient, as other considerations may distort the military logic.

While our focus on high-intensity war was appropriate, the delimitation of not including assessments regarding Russian military capabilities designed for other contingencies was necessary but at the same time unfortunate. In its endeavour to fight a local, or even regional, war as a limited military operation, Russia's significant self-restraint has hampered its success on the battlefield. A better understanding of such scenarios would likely have elucidated the effects of Russia's self-imposed operational restraints.

Research delimitations will continue to be important in future studies, and we will need to find ways to select the most relevant factors for research. One resource-efficient way to explore a larger variety of conflict scenarios, and against

[14] Norberg and Goliath 2019, p.74.

[15] Ibid. p.63.

many potential adversaries, is through wargaming.[16] This would require both time and resources; notwithstanding those requirements, the particular skills needed exist within FOI, as well as in organisations outside Sweden. In addition, with an ever-growing body of quality research on Russia's armed forces, there are more opportunities to stand on the shoulders of colleagues around the world.

Lastly, just as our assessments had not factored in Russian domestic political sensitivities regarding the reality of conscripts dying on foreign soil, when focusing on Russian military capabilities we did not consider the effect of the adversary's counteractions, i.e. the strengths and weaknesses of the Ukrainian armed forces, or international reactions. There were simply too many variables to address analytically. Ukraine's resistance and Western support were crucial to how the war played out in 2022–2023, but the analysis of Ukrainian armed forces and sentiments among Western countries towards Ukrainian sovereignty were outside the remit of Russian military studies. This does underscore, however, that one has to factor in the specific operating environment as well as the adversary when making assessments about military capability.

1.3 Assessing Russian Military Capability in the Future

As long as the war continues as it did in early 2024, it would probably consume all additional military forces that Russia could mobilise, train and equip. Any increase in military capability would require a significantly lower intensity in fighting, or even a ceasefire. The prospect of studying how Russia reconstitutes its forces and implements lessons from the war is determined by the extent to which information will be available for researchers. The outlook is mixed.

The war has had a paradoxical effect on the availability of information about Russia's military. Before the war, we had plenty of data about how Russia built military power but could only guess about the specific uses of its force. Now, however, there is an abundance of information about the performance of Russian forces in combat but much less about force generation in Russia.

Specifically, during the course of the war, Russian losses tallied on websites such as Oryx and BBC Russian/*Mediazona* have underpinned clear observations about both the modes and intensity of Russian warfighting over time. In contrast, information about how Russia is building military force at home is increasingly warped. With the ongoing war as a backdrop, official information is often twisted and likely untruthful. Russian authorities are classifying more and more of the information, for example, in the state budget. Severe repression and censorship, such

[16] In contrast to one-sided assessments of Russian military capability, war games capture the interactive aspect of war, that a force has an adversary who is actively trying to thwart its plans. War games cannot fully capture, however, the war's complexity and lethality.

as the ban on using the word "war," or smearing the Russian Army, has silenced much analytical and research work. Relentless anti-Ukrainian and anti-Western propaganda in Russian media outlets reinforces suspicion and enmity. Almost all contacts with experts, analysts, and journalists in Russia are gone, quashed by a sense of how grave or even dangerous the situation is.

In early 2024, what in 1991–2021 now seems like a comparative "golden era" of information about and contacts with Russia appeared to be a historical anomaly. As discussed above, in the introduction, although there was much that pointed to perhaps more Cold War-like relations as a new normal, all was not doom and gloom in terms of obtainable sources of information on Russia. First, in the wake of the war, Russian media outlets in exile, in cooperation with freelance journalists in Russia, have become important sources of information. At the time of writing, the Russian government's efforts to shut this down have not been successful.

Second, dissemination of truthful information during the 2009–10 military reform and a clear vision of its end goal were prerequisites for success, especially involving the professionalisation of the armed forces. Given political sensitivities regarding conscription in Russia, maintaining the declaration of a continued emphasis on voluntary military service in the reconstituted armed forces will require a certain level of transparency and candour. Otherwise, recruiting that depends on a voluntary basis will likely plummet, and parents may even refuse to send their youth away for conscription.

Third, in spite of Russia's tighter grip on information, one can still find abundant information and commentary about the war. New informal sources, social media, and satellite imaging provided by public companies, as well as analytical nodes such as Bellingcat and the Conflict Intelligence Team, CIT, which played a small role in our research before the war, have come to the fore. Some Western governments and their agencies publish selected information about the war. As always, one should remain critical about one's sources and discuss who they are, what they say and, crucially, why they may say what they say.

Lastly, it is unlikely that in the near future it will be possible to visit Russia as we were accustomed to doing previously. A way to compensate for the ensuing and current dearth of contacts is to interact even more with other researchers on these issues, both in the West and in the countries neighbouring Russia. Understanding Ukraine's hard-won experience is crucial. In contrast to us, who assess Russian military power in theory, they have been facing it in reality.

1.4 Conclusions

The overall analytical lesson learned from Russia's war in Ukraine is that assessments must emphasise that actual war is more complex than peacetime assessments, with many previously unknown factors coming into play. By definition, the word "assessment," explicitly means that one does not fully know everything.

It is not a prediction. It is not an early warning about impending use. However, it is indeed useful to do research on military power to form well-grounded opinions on potential developments.

The war has clearly shown that Russia's current regime is willing to use large-scale conventional war to achieve its political goals. As long as this type of political leadership remains, it is imperative for European and world security to study the Russian military. It is obviously also important to study Russia's actions in the war. As long as the war continues, it will perpetuate uncertainties about the future development of Russia's Armed Forces. Conducting assessments with ten-year perspectives would be futile, but sometime in the future, the fighting will recede. Russia's military power will then begin to grow again, since its ongoing operations will not be immediately consuming newly produced military resources. Understanding, assessing, and addressing the various preconditions that Russia will apply to the reconstitution of its military could make use of the lessons learned here. Access to reliable information is an absolute prerequisite. Despite the increasing challenges associated with studying Russia's armed forces, there has likely never been a more relevant and pressing need in the post-Soviet period.

If anything, the Russia and Eurasia Studies Programme should continue describing what military force Moscow actually has at its disposal, as well as exploring ways to assess what Russia could do with these forces in different circumstances against different adversaries. However, if there is any substantive lesson that Russia's war has taught us, it is that political will matters. Therefore, it is imperative that we continue to pursue the broad approach to studying Russian military power that we have articulated in our series of publications, *Russian Military Capability in a Ten-Year Perspective*. Studying military power entails more than asking what military force is available and then assessing what it can do; it also involves examining the industrial, financial, and political preconditions for building and using that force. This comprehensive approach has guided our work for 25 years.

2. Analysing Russia's Security Policy in Times of War

Carolina Vendil Pallin

Although Russia's military capability constituted the tool for attempting to coerce Ukraine into submission, launching the invasion was a security policy decision. There was no shortage of warnings before Russia's invasion in February 2022. Washington attempted to avert the invasion by releasing intelligence data in an unprecedented manner. Russia's operation was thus not a surprise attack. While the exact nature and size of Russia's military operation were not predictable, Moscow had communicated its security goal of controlling Ukraine and establishing a sphere of interest in its immediate neighbourhood clearly and consistently for more than a decade, if not longer. While the Russia and Eurasia Studies Programme at FOI did not predict a full-scale war in Ukraine, its *Russian Military Capability* reports did outline in detail the evolution of the Kremlin's security policy.[1] The Russia and Eurasia Studies Programme reached its conclusions through analysis not only of Russia's strategic documents, official statements, speeches, government programmes, and laws but also of its foreign policy initiatives, agreements and positions inside multilateral fora, studying the link between domestic and security policies and Moscow's thinking about future wars.

The reality of Russia's full-scale invasion nevertheless raises questions about whether its security policy can still be examined using these sources in the same manner: Are they still available, and are they less reliable than before? The level of repression makes it perilous for researchers inside Russia to publish and communicate certain findings, such as politically sensitive research results. It is not even admissible to call Russia's invasion a war, and the list of what was "extremist" grew longer by the day, even before 24 February 2022. Add to this an increasing tendency to restrict access to everything from statistics to government documents, as well as increasing official and unofficial censorship. In light of these conditions, this chapter aims to examine how Russia's security policy can be studied, taking into account heightened censorship, the unavailability of sources, and the demands that the ongoing war places on Russia's society and decision-making machinery.

[1] The Programme's most recent security policy analysis predicted that Russia would continue to pursue a policy to restore its great-power status "including using military means, with the right to an exclusive sphere of influence"; this analysis is found in the chapter by Jakob Hedenskog and Gudrun Persson, "Russian Security Policy," in *Russian Military Capability in a Ten-Year Perspective*, eds. Oxenstierna, Susanne and Westerlund, Fredrik, FOI-R--4758--SE, (Stockholm: Swedish Defence Research Agency), 2019, pp.79–95, p.90.

I begin the discussion by looking more closely at how FOI's Russia and Eurasia Studies Programme studied Russian security policy before February 2022. Subsequently, I consider whether, given the invasion, there is a need to re-evaluate some of the assumptions made and I provide examples of how access to and reliability of data have changed. Finally, I mention additional data and information that may be of interest to complement previous sources and discuss possible methodologies and approaches.

The objectives are thus to explore the altered preconditions for studying Russian security policy, identify possible traps and sources of erroneous conclusions, and identify potential additional sources and methods. I do not claim to produce an exhaustive review of the research on Russian security policy post-February 2022. The approach here is explorative and aims to contribute to the overall discussion, in the final chapter of this edited volume, of the pitfalls and possibilities that arise in assessing Russian military capability.

2.1 Studying Russian Security Policy Prior to February 2022

Prior to February 2022, when the Russia and Eurasia Studies Programme at FOI studied Russian security policy, it relied on the analysis of official sources, such as strategy documents, speeches by key decision-makers, laws and other high-level statements, as well as the concrete measures to implement them. This methodological choice was underpinned by the fact that national-security planning in Russia more or less followed a procedure enshrined in law. This made the main official security documents, most importantly the National Security Strategy, "the lowest common denominator" of consensus among the political leadership.[2] Another important element was the possibility to visit Russia to talk to researchers and analysts there, for example by attending conferences and workshops or conducting informal talks and interviews. In addition, the FOI Russia and Eurasia Studies Programme followed articles in the Russian media, research publications, and the Russian debates in key journals, as well as opposition activity and public opinion polls. Reliance on opinion surveys was never one of FOI's main sources for following Russian security policy, although their results were useful indications of the general mood in domestic politics, not least when providing long time series. For example, the respondents' views of whether Ukraine was a friend or a foe at a particular time were less likely to be of interest than following the fluctuations in those views and how they, in turn, related to official propaganda. Overall, according to an analysis of peer-reviewed Russian studies articles published between 2010 and

[2] Hedenskog, Jakob, Persson, Gudrun and Vendil Pallin, Carolina, "Russian Security Policy," in *Russian Military Capability in a Ten-Year Perspective*, ed. Persson, Gudrun, FOI-R--4326--SE (Stockholm: Swedish Defence Research Agency), 2016, pp.97–132, p.98.

2022, much of the field's research prior to 2022 appears to have relied on surveys.[3] There were good reasons for treating surveys with caution even before February 2022. Today, this method of gauging Russians' political sentiments and attitudes is, in practice, probably unavailable to most researchers in countries that Moscow has labelled as "unfriendly."[4]

2.2 Worsening Conditions After Russia's Full-Scale Invasion

Russia had become increasingly authoritarian over a long period, even before 2022, but after the full-scale invasion, repression and censorship increased instantly. What remained of the independent opposition and media disappeared. The larger anti-war protests that did occur were mainly in the first few weeks after 24 February 2022. After that, they petered out or transformed into acts of protest by single individuals, probably both because of the increasing realisation among Russians of the price they would have to pay for protesting and also because many among the opposition had left Russia.[5] The government used a wide array of laws and measures to clamp down on the opposition. Among the most draconian of these was the amendment to the Criminal Code making it illegal to disseminate "false" information about the actions of the Armed Forces, with a maximum prison sentence of fifteen years for doing so; only the Ministry of Defence was permitted to decide what information was correct. Discrediting the Armed Forces and its military operation became punishable for up to five years. This instituted censorship on what was legal to say about the invasion, making it possible to jail critics and close down the remaining independent news resources. As a result, a considerable

[3] La Lova, Lanabi, "Methods in Russian studies: Overview of top political science, economics, and area studies journals," *Post-Soviet Affairs*, vol. 39, No. 1 (2023): Pp.27–37.

[4] Russia enacted a law on possible countermeasures against countries that had taken "unfriendly measures" against Russia. In 2021, this resulted in a list of countries that included the U.S. and the Czech Republic. This list quickly grew longer in 2022, when all the countries that adhered to the sanctions against Russia were included. Not only were all of the European Union countries included, but also, for example, Taiwan, Singapore, Japan, and South Korea, as well as all the countries within the British Commonwealth; for a recent list of the countries, see https://www.rbc.ru/politics/03/08/2023/62e3b3f59a79472ed9cfd9ee.

[5] Dolinina, Irina and Uzhvak, Polina, "Protestov v Rossii net? A Roskomnadzor nashel," *Vazhnye istorii*, 22 March 2023, https://storage.googleapis.com/istories/stories/2023/03/22/protesty-v-rossii/index.html.

exodus occurred as many opposition activists, independent lawyers, journalists, and other skilled workers left the country.[6]

Russia's efforts to control the information available to its population also intensified, especially on the Internet after February 2022. The law on blocking web resources containing information not allowed according to Russian legislation came into force in 2012, but, in 2022, the entries on the blacklist increased substantially. The number one social media network in Russia, VK, had, in practice come under government control from about 2014 and increasingly became a tool for both surveillance and steering Russian users away from independent sources.[7] This was especially true after Facebook, Instagram, and Twitter were blocked in 2022.[8] Russia is furthermore taking measures to hinder its population from using VPN (virtual private network) services to circumvent blocking. A law on a so-called "sovereign Internet" had already come into force in 2019, making it possible for Russian authorities to control information flows and make Internet service providers block websites more effectively. The 2019 law also introduced measures to make it possible to disconnect a Russian segment of the Internet from the outside world, for example to subdue protest in specific regions. Evidence suggests that Russia applied some of its blocking capacity to limit the information flows on Telegram in connection with a mob that stormed the airport in Makhachkala, on 30 October 2023, in search of Jews.[9] In January 2024, a number of Telegram channels were blocked during unrest and popular protests in Bashkortostan.[10]

In addition, available sources became scarcer as more data was classified as secret or restricted information. For example, some research on voting anomalies that relied on data from the Central Electoral Commission (CEC) will be more challenging in the future when results are no longer presented in datasets that are

[6] The exact number of Russians who have left is impossible to determine, but estimates usually land between 600,000 and 1,000,000 following the second wave of emigration in September 2022 to escape mobilisation; see, for example, *Re:Russia*, "Begstvo ot voiny: novye dannye pozvoliaiut otsenit chislo uyekhavshikh possiian v bolee chem 800 tysiach chelovek," 28 July 2023, https://re-russia.net/review/347/.

[7] Dietrich, Philipp, *The Key Player in Russia's Cybersphere: What the West Needs to Know about VK Company*, DGAP Analysis, No. 4 (September 2023), https://dgap.org/system/files/article_pdfs/DGAP%20Analysis%20No.%204_September_20_2023_20pp.pdf.

[8] Russia also declared Meta an "extremist organisation." Especially the blocking of Instagram resulted in an unprecedented increase in VPN (virtual private network) downloads in Russia; see Leigh, Dana, "VPN Usage In Russia Up 10,000% Following Instagram Ban," *TechRound*, 16 March 2022, https://techround.co.uk/news/vpn-usage-in-russia-up-by-10000-following-instagram-ban/.

[9] Pliushchev, Aleksandr, (https://www.youtube.com/@plushev), "Tochka," YouTube, 5 November 2023, https://www.youtube.com/watch?v=s2va6CWuFqQ.

[10] *Mediazona*, "Telegram soobshchil, chto ne blokiroval kanaly vo vremia protestov v Bashkortostane", https://zona.media/news/2024/01/18/telegram.

easy to download, and independent analysis is repressed.[11] Independent election monitoring is no longer a realistic possibility, making data from organisations such as the Movement for Defence of Voters' Rights *Golos* unavailable. The OSCE (Organization for Security and Co-operation in Europe) decided against sending observers during the Duma elections in 2021 due to the restrictions imposed by Moscow and is unlikely to return under current circumstances. The introduction of electronic voting further complicates election analysis.

In parallel with increasing repression and censorship, Russian propaganda intensified, along with measures to shape, especially, the political views of a younger generation. Only official historical narratives were allowed, and the population was expected to adapt to patriotic values as defined by the state.[12] In 2023, the government introduced a new compulsory university course called "The Basics of Russian Statehood," aiming to instil state patriotism among students. Meanwhile, the curriculum in schools became increasingly ideological and militaristic, with mandatory military training introduced in schools from September 2023. All of these measures will have consequences for the possibilities available to Russian citizens to express themselves freely, as well as for research and academic work.

Before 2022, we were able to use contacts at Russian think tanks and different meeting formats to gauge sentiments, especially among Moscow's researchers and analysts. However, the Moscow-based think-tanks that could previously produce research and policy recommendations of interest, such as the Carnegie Moscow Center and the Russian International Affairs Council (RIAC), have either been closed down or forced to follow state official policy rigorously. After the full-scale invasion of Ukraine, it was no longer enough to merely refrain from criticising the Russian government; complete support for the war against Ukraine became a mandatory requirement. Russian authorities have further curtailed international cooperation within the academic community, and there is increasing self-censorship within Russian social science research.[13] Very few academic channels remain open. Most Western universities and institutes have also put cooperation with their Russian counterparts on hold or discontinued it altogether. As a result, the possibilities for interacting with security and social science researchers based in Russia

[11] See, for example, Shilkin, Sergei, "Anomalnye i normalnye: statesticheskii analiz itogov dumskikh vyborov," *Fond liberalnaia missiia*, 18 November 2021, https://liberal.ru/lm-ekspertiza/anomalnye-i-normalnye-statisticheskij-analiz-itogov-dumskih-vyborov. In October 2022, Shilkin and other members of the organisation Golos were investigated by Russian authorities for discrediting the Armed Forces, "K analizirovavshemu rezultaty vyborov uchenomu Shpilkinu prishli s obyskom," *RBK*, 5 October 2022, https://www.rbc.ru/politics/05/10/2022/633d3d299a7947f5d9e9a4bb.

[12] Vendil Pallin, Carolina, Engqvist, Maria, and Gräns, Carl Michael, "Russia's national security: Fighting the West for regional hegemony," in *Russia's War Against Ukraine and the West: The First Year*, eds. Engqvist, Maria and Wannheden, Emil, FOI-R--5479--SE, (Stockholm: Swedish Defence Research Agency), 2023. Pp.33–44, p.38ff.

[13] Zavadskaya, Margarita and Gerber, Theodore, "Rise and fall: social science in Russia before and after the war," *Post-Soviet Affairs*, vol. 39, No. 1–2 (2023): 108–120.

have become minimal and fraught with risks for all parties. An individual Russian researcher could be in peril for even communicating with the West. Moreover, it could be more difficult to interpret whether research and analysis are of high quality or dictated by the Russian government, and whether they represent policy statements rather than good analytical work.

But all is not despair and gloom. In spite of the hostile climate, a generation of skilled journalists had developed inside and outside Russia. Among the news agencies and web projects that regularly publish insightful analytical pieces are not only *Meduza, Vazhnye istorii, Proekt*, *Novaya gazeta* and *The Insider*, but also regional publications such as *Pskovskaia guberniia*.[14] Some of these investigative news outlets are based abroad, but often they still have journalists working anonymously inside Russia. Some of the sources and datasets that they base their analytical articles on are leaks of data from Russian government authorities, banks, and other companies. Not seldom have these datasets become available as a result of unauthorised access to archives – either digitally or simply through the purchase of registries or compiled datasets from corrupt officials. Russia, in spite of its self-proclaimed "digital sovereignty," is a country where personal and other data is regularly leaked, bought, or stolen. This raises a number of ethical questions about how to use, if at all, stolen data, for example. An example is the data on demonstrations cited above; it was made accessible via a theft resulting from a hacker attack. A subsidiary of the Russian authority responsible for controlling and monitoring mass media and the Internet in Russia, Roskomnadzor, experienced a hacker attack resulting in leakage of data. Among the trove of leaked information was a database that had been compiled on every incident of protest, allowing us to compare that dataset with, for example, that of the organisation OVD Info.[15] Furthermore, other avenues of research worth exploring in more detail could be social media, especially Telegram. In addition, evidence of partial shutdowns of the Internet in certain regions could be an indication of popular unrest and mass protests.

There is every reason to expect that a number of more traditional sources, such as legislation, policy roadmaps, and strategies will need to be adapted to new conditions. Following exactly how this takes place will be of interest and reveal Russia's priorities and dilemmas. Whereas strategies, doctrines, and statements on the federal level tend to be vague, the roadmaps and concrete action plans must be more tangible; they are meant to guide ministers and heads of divisions and

[14] Availabe at https://meduza.io/, https://istories.media/, https://www.proekt.media/, https://novayagazeta.eu/, https://theins.ru/ and https://gubernia.media/, respectively. In 2023, the editor-in-chief of *Pskovskaia Guberniia*, Denis Kamaliagin, was accused of "discrediting the army" a second time, and is wanted by Russian Police authorities. He has left Russia, and is publishing from abroad.

[15] The hacked government authority was the General Radio Frequency Centre, which is subordinated to Roskomnadzor (Federal Service for Supervision of Communications, Information Technology and Mass Media). OVD Info is an independent human rights project, covering political repression and providing advice and legal assistance to people arrested for using their right to attend meetings and other basic rights, https://ovd.info/ .

departments on how to implement policy. Most ministries have analytical institutions and centres that they task to gather necessary data and other information needed for devising and implementing policy; these studies are more likely to be available and also provide details not found in government strategies.[16] This is also true at the regional level, which is where much of the actual work is done in converting, for example, national projects into action, meeting targets, and reporting back on progress. Following the regional level will be more resource- and time-consuming, but could yield important insights into both the goals that are established and whether it is at all possible to implement policies.[17]

There is every reason to interpret opinion polls conducted in Russia even before 2022 with caution. However, entirely dismissing all polls after 2022 would also be a mistake. For example, Jade McGlynn uses opinion polling coupled with interviews over Zoom, email, Signal and Telegram, as well as social media analysis. Taken together, this approach allows her to draw the conclusion that there is real support for the war among the Russian public and elites.[18] Disregarding such data on the basis that repression makes people express what authorities want to hear would mean missing important parts of the puzzle. Complementing opinion polls with other data sets is thus a way forward when interpreting the polls that institutes such as the Levada Centre conduct in Russia under today's conditions of repression and censorship. Furthermore, using long time series rather than an individual survey allows for conclusions about overall trends, since any errors or bias in the polls should be systemic.

Finally, how to interpret and use official strategic documents and statements in these new conditions requires some thought. First, decision-making has become more difficult to follow on account of more secrecy and some of the established procedures for devising policy appear to be in disarray. Second, Russia's war against Ukraine dimensions almost every policy area and has shortened the planning horizon considerably. Although Russia's overall strategic goals probably remain consistent as long as the present political leadership remains in power, documents such as the National Security Strategy were developed and coordinated in radically different circumstances. Does this mean that sections of the strategy have become obsolete

[16] Gorskiy, Dmitry, interviewed in the pod, "The Naked Pravda: How studying Russia became a paradox," *Meduza*, 15 December 2023, https://meduza.io/en/episodes/2023/12/15/how-studying-russia-became-a-paradox.

[17] An example of how goals on the national level create headaches for regional and local officials is the targets on how many men should sign contracts for military service. See, for example, Dmitrii Medvedev's statement about 410,000 contract soldiers signing on in 2023, "Medvedev zaiavil o 410 tys. novykh kontraktnikov v 2023 godu," *RBK*, 9 November 2023, https://www.rbc.ru/rbcfree news/654cd8059a7947f66dc48ae0. Compare this to how an official of the Military Commissariat in Yakutiia urges his colleagues to increase the number so that the region does not fall behind in achieving the targets for 2023, "Russia Seeks to Send 500 Residents of Siberian Region to War Weekly," *RadioFreeEurope/Radio Liberty*, 14 November, https://www.rferl.org/a/russia-recruits-war-yakutia/32684727.html.

[18] McGlynn, Jade, *Russia's War* (Cambridge: Polity Press, 2023).

and, if so, which ones? Russia's confrontation with the West is long-term and deep-seated. This was obvious in the latest National Security Strategy, but it was also a theme in previous editions. This rift has only deepened after February 2022, as has the theme of Russia's representing a distinct Slavic civilisation, with a geographic sphere of interest in its immediate neighbourhood. However, the conditions for striking a balance between national security interests and socioeconomic development, previously an outspoken goal, have changed dramatically. How Russia adapts its policy in these areas, not least through government regulations and instructions, will be important to follow. Official documents and statements will thus continue to be important, but perhaps paying attention at times to what is missing, what is not said, nor published, will also yield important insights. Dmitrii Medvedev's frequent tweeting of aggressive statements, for example, stands in harsh contrast to the low-key, technocratic behaviour of Prime Minister Mikhail Mishustin. Although registering the unsaid was important before the war, it could become an even more salient way of understanding the unspoken dilemmas that Russia finds itself facing, as well as how different politicians view their role in the system.

2.3 Linking Security Policy to Military Capability

Russia has stated a goal to rebuild its military capability. Doing so requires resources, and Moscow will have to prioritise military needs over other societal demands. Mapping Russian policy priorities, both in official strategies, policy roadmaps, and speeches, will provide part of the answer to this question. The ability to keep society calm and willing to contribute will also be an important factor. The next wave of mobilisation may yield important insights into how prepared Moscow is to risk societal unrest and even protest. So far, Russia's so-called technocrats, the government ministers and officials responsible for economic and social policy, have been skilful in keeping Russia's economy afloat. Their future ability to do so will also be key to Russia's possibilities for reconstituting its military capability. Most importantly, whether or not Russia continues to fight the war against Ukraine at the current intensity will either limit or free resources for building new units and procuring modern arms and equipment. The war against Ukraine will continue to dimension Russian policy and its limits for reconstituting military capability.

2.4 Conclusions

There are significant challenges ahead for anyone studying Russia. While some of the experiences from the Soviet and Cold War eras might be of use, there is every reason to be cautious. Many conditions are radically different. The Soviet Union was a one-party dictatorship underpinned by ideology, whereas the current Russian political system is personalist and has only a vague neo-imperial ideology in the

making. Perhaps even more importantly, the international system is not bipolar in the way it was during the Cold War, and the Russian position in the global power balance is weaker than that of the Soviet Union.

Analysing the long-term goals of Russia's security policy will remain as important as before 24 February 2022. This makes it impermissible to resort to slipshod guessing, uncritically adopting narratives and clichés about Russia, Putin and the Cold War. Historical analogies and anecdotal evidence can be useful to a degree, but they usually reveal just as much about the analyst using them as the topic at hand. Nor can wishful thinking be allowed to replace analytical rigour. Russia's official policy will continue to be available in main speeches and documents, but the challenge will consist in understanding which statements and goals are more important and realistic for Russia to implement. Likewise, even in an authoritarian system, societal sentiments have importance, albeit not in the way voters or a grass-root civil society might consider. Another of the challenges ahead will be for researchers to gauge how much Russia's war has changed its population, whether the current policy of patriotic indoctrination is successful, and how the elites reconfigure themselves. In fact, as repression, censorship, and self-censorship have increased, the challenges in reading Russian society and popular sentiments will mount for the Kremlin as well. Studying how it attempts to overcome this difficulty could be an interesting topic in itself.

Finally, the question of succession constitutes a permanent challenge for personalist authoritarian systems such as Russia's. Currently, the system appears rigid and cemented, and some of the key ministers and officials have been at their posts for a long time. How Moscow seeks to arrange a generational turnover without rocking the system will be key for Russian security and stability. It will need to undertake this turnover in a Russia that has changed since February 2022, which has become increasingly militaristic and repressive, a Russia bordering on totalitarianism, engaged in the largest war in Europe since the Second World War. Despite all the difficulties involved in collecting and analysing data, this is not the time to be lazy or resort to sloppy guessing about Russia.

3. Assessing Russian Military Expenditure in Times of War

Emil Wannheden

This essay analyses the challenges of estimating Russian military expenditure using open sources, given the censorship and limitations on data access that the Russian government has introduced in the wake of its invasion of Ukraine in February 2022.[1] The argument here is that it is currently impossible to determine the level of actual military spending in Russia by using open sources. It is still possible to make estimates of ranges of military spending, but they will be less reliable than in the past. In addition, analysing Russian budget plans for future military spending will not be as useful as it was before. The war has shortened Russia's actual policy-planning horizon to a few months, which means that the budget plans for the next year, let alone the years after that, are an uncertain indicator of future policy and are likely to be revised according to the needs created by the war. Finally, in times of war, there may be a smaller benefit in analysing military expenditure as a component of future Russian military capability in, for example, a ten-year perspective. In the intervening time, other factors are more important, not least the intensity, duration, and eventual outcome of the war in Ukraine.

Analysing Russian military expenditure and the Russian economy has been an important component in the estimates of Russian military capability made by the FOI's Russia and Eurasia Studies Programme since the end of the 1990s. The premise is that military capability needs to be assessed holistically, taking into account the country's political, economic, and cultural resources.[2] This is also how Russian military thinkers have conceptualised military capability, military doctrine, and war.[3] Russia's war against Ukraine has made the study of Russian military expenditure even more urgent. As the war has turned into a war of attrition, economic

[1] The author is grateful for comments received from Julian Cooper and Carolina Vendil Pallin on an early draft of the text.

[2] Persson, Gudrun, "Introduction," in Persson, Gudrun (ed.), *Russian Military Capability in a Ten-Year Perspective – 2016,* FOI-R--4326--SE (Stockholm: Swedish Defence Research Agency, December 2016), p.17; Oxenstierna, Susanne, "The economy and military expenditure," in Westerlund, Fredrik and Oxenstierna, Susanne (eds.) *Russian Military Capability in a Ten-Year Perspective – 2019,* FOI-R--4758--SE (Stockholm: Swedish Defence Research Agency, 2019), p.97; Oxenstierna, Susanne, "Russia's Defense Spending and the Economic Decline," *Journal of Eurasian Studies* 7 (1), pp.60−70.

[3] Persson, Gudrun, "Russian views on future war – The legacy of A.E. Snesarev," in Forsström, Pentti (ed.), *Russian Concept of Deterrence in a Contemporary and Classic Perspective*, conference proceedings (Helsinki: Finnish National Defence University, 2021), pp.40–41.

variables have become more important for the outcome of the war. The question of interest, of course, is whether the level of military expenditure required for the war in Ukraine is sustainable for Russia's economy and society.

However, studying Russia has become more difficult since the invasion of Ukraine in February 2022. Repression and censorship have increased. Is it still possible, and to what degree, to accurately estimate Russian military expenditure? What are the limitations and potential pitfalls of studying Russian military expenditure? And lastly, is it relevant to study military expenditure during an ongoing war? The answer to these questions has implications for how analysts should study Russian military capability.

The rest of this essay is structured as follows: first, there is a discussion of how Russian military expenditure has been studied in the past. Second, there is an analysis of what limitations have emerged since February 2022. Third, there is a discussion of possible pitfalls to avoid when studying Russian military expenditure. Fourth, there is a reflection on the relevance of studying military expenditure for the purpose of assessing the military capability of Russia while it is at war. Finally, some concluding thoughts are presented.

3.1 Past Assessments of Russian Military Expenditure

Before February 2022, it was relatively straightforward to follow the development of Russia's military expenditure. Until that time, beginning in 2010, the Russian Federal Treasury published monthly budget execution reports on its website, which contained disaggregated data on federal budget expenditure, including classified expenditure. Calculating Russia's actual military expenditure was a matter of looking up the appropriate budget lines in openly available Excel sheets and adding them up. In this way, it was also possible to analyse changes in expenditure patterns for different parts of the military organisation.

The debate among researchers and intelligence analysts about what statistics should or should not be included in Soviet or Russian military spending goes back to the dawn of the Cold War. Depending on the definition one uses of what constitutes military expenditure, one gets different numbers. Russia's own definition of military expenditure is narrow and only includes spending under the budget chapter "national defence" (*natsionalnaia oborona)*. The most authoritative international definition of military expenditure is that of the Stockholm International Peace Research Institute (SIPRI), which also includes other expenditure, some of which, in the Russian case, falls under "national security" (*natsionalnaia bezopasnost*) and other budget lines. SIPRI's definition of "total military expenditure" allows for comparisons between different countries. This is also the definition that researchers at FOI have used in past assessments of Russian military capability. The last available SIPRI

update on actual spending estimates that Russia spent 4.54 percent of its GDP on total military expenditure during the first half of 2022.[4] The yearly assessment by the International Institute for Strategic Studies (IISS), accessible in its publication, *The Military Balance,* follows the NATO definition and is usually very similar to SIPRI's. The Gaidar Institute for Economic Policy, an economics research institute based in Moscow, developed a third, wider definition of Russia's military expenditure. However, the Gaidar Institute stopped publishing its calculations of that expenditure in 2020. It is possible to conceive even wider definitions by including most or all of the secret expenditures in the federal budget, the spending on the security services, subsidies to the defence industry, and so on.[5] Table 3.1 shows how different definitions imply different shares of military expenditure in GDP for the year 2018.

Table 3.1 Assessments of Russian military expenditure in 2018 as percent of GDP

Source and term	Percent of GDP	Notes
Ministry of Finance, "national defence" budget	2.7	Russian definition
SIPRI, "total military expenditure"	3.7	Allows for international comparisons; used by FOI
IISS, "military expenditure"	3.78	Follows the NATO definition
Gaidar Institute, "overall military expenditure"	4.07	
Andermo and Kragh, "upper bound of military expenditure"	5.7	Includes all secret expenditures and some civilian expenditures

Source: SIPRI, Military Expenditure Database; IISS, "Russia and Eurasia," in The Military Balance: The Annual Assessment of Global Military Capabilities and Defense Economics, Volume 120, Issue 1, 2020 (London: International Institute for Strategic Studies), 180; Vasily Zatsepin, "The defense economics and the military reform in Russia," in Russian Economy in 2019: Trends and Outlooks, Issue 41, 2020 (Moscow: Gaidar Institute), 564; Andermo and Kragh, "Secrecy and military expenditures," 313.

Another way to study military expenditure is to examine Russia's annual federal budget laws. These budgets are approved every year in November or December, and contain a military budget for the following year, as well as spending projections for the two years after that. Russia's 2023 federal budget, for example, includes spending plans for 2023, 2024 and 2025. Using these figures, analysts and researchers can estimate possible future military expenditure and get an idea of the government's political priorities in the coming years. In addition, the legislative process of the federal budget is accompanied by many documents that provide additional details

[4] Cooper, Julian, "Implementation of the Russian Federal Budget during January–July 2022 and Spending on the Military", *SIPRI Background paper*, October 2022.

[5] Andermo, Erik and Kragh, Martin, "Secrecy and military expenditures in the Russian budget," *Post-Soviet Affairs*, July 2020, Taylor & Francis Journals, vol. 36(4), pp.297–322.

on the opinions and priorities regarding military and other expenditures by the government, the ministries, the Defence Committee of the State Duma, and others.

It should be noted that the aforementioned estimates of military spending are not the same as the cost of the war in Ukraine. There may be military spending that is not related to the war (spending on the Strategic Rocket Forces, for instance) and there certainly is much war-related spending that is not connected to the military (the construction of infrastructure and the payment of pensions in occupied Ukrainian regions, for instance).

3.2 Emerging Limitations

In the spring of 2022, the Federal Treasury stopped publishing its detailed data on federal budget spending.[6] It is unlikely that it will resume doing so as long as the war continues, which means that for the time being, it is impossible to use open information to calculate actual Russian military expenditure. Still, until June 2023, the Ministry of Finance (MOF) published data on open budget spending on its "Electronic Budget" website.[7] Using this data, it was still possible to estimate aggregate spending on the "national defence" budget chapter by adding an appropriate amount of residual classified spending to the published open spending.[8] Unfortunately, even this data has ceased to be published. Since July 2023, the MOF has only published the total amount of federal budget expenditure.

As mentioned above, the federal budget laws provide another avenue for studying military expenditure. Here, too, data has been restricted. Some of the documents connected to the budget that were previously available are no longer accessible, or contain less information. In addition, the share of classified spending in the budget has risen. In the 2023 federal budget, 22 percent of the budget was classified.[9] Still, the budget law contains details on planned open expenditures, and aggregate amounts for classified expenditures. By examining the 2023–2025 federal budget law, SIPRI estimated in June 2023 that the Russian government was planning to spend around 4.4 percent of GDP on "total military expenditure" in 2023.[10] However, it has recently become clear that actual military expenditure in 2023 will exceed that figure considerably. In the draft budget law for 2024, the 2023 allocation to "national

[6] Oddly enough, it resumed publishing the reports in August and September 2022, before again ceasing to report.

[7] *Ministry of Finance*, "Electronic budget," www.budget.gov.ru.

[8] For example, during the first six months of 2022, 74 percent of classified spending went to "national defence." Calculating the total classified residual is a matter of subtracting open spending from the total budget spending, which is still published.

[9] Cooper, Julian, "Russia's military expenditure during its war against Ukraine," *SIPRI Insights on Peace and Security,* No. 2023/07, June 2023, p.11.

[10] Cooper, "Russia's military expenditure", p.10.

defence" was almost doubled, from about 5 trillion roubles to 9.7 trillion roubles.[11] Consequently, military expenditure will be much higher in 2023 than the previous year's federal budget law suggested. How much higher it will be is impossible to know.

A more fundamental question is whether Russian economic data and statistics should be trusted at all. This is also an issue that has been debated for decades, not least during the Soviet period. During the last years of the Soviet Union's existence, it became clear that its economists had published statistics selectively for the purpose of downplaying the magnitude of Soviet defence expenditure, thereby deceiving the United States and other Western countries.[12] In addition, the Russian defence sector was so opaque that even insiders were left guessing. As late as 2000, former Russian intelligence officer Vitaliy Shlykov admitted that not even the Ministry of Defence knew the extent of military spending.[13]

The professionalisation of the Russian economic bureaucracy and the gradual integration of Russia into the global economy did much to alleviate the issues with unreliable Russian statistics and bring them to an acceptable international standard. There is no reason to assume, for instance, that budget data regarding military expenditure during Vladimir Putin's and Dmitri Medvedev's tenures as presidents was falsified. It is difficult to falsify such data without undermining the budget-planning process, which would be contrary to the government's interests. However, considering the existential stakes in Russia's ongoing confrontation with the West, which to a significant degree takes place in the economic sphere, it is likely that the government is encouraging or sanctioning the adjustment of certain economic statistics. The government wants to present a favourable image of the economy, downplay the effects of the sanctions, and hide the scale of its military sector, both towards its domestic audience and towards international observers. In the case of the federal budget, the government has simply decided to make it secret to a greater degree than before. This is a continuation of a trend that has been going on for a number of years.[14]

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[11] *Ministry of Finance*, "Poiasnitelnaia zapiska k proektu federalnogo zakona 'o federalnom biudzhete na 2024 god'", https://sozd.duma.gov.ru/bill/448554-8, pp.443–445.

[12] Rosefielde, Steven, "Russian Defence: Economic Constraints and Potential," in Rosefielde, Steven (ed.) *Putin's Russia: Economy, Defence and Foreign Policy* (Singapore: World Scientific Publishing, 2021), pp.202–204.

[13] Quoted in Leijonhielm, Jan, Hedenskog, Jakob, Knoph, Jan, Oldberg, Ingmar, Unge, Wilhelm and Vendil, Carolina, *Rysk militär förmåga i ett tioårsperspektiv: en förnyad bedömning* (Stockholm: Swedish Defence Research Agency, 2000), p.59.

[14] Andermo and Kragh, "Secrecy and military expenditures."

3.3 Pitfalls in Studying Military Expenditure

With the aforementioned limitations in mind, it is useful to consider three potential pitfalls to be aware of when describing Russian military expenditure. The first one concerns the difficulty of assessing what spending is military-related within the Russian budget; the second arises when comparing Russia's military expenditure to that of other countries; and the third is the use of Russian budget laws to forecast future military spending.

The first pitfall, then, is to assume that the "national defence" item in the Russian budget contains all military spending. As described above, there is much military-related spending in other parts of the budget, both open and secret. Given that increasing amounts of the total budget are classified, it is possible that the difference between the "national defence" budget and actual total military expenditure is larger than it was before the war. Consider, for example, the classified spending contained in "expenses for the implementation of non-programme activities" in the 2024 draft budget.[15] This secret budget line has swelled from a 2023 allocation of 873 billion roubles to a 2024 allocation of 7.16 trillion roubles, which roughly corresponds to *two* pre-war "national defence" budgets. There is no way of knowing how this money is planned to be spent, but it would be reasonable to assume that a part of it is related to the war. The increasing secrecy affects both the possibility of assessing aggregate amounts of military spending and of analysing allocations within that spending.

There is also the issue of military spending outside the federal budget. As the costs of war rise, the government is trying to transfer some of the costs to Russia's regions and companies. The proliferation of private military companies (PMCs) is an example of this phenomenon. Estimating how much Russia is spending on these military entities is difficult, since the data is limited. Another consideration is that the Russian economy and society as a whole are becoming more militarised, and the defence industrial complex has been mobilised. This blurs the line between civilian and military activities. For instance, the 2024 federal budget foresees the creation of a new National Project for the production and purchase of drones, costing 45 billion roubles. Ostensibly, the project is for civilian purposes, but drones are a clear example of dual-use products.

Under current conditions, it is therefore difficult, if not impossible, to accurately assess and aggregate actual Russian military expenditure. Leaks of government documents could provide the data for future assessments, but it will be difficult to evaluate the reliability of the data in these documents. The Russian government's attempts to conceal the costs of the war in Ukraine and to transfer the costs to other public, private and unofficial actors means that estimates of military expenditure based on official documents are likely to be underestimates. Using the "national

[15] *Ministry of Finance*, "Poiasnitelnaia zapiska", p. 414.

defence" budget line as shorthand for military expenditure is not a good solution, since it is a drastic underestimation. Analysts, researchers and journalists should instead present plausible ranges of total military expenditure, based on available information. The economist Richard Connolly, for example, estimated that in 2023, Russia will spend anywhere between 8 and 10 percent of its GDP on military expenditure.[16]

A second pitfall arises when one attempts to compare Russia's military expenditure to that of other countries. Two problems are embedded in this pitfall. The first is that Russia's budget is denominated in roubles, and converting the budget to US dollars to allow for international comparisons yields dramatically different amounts depending on what exchange rate is used. The exchange rate of the rouble has become more volatile in the last year. For example, from the summer of 2022 to the summer of 2023, the value of the rouble relative to the US dollar approximately halved. In US dollar terms, then, Russia's military expenditure decreased during this period, but this is exclusively due to exchange-rate effects. Since Russia produces almost all of its military materiel within its own borders, the defence sector is not heavily affected by changes in the rouble's exchange rates.

A second problem with international comparisons concerns the price of military-related goods and labour in Russia. Since raw materials and labour costs are cheaper in Russia than in the West, Russia gets more "bang for the buck" (or rouble, as it were) for its military expenditure. Using estimates of purchasing power parities (PPP) can alleviate this problem. But the fact that Russia's economy is more isolated than before makes it more difficult to compare goods in Russia to goods in other countries, especially in the defence sector.[17] As an example, the Economist's "Big Mac" PPP index, which compares the prices of Big Macs across different countries, is less relevant if said burger is produced by the Russian substitute, "*Vkusno i tochko*," instead of by McDonald's. In addition, as noted above, Russia's economy is becoming increasingly militarised and securitised. The military budget of a militarised and partially mobilised autocracy may have more opportunities to draw on wider economic and human resources compared to a non-mobilised democracy. On the other hand, the increased demand for defence-related goods may lead to inflation in the defence sector. In sum, comparing Russia's military budget with that of other countries, especially democracies, is fraught with difficulties and potential confusion. The difficulties increase in times of war, sanctions, and economic volatility.

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[16] Sebastian, Clare and Ziady, Hanna "The spiraling cost of war means growing economic pain for Russia," *CNN Business*, 28 August 2023, https://edition.cnn.com/2023/08/28/economy/russia-military-spending-economic-impact/index.html.

[17] These issues are discussed in Connolly, Richard, *Russian Military Expenditure in Comparative Perspective: A Purchasing Power Parity Estimate,* CNA Occasional Paper, 10 January 2019, and Ädel, Maria, Johnson, Andreas and Junerfält, Tobias, *Dealing with Defence-specific Purchasing Power: A Discussion and Further Development on Current Methodology,* FOI-R--5209--SE (Stockholm: Swedish Defence Research Agency, 2022).

A third pitfall involves giving too much weight to the figures presented in Russia's federal budget. As discussed above, the allocation for "national defence" in 2023 almost doubled during the course of the year. This discrepancy demonstrates that as long as the war continues, the Russian budget-planning process is no longer a reliable indicator of future spending. The budget process takes place much in the same way it did before the war, creating an appearance of normalcy. However, the needs created by the war have shortened the policy implementation horizon so much that multiyear plans mean little in practice.[18] The 2024 draft budget, for example, foresees lower military expenditure in 2025 and even lower in 2026. These long-term plans do not reflect the political reality in Russia. Even if Russia were somehow able to win the war in Ukraine in 2024 (whatever that means), the government would likely want to keep military expenditures high for years to come in order to replenish and reconstitute its Armed Forces.

Instead, statements by the political leadership provide more information on the direction of the government's economic policy. President Vladimir Putin had already stated in December 2022 that the army would "get everything it asked for."[19] Commenting on the 2024 budget, Finance Minister Anton Siluanov stated that, "the structure of the budget shows that the main emphasis is on ensuring our victory. . . , everything necessary for the front, everything necessary for victory is in the budget."[20]

3.4 Linking Military Expenditure to Military Capability

Converting increases in military expenditure into increased military capability takes years and is dependent on many other factors. One important reason behind FOI's analyses of Russian military expenditure was that it allowed for reflections on how it contributes to the development of military capability in both the present and a ten-year perspective. The 2019 assessment, for instance, presented different projections of possible military spending in 2029 by assuming plausible defence burdens and economic growth rates. The corresponding conclusion was that the most likely scenario was that Russia would incrementally develop and expand its

[18] Luzin, Pavel and Prokopenko, Aleksandra, "Pushki vazhnee vsego. Chto proekt biudzheta –2024 govorit o prioritetakh Kremlia", *Carnegie Endowment*, 29 September 2023, https://carnegieendowment.org/politika/90666.

[19] *President of Russia*, "Zasedanie kollegii Ministerstva oborony", 22 December 2022, http://kremlin.ru/events/president/news/70159.

[20] *Kommersant*, "Siluanov: osnovnoi prioritet biudzheta – obespechenie pobedy Rossii", 28 August 2023, https://www.kommersant.ru/doc/6239580.

military capability up to 2029.[21] This type of analysis, which was done in peacetime, is not relevant as long as Russia is at war with Ukraine. In peacetime, military capability changes slowly; during war, it can change quickly. During war, attrition on the battlefield is simply a much more important factor for military capability than military expenditure, which will be focused on replenishing the losses of the Armed Forces. The present level of Russian military expenditure says something about the financing that goes towards maintaining or replenishing Russia's current military capability, but it says nothing about potential future military capability. Studying a warring country's military expenditure is interesting for other reasons. The defence burden becomes an indicator of the impact of the war on the country's economy and society and the degree of its militarisation. The level of military expenditure will likely be proportional to the intensity and scale of the war. It could also be an indicator of the level of losses sustained during the war and the political leadership's prioritisation of the war. These are important factors in a war of attrition, but they go beyond the analysis of military capability in a strict sense.

3.5 Conclusions

Studying Russian military expenditure using only open sources was never easy, and it has become increasingly difficult. However, it would be a mistake to give up. Researchers and analysts can still infer much from what information is still available, though they will have to accept that it is no longer possible to present precise figures of past military spending. Information on future budget plans of planned military spending is still available and is interesting to study, but should not be taken as reliable indicators of what the Russian government actually will spend. The immediate needs of the war have absolute priority, and these needs are not foreseeable. Studying the level of military expenditure in a country at war has limited usefulness for assessing possible future military capability. It may be more useful to consider the priorities of the political leadership. If they believe that developing, or restoring, military capability is important, they will likely find the means to do so. In addition, analysis of military expenditure can help explain the impact of war on a country's society and assess its resilience and degree of engagement in the war. This is useful for analysing military capability in a broader sense, but it is just one of many important factors.

[21] Oxenstierna, Susanne, "The economy and military expenditure," and Westerlund, Fredrik, "Russian military capability in a ten-year perspective," in Westerlund, Fredrik and Oxenstierna, Susanne (eds.) *Russian Military Capability in a Ten-Year Prespective – 2019,* FOI-R--4758--SE (Stockholm: Swedish Defence Research Agency, 2019), pp.109–110, p.142.

4. Assessing Russia's Defence Industry at War

Tomas Malmlöf

It can already be stated that even if an end to Russia's war against Ukraine is not yet in sight, its enduring and overarching lesson is the scale and magnitude of resources required to fight a contemporary state-on-state war between two equal parties for any period longer than a few days or weeks. Even in the face of decades of efforts to compensate for mass with ever-greater technological sophistication, the stark reality persists: quantity still trumps precision. Mass and attrition remain key elements of warfare, possibly, even the most important.[1]

This war is therefore a reminder that success can only be achieved with a sturdy industrial base and the stockpiles to sustain the fight, as noted by General Sir Patrick Sanders, Chief of the General Staff of the British Army. There need to be plans on how "to reinforce and regenerate the force – for to focus on the first echelon – those troops that will be put into battle at the start of a war – is simply to prepare for failure."[2] As for future wars, another, equally important lesson is the balancing between traditional platforms and next-generation capabilities that are currently being designed, built, and fielded.[3] Although the above remarks by General Sanders were aimed at a Western audience – in particular, at the land forces community, from all of the UK's partners and allies worldwide – they are equally true for Russia and its allies.

In all previous studies conducted by FOI since the late 1990s on Russian military capability, the domestic defence-industrial base has been consistently understood as one of its major elements. This has come naturally, not least because Russia, as the main heir to the Soviet empire, took control over most of the Soviet military stocks of materiel and ammunition as well as most entities of the Soviet military

[1] Michta, Andrew A. "Mass Still Matters: What the US Military Should Learn from Ukraine." *New Atlanticist*, October 3, 2023, https://www.atlanticcouncil.org/blogs/new-atlanticist/mass-still-matters-what-the-us-military-should-learn-from-ukraine/; Norberg, Johan, Ismail Khan, and Jonas Kjellén. "Attrition and Regeneration: Russia's Armed Forces at War." In Engqvist, Maria and Wannheden, Emil (eds.), *Russia's War Against Ukraine and the West: The First Year*, (Stockholm: Swedish Defence Research Agency), 2023, pp.65–76, p.72.

[2] General Sir Patrick Sanders. "Keynote Speech Presented at the RUSI Land Warfare Conference 2023." *RUSI Land Warfare Conference 2023*, https://www.rusi.org/people/land-warfare-conference.

[3] The British Chief of the General Staff, General Sir Patrick Sanders, as quoted in: Kuper, Stephen. "UK Chief of General Staff: Mass Still Critical to Winning the Fight." *Defence Connect*, June 29, 2023. https://www.defenceconnect.com.au/geopolitics-and-policy/12247-mass-still-critical-to-winning-the-fight-uk-chief-of-general-staff.

industry. Russia also retained the strategic focus of its precursor on an independent defence industry capable of producing military equipment across the full range of its military service branches. The importance of the Russian defence industry is furthermore reflected in Russia's military doctrine from 2014. Paragraph 8 of the doctrine defines the defence industry as a constituent part of the military organisation of the state, next to Russia's Armed Forces and other military formations and bodies. The aim of the industry, according to paragraph 52 of the doctrine, is to provide the domestic defence and security sector with modern weapons and equipment, as well as strengthen the Russian strategic presence on the international arms markets.

In recent years, Russia's military-industrial complex has become increasingly shrouded in secrecy, reflecting a broader Russian trend as the country has slipped deeper into autocracy and neo-imperial ambitions under President Vladimir Putin. This incremental development already complicates recent efforts to estimate Russia's military production capacity and predict the future equipment holdings of its Armed Forces. Notwithstanding this evolution, the war against Ukraine is an exogenous shock that has exacerbated these difficulties even further since February 2022, as it has added a new layer of operational secrecy to Russia's already opaque data releases.[4] In addition, as noted by Bettina Renz, Professor at the University of Nottingham, as a site for fieldwork for research on defence and security matters, Russia is today basically inaccessible to Western subject experts, a situation that is unlikely to change any time soon.[5] Lastly, the innermost essence of the war itself in terms of the arbitrary destruction of military equipment, combined with Western sanctions, has made the entire analytical environment much more dynamic and unpredictable as regards Russia's actual military procurement and the status of its military equipment portfolio.

While the war will end one day, which will dampen the volatility and arbitrary unpredictability of the situation post-February 2022, it is highly probable that the opaqueness of matters related to Russia's defence and security sector will survive not only the war but also the Putin tenure. It is thus necessary to reconsider current analytical tools and the methods relied on to study the development within Russia's military-industrial complex, assessing its technological base, output of military systems, military equipment, and ammunition, as well as mapping the defence research infrastructure. Are these still relevant, or do they need to be supplemented with other types of information and other analytical tools and methods?

[4] The term 'exogenous shock' in this context is discussed in Gelman, Vladimir. "Exogenous Shock and Russian Studies." *Post-Soviet Affairs* 39, no. 1-2 (2022): pp.1–9.

[5] Renz, Bettina. "Western Estimates of Russian Military Capabilities and the Invasion of Ukraine." *Problems of Post-Communism*, published online September 12, 2023.

Outline

The remainder of this essay is structured in the following manner. The next section synthesises how the Russian defence-industrial sector was studied in the last two decades up to February 2022. Although this section focuses particularly on studies conducted at FOI, they reflect a broader trend in how Russia's defence industry was researched during this period. The next section analyses the current scope for accessible information and the gaps in our knowledge related to defence-industrial issues and Russian military procurement. The ensuing section compiles some of the new approaches that have emerged within the research field. The final, concluding, section then wraps up and discusses the findings and their implications for further studies.

4.1 Defence-Industrial Studies in Retrospective

The study of Russia's defence-industrial complex had already become an integral part of FOI reports on Russian military capabilities at the inception of the format, in 1998, and has remained so up until February 2022. Although the key approaches in these studies have remained consistent, this has not prevented a certain shift in their centres of gravity over time; this is examined in more detail below. It can thus be said that, to a large extent, FOI reports have kept up with the times, and reflect how this research field developed during this period, as the developments within Russia's defence-industrial sector and procurement system generated new research questions.

The earliest FOI studies of the period focused primarily on the political management of the defence-industrial complex, its financing, sectoral structure, and personnel supply. Additionally, there was also substantial emphasis on Russian military research and development, research and development (R&D), and assessments on whether Russia had the capability to narrow the technological divide with the West. The restructuring of the industry and procurement system that occurred until the early 2010s was frequently regarded in academic discourse as proof of the sector's inefficiency and incapacity to be modernised or reformed. It was widely assumed in the West that Russia had to choose between remaining self-sufficient in 20th-century technology or acquiring high technology from abroad at the cost of increased dependency and less freedom of action for its foreign policy.[6]

The fourth State Armament Programme (SAP), introduced for the period 2011–2020, marked a significant turning point for Russia's defence industry and

[6] Leijonhielm, Jan (ed.), *Russian Military Capability in a Ten-Year Perspective: Ambitions and Challenges in 2008*, FOI-R--2759--SE (Stockholm: Swedish Defence Research Agency), 2009, pp.25–26.

military procurement and development in this regard.[7] In terms of financing and ambitions, this programme dwarfed its predecessors. In addition, the costly development projects for the Russian nuclear triad had come to an end in the early 2010s, allowing even more capital to be allocated to other industrial sectors and conventional arms development programmes. Simultaneously, the restructuring of the defence industry and procurement system seemed to have resulted in increased consolidation of the sector, thereby improving the ability of the industry to contribute to Russian military capability.

As the performance of Russia's defence industry improved in the 2010s, partly due to the aforementioned factors, academic interest shifted towards the industry's production capacity and delivery of military equipment. The questions of when Russia could begin serial production and deployment of modern military systems that were developed after the breakup of the Soviet Union, and of when its dependency on the Soviet technology portfolio could cease, became subjects of much debate. For instance, the 2019 FOI report on Russian military capability in a ten-year perspective deduced that Russia's defence industry would not only consolidate the progress made in equipment recapitalisation under SAP 2020, but also enhance the total equipment holdings for the organisation of the Armed Forces. In the late 2010s, it was not an unreasonable forecast to assume that, within a decade, the Armed Forces would be relying on a combination of Russian fully modern post-Soviet-designed equipment, modernised Soviet systems, and legacy hardware, albeit much of the latter would probably be comprised of equipment stockpiled for long-term storage.[8]

4.2 Emerging Limitations for Defence-Industrial Studies

The exogenous shock of Russia's invasion of Ukraine in February 2022 made obsolete all previous predictions on Russia's future military portfolio or the status of its defence-industrial complex towards 2030 or beyond. Simultaneously, these issues lost their relevance compared with the new and more urgent task of evaluating the industry's short-term capability to deliver sufficient military equipment and ammunition to ensure that the Armed Forces can continue to fight and somewhat begin to restore the stocks of equipment and ammunition for the post-war period. It is therefore highly likely that the Russian military equipment portfolio in 2030

[7] In Russian: *Gosudarstvennaia programma vooruzheniia*, GPV.

[8] Malmlöf, Tomas and Engvall, Johan, "Russian Armament Deliveries", in Westerlund, Fredrik and Oxenstierna, Susanne (eds.) *Russian Military Capability in a Ten-Year Perspective – 2019*, FOI-R--4758--SE (Stockholm: Swedish Defence Research Agency), 2019, p.120, pp.122–127.

will differ significantly from the proposals outlined in SAP 2027, or from the best guesstimates of Western analysts.

One method of assessing the current scope of information accessible for investigating Russia's military-industrial complex, military R&D, and procurement in autumn 2023 is to organise a Rumsfeld Matrix consisting of four categories of known or unknown knowns and unknowns.[9] An example of how this can be done is outlined below in the remainder of this section.

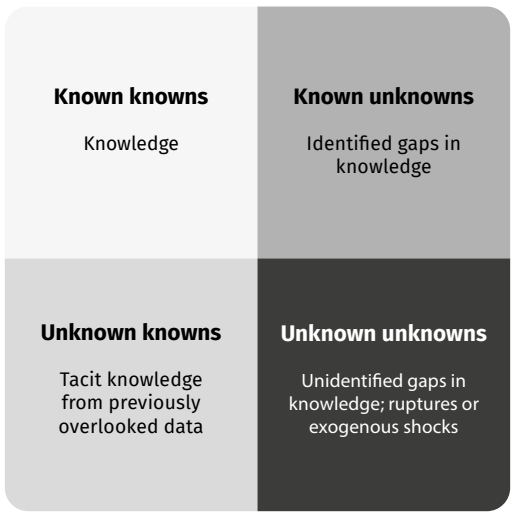

Figure 4.1 The Rumsfeld Matrix.

Known knowns

The known knowns are identified facts or variables that are the underpinnings of our knowledge. To this group belong, for instance, the overall defence-industrial structure, including its R&D entities (last published openly in 2015), as well the lists on Russia's strategically important companies that have been published later. Basic register information on most companies can be obtained from the open registers of the Russian Tax Inspection. Company websites can sometimes provide additional information, but they should be considered a biased source.

Other known knowns are data on deliveries of larger military platforms and equipment and, more infrequently, on procurement contracts. Until 2020, this information was deliberately released to the public, after which it has become

[9] In 2002, the then US Secretary of Defence, Donald Rumsfeld, gave a press briefing on the Iraq War, where he categorised information into four main groups: known knowns, known unknowns, unknown knowns, and unknown unknowns. These distinctions subsequently formed the foundation of what has popularly become known as the Rumsfeld Matrix, a decision-making framework used to map and evaluate varying degrees of certainty and uncertainty.

occasional. Since then, it appears that only data from the annual editions of the International Institute for Strategic Studies (IISS) publication, *The Military Balance*, remain, although it does not disclose its sources. The joint government website for public procurement contains systematic information on Ministry of Defence procurement. However, most reported contracts are of a civilian nature and do not reveal much about Russia's military acquisitions. It also appears that Russia has now restricted the ability to access this information from abroad. As for Russian arms export, the SIPRI Arms Transfers Database includes data on Russian arms export with data for the last year reported.[10]

Known unknowns

The identified gaps in our knowledge that we are aware of represent the realm of the known unknowns, of which there are ample. Russia's true defence-industrial production capacity, the impact of sanctions, as well as its advances in military technology and R&D belong to this category. Other data that have always belonged to this group indicate how much of Russia's stored equipment is actually usable and suitable for restoration or modernisation of their combat capability. The impact of corruption within the defence-industrial complex and within the procurement system also fit in here.

Due to Russia's own current political trajectory and the uncertainties of the war, this category currently expands while data dries up. An example of a relatively new known unknown, not particularly related to the war, is the increasing exemptions for defence entities from the mandatory disclosure of certain financial and company data that all public and non-public joint-stock companies are obliged to disclose. Another example is the number of units specified in new procurement contracts, or the number of units of a specific system that have been delivered to the Armed Forces. Russia used to make such information public to a certain extent. These days, however, these figures are usually released, at best, in percentages of an absolute quantity or as batches; both are methods of concealing the true scale from the general public.

The current fighting, the magnitude of the attrition of equipment and the usage of ammunition, along with the ultimate outcome of the war, are known unknowns by themselves, but they also generate several war-related known unknowns of importance to the Russian defence-industrial complex, military R&D and procurement. Among these, for example, are probable changes to the current SAP and the State Defence Orders (SDO), which collate all military procurement and R&D contracts between the principal defence-industrial contractors and the MoD on

[10] As the Russian export value in 2020–2022 had shrunk, on average, to half the value for the period 2015–2019, there is nevertheless a need for a more thorough analysis of the causes of this trend. This, however, is beyond the scope of this study.

a yearly basis.[11] It is not unthinkable, for instance, that the war forces a reorientation of the focus of the military-related R&D, at least for the short term, to better respond to the most urgent needs of the warfare in Ukraine.

Perhaps the greatest known unknown, and the most urgent to unravel for Ukrainian and Western analysts who use and rely on open sources, is the current production capacity of the Russian defence-industrial complex. Russian grandstanding on its defence-industrial capacity and obfuscation of realistic production timelines and current phases of various R&D processes have long been integral parts of Russian strategic communication. It has usually been possible to take these biases into account in a research-driven analytical process, and to use the most reliable data points to fill in some of the gaps. A number of factors related to the war now further complicate the picture of Russia's current production capacity.

First, it is probably correct that Russia has indeed mobilised its factors of production to increase its output of military goods, and that this has provided some tangible results. At the same time, it is difficult to verify the magnitude of the increased production of military systems and munitions claimed by Russia. It continues to present some of these increases as percentages of earlier outputs of undisclosed magnitudes and those absolute figures that it does account for appear to be unrealistically high when compared to previous peacetime data and assessed timelines for expanding production.

Second, despite reservations from Russia's political leadership, and in some cases even without its knowledge, Russia's defence industry made itself dependent on global production chains in order to meet increased demand. This trend has persisted for the last two decades, if not longer. The opening to the global market encompassed cutting-edge production technology to update obsolete manufacturing facilities, along with Western inputs such as semiconductors, electronics, and other subcomponents to modernise outdated military systems and develop new ones. Not least due to ongoing battlefield forensic studies in Ukraine, the extent of this dependency on Western technology and high-tech products has now becoming increasingly apparent.[12] This is proof that the targeted sanctions have indeed had a negative impact on industrial output, although its magnitude remains a known unknown.

Unknown knowns

Unknown knowns are data that are available and accessible in principle, but which we did not realise we knew or could access. They are facts, sometimes tacit, whose significance has been previously overlooked, neglected, or dismissed, as irrelevant

[11] In Russian: *Gosudarstvennyi oboronnyi zakaz*, GOZ.

[12] See further Malmlöf, Tomas, "Russia's Defence Industry at War: Can it Live Up to Expectations?", in Engqvist, Maria and Wannheden, Emil (eds.), *Russia's War Against Ukraine and the West: The First Year*, (Stockholm: Swedish Defence Research Agency), 2023, pp.100–101.

for the specific research task at hand. The purpose of exposing the unknown knowns is to access concealed knowledge that could improve our comprehension. This group has therefore become more important for research on the Russian defence-industrial sector, military R&D, and procurement as our conventional supply of known knowns shrinks and our stock of known unknowns increases.

In this regard, for instance, there remains, fortunately, a significant corpus of sources to be revisited and systematically collated, including more thorough readings of past company annual reports, official statements, and published development programmes pertaining to the defence-industrial sector or affiliated industries. These sources were easily overlooked in the past, with its more tangible, down-to-earth focus on development, procurement and deployment of arms platforms and systems. Properly used, however, they could still bring some answers to the more fundamental and in-depth research questions about the political economy of the entire defence-industrial sector or its sub-branches, the industrial organisation, structure and design of the Russian defence market, that is, the very fundament of Russia's defence-industrial production and R&D. If nothing else, such a mapping of the fundamentals would increase our understanding of this industrial sector, which, at best, would help researchers to produce better assessments and forecasts about its performance.

Crucial, supplementary information can also be searched for elsewhere. For instance, data from subcontractors to the defence industry, such as the steel industry or chemical industry, can provide information on defence-industrial demand on inputs. Other, potential sources of information that might be worth considering are websites for professional organisations and networks, job search and job advertising sites, social media, and so on.

Unknown unknowns

The unknown unknowns are the factors we are unaware of and therefore cannot foresee. They represent the most significant sources of uncertainty – the ruptures, the black swans, or the exogenous shocks. In spite of Russia's annexation of Crimea and its covert war in the Donbass, which were nevertheless some years before Russia's full-scale invasion of Ukraine, the scale of its eventual invasion was an unknown unknown. Examples of theoretically thinkable future unknown unknowns with a likely impact on Russia's defence-industrial sector might be, for instance, either a sudden end to the war or its expansion to other countries, a major technological

breakthrough in Russia or in the West, or a serious or profound collapse of Russia's political or economic system.

4.3 Emerging New Approaches to Studying Russia's Defence-Industrial Base

The war has increasingly become a showdown between Russia and the collective military-industrial production capacity of Western countries. The determination of Western countries to support Ukraine, both politically and through military supplies, is a critical factor for the outcome of the conflict, not least because Russia seems committed to sustaining its aggressive stance and is now mobilising its economy for a prolonged war. According to official statements and after a somewhat hesitant 2022, Russia allegedly multiplied its production of the most critical systems and artillery shells under 2023. Due to the impossibility of verifying these figures, the need for dependable economic intelligence has become increasingly essential, prompting the development of novel analytical techniques. The following compilation presents a selection, without attempting an exhaustive list, of new methodological approaches that have arisen in the research field since the beginning of hostilities in February 2022.

Digging Into Battlefield Forensics

How dependent is Russia on Western components and defence technology? While it was widely acknowledged prior to February 2022 that Russia's defence industry employed Western electronics and components for modern weaponry, it was only with the help of battlefield forensics that the true extent of this practice could be revealed following the invasion, highlighting the scale and scope of the issue.

Some of the organisations using this kind of field investigation in their reports about the war are the British Royal United Services Institute, RUSI, and the Conflict Armament Research organisation, CAR, which is specialised in working within this area. Besides highlighting the centrality of foreign technology to Russian advanced equipment, these investigations have also provided solid proof of some of the leakages of the current sanctions regimes, and they have also shed some light on Russia's shrinking stockpiles of advanced missiles.[13]

[13] Malmlöf, Tomas, "Russia's Defence Industry at War: Can it Live Up to Expectations?" in Engqvist, Maria and Wannheden, Emil (eds.), *Russia's War Against Ukraine and the West: The First Year*, (Stockholm: Swedish Defence Research Agency), 2023, pp.97–107.

Analysing Satellite Photos

How much equipment is left in Russia's reserve? The development of space technology in recent decades and the increasing commercialisation of the space sector have led to increased access by nongovernmental organisations to satellite imagery that was previously the exclusive domain of government agencies, either because of high costs or because the images were considered to contain classified information. This trend has led various actors, including established entities such as the media and security-policy analysts, as well as previously unknown and inexperienced parties, to utilise satellite data accessible from tools such as Google Earth or from satellite-photo providers, such as SkyFi, Maxar Technologies, or Planet Labs, for scrutinising different aspects of the conflict between Russia and Ukraine.

In addition to the opportunity to track the ongoing conflict in near real-time and achieve various other objectives with satellite imagery that is either free or purchased at a modest cost, this approach has also been leveraged by multiple actors to estimate the turnover of Russia's stockpiled tanks at its Central Tank Reserve Bases and military-equipment storage and repair bases.[14] For this use, the methodology has drawbacks, such as not knowing the intended use of the remaining stockpiles, for instance, yet it should provide a reasonable estimate of the remaining number of stored tanks and the rate at which they are being refurbished or modernised for service in Ukraine.

Analysis of satellite imagery has also been used to monitor Russia's expansion of its production capacity in the defence industry. For instance, Radio Liberty has reported on the completion of new production halls at the Kazan and Irkutsk Aviation Plants, the Ural Civil Aviation Plant, the Dubnyansky Machine-Building Plant, and Kronstadt.[15]

[14] See, for instance, Mykhaylenko, Ihor. "Analiz zapasiv tankiv RF na bazakh zberihannia za Uralom". *Militarnyi*, August 22, 2022, https://mil.in.ua/uk/blogs/analiz-zapasiv-tankiv-rf-na-bazah-zberigannya-za-uralom/ or Covert Cabal. "How Many of Each Type of Tank Does Russia Have In Storage?" *YouTube*, uploaded April 7, 2023. https://www.youtube.com/watch?v=2PHUK6zkbpc or "Rossiia napolovinu opustoshila krupneishii sklad sovetskoi bronetekhniki". *The Moscow Times*, August 7, 2023, https://www.moscowtimes.ru/2023/08/07/rossiya-vivezla-pochti-polovinu-bronetehniki-s-krupneishei-bazi-hraneniya-a51229.

[15] Ovsyanyi, Kirill. "«V tri smeny». Sputnikovye snimki pokazyvaiut, chto Rossiia rasshiriaet voennye zavody po vsei strane". "'In three shifts'. Satellite images show Russia expanding military factories across the country"; *Radio Liberty (Krym.Realii)*, October 26, 2023, https://ru.krymr.com/a/zavod-sputnik-voyna-rossiya-oboronka/32655359.html.

Comparing Figures on Industrial Output with Turnover and Input Industries

How much have Russia's defence-industry production volumes increased since the start of the war? Despite Russian claims that the defence industry is now working three shifts, seven days a week, with the production of certain systems allegedly increasing several times over, in some cases even exponentially, it is difficult to find circumstantial data supporting these claims. Dr. Pavel Luzin of the Jamestown Foundation has compared what is known about Russia's national-defence spending with published industrial data on manufacturing output for industries related to arms manufacturing. According to these comparisons, a significant part of the formally growing manufacturing output indexes in Russia are due to increased costs as opposed to true growth in material output. Additional data from the state-owned corporation, Rostec, the biggest arms manufacturer in Russia, also indicate a significant increase in cost-plus inflation within the Russian military-industrial complex.[16]

Exploring the Manufacturing Facilities

How dependent is Russia on Western production technology? The buildup of Russia's defence-industrial base in the 2000s and 2010s was largely based on massive imports of advanced machine tools from the U.S. and its European and East Asian allies, as by then the technological levels and business models of Russian domestic machinery builders were hopelessly outdated.[17] The significance and scale of this modernisation of the defence-industrial machine park has often been poorly understood and thus overlooked, despite being the Russian defence industry's major Achilles' heel.

Despite the high level of clandestinity surrounding Russian defence-production facilities, the analyst company, Rhodus, has managed to develop a laborious but effective method to circumvent this secrecy and map the manufacturing base of several key companies. The aim is to identify the chokepoints and supply chains of the entire defence industry. The methodology developed by Rhodus is based on visually identifying the manufacturers of the machine tools that the defence companies use in their production by analysing filmed footage from Russian TV channels as well as company videos used in their marketing. This information is further supplemented by, for instance, data on public tenders, vacancy listings and work resumes from job-search websites.[18]

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[16] Luzin, Pavel. "Russian Arms Production Q2 2023." *Eurasia Daily Monitor* 20, No. 126. The Jamestown Foundation, https://jamestown.org/program/russian-arms-production-q2-2023/.

[17] See, for instance, Malmlöf, Tomas. *The Russian machine tool industry – Prospects for a turnaround?* FOI-R--4635—SE, (Stockholm: Swedish Defence Research Agency), 2019.

[18] Galeev, Kamil, et al. "How does Russia make missiles? Teaser: The Votkinsk Plant." *Rhodus Intelligence Report*, 2023, https://rhodus.substack.com/p/how-to-make-an-iskander.

Looking for Anomalies in Customs Data

How effective are the sanctions against Russia and, in particular, its defence industry? It is a well-established fact that the impact of sanctions tends to diminish over time as the affected country attempts to adapt; it is usually a cat-and-mouse game between sender countries and target countries.[19] In Russia's case, it has the entire Soviet experience of sanctions to fall back on, and it has worked hard to replace its previous cooperation with Western partners with import substitution, grey import from third countries, and contraband dual-use and military inputs in order to mitigate its current plight. What is additionally noteworthy is that Russia is involved in cooperation with other states that also have extensive backgrounds of experiencing sanctions, notably North Korea and Iran.[20]

Foreign-trade data is the primary tool for monitoring Russian techniques of evading Western sanctions. As Russia has ceased publishing this type of statistics, analysts are using trade data from nations that trade with Russia as a proxy. Of particular interest are the newly emerging trade patterns, in which certain countries are increasing their imports of war-related materials or dual-use products from countries that have already banned their export to Russia due to the imposed sanctions. This suggests that there is a leakage inherent in the sanctions regimes.

Building Models

How long can Russia keep on fighting, and how fast can it rebuild its stocks of military equipment and ammunition? As Putin's envisaged *blitzkrieg* evolved into a prolonged war of attrition, Russia's industrial base and military stockpiles received increased attention, being the primary facilitators of its ongoing war efforts. If it had been possible with some certainty to determine the size of the Russian stockpiles, the production capacity of the industry, and the attrition of equipment and ammunition in Ukraine, it would have been possible to estimate how long Russia could sustain its war. However, the reality is much more complex. Reliable information on quantities, such as the number of stored units and industry production, is lacking. Figures on material destruction and ammunition consumption are intrinsically dependent on the built-in dualist logic and dynamics of warfare. In addition

[19] This terminology is borrowed from Connolly, Richard. "Sanctions and Political Economy." In *Russia's Response to Sanctions: How Western Economic Statecraft is Reshaping Political Economy in Russia*, pp.9–29, Cambridge, Cambridge University Press, 2019.

[20] See, for instance, Keatinge, Tom. "Developing Bad Habits: What Russia Might Learn from Iran's Sanctions Evasion." *Royal United Services Institute (RUSI) Occasional Papers*, June 6, 2023. https://www.rusi.org/explore-our-research/publications/occasional-papers/developing-bad-habits-what-russia-might-learn-irans-sanctions-evasion.

to being dependent on what the combatants themselves choose to report, these figures might vary greatly over time, making it difficult to use them in forecasts.

One approach to overcome these constraints could entail the use of available data along with supplementary assumptions in order to construct numeric models for various potential scenarios. The author used this approach in a previous FOI report on Russia's war against Ukraine to assess potential constraints on Russian manufacturing of main battle tanks and artillery ammunition via basic linear extrapolation.[21] While the results of the models should not be mistaken for the actual, yet unknown, reality, they still allow for certain deductions about Russia's defence industry's capability to aid in its wartime operations and, in this respect, the importance of its military-equipment stockpiles.

4.4 Conclusions

In hindsight, a substantial proportion of Western studies on Russia's defence industry failed to recognise the importance of the methodical and gradual reconstruction of the defence-industrial infrastructure and factors of production on which Russia has devoted considerable resources over the past two decades. Therefore, a significant amount of time has been wasted, which could have been used to prepare for countering Russia's reconstruction of its defence-industrial capability. Additionally, more detailed identification and study of the relevant areas and aspects of the industry for its long-term development and contribution to Russian military capability should have been conducted when data was more accessible.

As access to Russian primary data is unlikely to improve in the near future, significant methodological development and experimental work may be necessary to ensure the relevance of research on Russia's defence industry and procurement for further analyses of Russian military capability. Some of the new and innovative methodological approaches presented above are aimed at circumventing Russia's progressive securitisation of its defence-industrial sector or mitigating the analytical uncertainties that emerge from Russia's ongoing war against Ukraine. They are, thus, primarily focused on rolling back our known unknowns.

To make further progress, it is nevertheless also imperative to start addressing the unknown knowns. Battlefield forensics or the painstaking effort to map out the manufacturing facilities of the Russian defence-industrial complex as outlined above are prime illustrations of how piecing together isolated fragments of data from diverse sources can lead to new discoveries. When combined, these fragments can assemble a fascinating and informative picture of a subject. For context, during the aftermath of World War II, the United States and the United Kingdom compared their war estimates of German production data with actual production

[21] Malmlöf, Tomas. "Russia's Defence Industry at War: Can it Live Up to Expectations?" in Engqvist, Maria and Wannheden, Emil (eds.), *Russia's War Against Ukraine and the West: The First Year*, (Stockholm: Swedish Defence Research Agency), 2023, pp.97-107. 2023.

figures from the German Industrial Ministry under Albert Speer. They then discovered that analysing serial and manufacturing markings on enemy equipment was a more effective method than reconciling disparate reports from prisoners of war, basing production estimates on pre-war capabilities, or forecasting production trends based on estimates of resource use in the enemy country.[22]

Properly used as complements to existing methods, the alternative approaches discussed in this essay might be helpful in our attempts to gain a better understanding and knowledge of Russia's defence industry and to get a better grasp of its actual and likely future contribution to Russian military capability.

In the absence of Russian primary data, it is thus probable that a range of interdisciplinary methods, both new and established, will have to be used in parallel to investigate the Russian defence industry and procurement in the years to come. This work might also involve using new working tools, such as software for design and construction of database models over Russia's defence-industrial complex, arms systems and subcomponents, known procurement contracts and actual deliveries; software for data harvesting of social media and websites; or satellite photographs for temporal analyses and interpretation. It might also include exploring new types of sources, such as the use of decentralised data from Russia's regions, instead of data from the federal level.

Consequently, we might expect that the entire research process will become more resource-intensive and time-consuming to make up for the time lost when Russia's defence industry was more accessible and it was possible to discuss the developments with Russian researchers and analysts on the ground in Russia. Additionally, there will be a need for greater innovativeness and risk-taking to test new approaches and apply indirect methods that might or might not generate knowledge.

In this more demanding environment, it will be necessary to build robust internal and external research networks to exchange ideas and experiences. In the longer term, this could lead to closer cooperation towards a greater division of labour and specialisation in certain sub-areas, as well as increased data-sharing.

The research field could benefit from greater exchange of information with defence industries and supervisory authorities outside Russia. Such cooperation would create a better understanding of generic problems and issues within the defence-industrial sector. If Ukrainian experience is still considered a relevant proxy and source of knowledge for the Russian defence industry, the defence-industrial complex in Ukraine could provide valuable insights into the specific challenges faced in the post-Soviet era.[23]

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[22] Ruggles, Richard, and Brodie, Henry. "An Empirical Approach to Economic Intelligence in World War II." *Journal of the American Statistical Association*" 42, No. 237 (1947), pp.72–91.

[23] In accordance with the research policy established by FOI's Ethics Council, the author hereby declares that AI tools have been used to help produce this text (ChatGPT 3.5 and DeepL), mainly for the purpose of formatting footnotes and rudimentary language editing.

5. Studying the Neighbours of a Russia at War

Kristina Melin

A central driving force behind the Russian invasion of Ukraine, both in 2014 and in 2022, has been Russia's striving for a "sphere of influence." Its objective is to exert a level of control over the foreign and security policy orientations of neighbouring states, to prevent their integration into Western structures. Moscow expresses the same ambition towards many of the countries in the area of the former Soviet Union. Yet because of Russia's aggression against Ukraine, several of the countries of the former Soviet Union are moving further away from association with Russia. The reactions of Russia's neighbours to the war have underlined that its post-Soviet neighbourhood is less cohesive and tied to it than Moscow would wish. There is an obvious tension between Russia's enduring claims to influence and the drive of neighbouring countries to stake out a different path. At worst, this trend could once again fuel Russian aggression. A new regional security landscape is emerging, revealing the agency of the region's constituent states as they continue to diversify relations and deepen cooperation with other partners. Change is fast-paced and outcomes uncertain. For the neighbours, there are risks of new dependencies, instability, and conflict. Belarus is the exception. Its traditional balancing foreign policy has ended, and Russia's dominance is undermining Belarusian sovereignty. Yet Belarus' military importance to Russia is increasing. The neighbourhood is in a process of change – fast, unpredictable, and potentially profound.[1]

Aim and Scope

The aim of this essay is to explore which issues will be important to follow when studying Russia's neighbourhood as the ramifications of the war in Ukraine unfolds. The emphasis lies on the countries' relationship with Russia and on emerging security risks. The text deals with neighbouring countries towards which Russia's claims of influence are most clearly expressed, excluding Ukraine. These are Belarus, Moldova,

[1] Melin, Kristina; Engvall, Johan; Khan, Ismail, "Shifting balances: The war and Russia's neighbours," in Engqvist, Maria and Wannheden, Emil (eds.), *Russia's War against Ukraine and the West: The First Year*, FOI-R--5479--SE, (Stockholm: Swedish Defence Research Agency), 2023, pp. 45–64.

Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. Special attention is paid to Belarus due to its importance in the war.

First, I consider how the Russia and Eurasia Studies Programme at FOI studied Russia's influence over its neighbours before the war and how that focus needs to adjust. Next, I discuss the need to examine the neighbours themselves in greater detail, especially in matters of security. The subsequent section grapples with issues raised not only by Belarus's military importance to Russia, but also the necessity of continuing to view Belarus as a separate country, at least analytically. The final section deals with the question of the source material available for the study of Russia's neighbours. The conclusion summarises the points made.

I argue that Russia's neighbours should, to a greater extent than before, be studied in their own right. This is key to understanding the current changes and challenges in the region. However, I also maintain that it remains important to consider how Russian influence over its neighbours develops, as this will shape the policies both of the neighbours and Russia. Admittedly, there is a certain tension between studying Russia's neighbours as, on the one hand, subjects in international affairs and, on the other, as objects of Russian ambitions. However, as I show, it is important to do both.

5.1 Studying Russia's Influence Before and After 2022

Several iterations of FOI's series, *Russian Military Capability in a Ten-Year Perspective*, include a consideration of Russia's efforts to exert influence over its neighbours, as part of the larger analysis of Russian foreign and security policy. This analysis has predominantly, although not exclusively, focussed on Russian regional integration projects, such as the Collective Security Treaty Organisation (CSTO), the Commonwealth of Independent States (CIS), the Eurasian Economic Union (EEU), and Russian bilateral security cooperation, its military footprint, and role as security provider and arbitrator.[2] As such, emphasis has rested on how Russia exerts influence, and less on how Russian influence is received among its neighbours.[3]

While this focus enabled a detailed understanding of Russia's means and objectives for exercising influence, it made it harder to appraise trends and processes in the countries on the receiving end of its ambitions. In contrast, and as an exception to that prevailing approach, the FOI report, *Russia's War Against Ukraine*

[2] See, for example, Hedenskog, Jakob and Persson, Gudrun, "Russian security policy," in *Russian Military Capability in a Ten-Year Perspective – 2019*, FOI-R--4752--SE (Stockholm: Swedish Defence Research Agency), 2019, pp. 79–96.

[3] However, besides the RMC, other FOI reports have studied the neighbours in detail and taken their responses and reactions to Russian influence into greater consideration. See, for example, Hedenskog, Jakob, *Endgame Belarus? Union State Integration under Pressure*, FOI-R--5181--SE (Stockholm: Swedish Defence Research Agency), 2021.

and the West: The First Year, analysed Russian influence from the perspective of its neighbours. In particular, it asked whether these states had changed their foreign and security policy towards Russia and its traditional vehicles of influence, such as regional organisations, or its military presence and cooperation, since the outbreak of full-scale war. It also considered whether the neighbours explored other partnerships as an alternative to Russia. The analysis underlined that Russian regional influence depend not only on its efforts to exert it, but also on how the neighbours responded to it.[4]

In the future, it will be necessary to apply both perspectives to the study of Russian influence. In one sense, turning the perspective towards the neighbours helps expose the diversity and agency of a group of countries that are too often denoted as Russia's "backyard." Indeed, as shown in the report *Russia's War Against Ukraine*, while the Moldovan government interpreted Russian leverage as an immediate security threat, other states in the region still viewed Russia as a partner, albeit a more burdensome associate after having started its war. In fact, economic relations between Russia and many of its partners have increased.[5] In another sense, it would be a mistake to suspend the study of the means and objectives of Russian influence. Russia will doubtless continue to project considerable power on several of its neighbours in the coming years. Regional authority remains a political priority for the Kremlin and its influence will remain a constraining factor for the security and foreign policy choices of some of its neighbours.[6]

Emerging issues

Both the FOI reports on Russian military capability and *Russia's War Against Ukraine* focused mainly on the patchwork of security cooperation agreements with Russia, as well as Russian military presence and the participation in Moscow-led regional organisations across these ten countries. How these factors develop will remain a central indicator of Russia's influence and whether other powers might replace it. However, the war also necessitates a new focus on other indicators for assessing Russia's changed and changing regional position. Below, I discuss three such indicators: diasporas; trade patterns and, especially, arms sales; and sanctions.

While Moscow has traditionally viewed the Russian diaspora as a means of influence beyond its borders, this may not be true for the current wartime émigré community. According to one estimate, published in The Economist, between 817,000 and 922,000 people left Russian between February 2022 and July 2023, many settling in Kazakhstan and Georgia. Other estimates indicate a wider range,

[4] Melin; Engvall; Khan, "Shifting balances."

[5] Ibid.

[6] *President of Russia*, "Kontseptsiia vneshnei politiki Rossiiskoi Federatsii", adopted by Presidential Decree No. 229, 31 March 2023, http://kremlin.ru/events/president/news/70811, §49.

as discussed in Chapter 2. It is unknown how many have since returned.[7] It remains to be seen whether this diaspora, having left Russia largely in opposition to state policies, will play a political role in the host countries, potentially influencing their relations with Russia. So far, the inflow has caused noticeable irritation in Georgia, where considerable parts of the population are already at odds with their government's cautious Russia policy.[8] Tensions over the diaspora may increase if Russian authorities implement the recently adopted law on electronic call-ups of reservists for military service, which would more readily target Russians living abroad in the neighbouring countries.[9]

Connected to this issue is the question of the reverse flow, the Central Asian diaspora in Russia, whose remittances contribute significantly to the Central Asian economies, especially those of Kyrgyzstan and Tajikistan. The economic importance of this community will continue to provide Russia with leverage towards these countries, and the scope of labour migration might well increase as the labour shortage in Russia deepens during the war.[10] Meanwhile, it is also becoming a contentious issue. Russian authorities have reportedly recruited Central Asian labour migrants to fight in Ukraine, which for the citizens of Kazakhstan, Kyrgyzstan, and Uzbekistan is illegal. Russia has pressured Kyrgyzstan to reverse the conviction of a Kyrgyz citizen who fought for Russia in Ukraine.[11] How these factors develop will affect relations between Russia and its neighbours.

As noted in the *Russia's War Against Ukraine*, Russia has become more dependent on its neighbours, not least Azerbaijan and Georgia, as trade routes are redrawn amid Western sanctions. It will be important to monitor how changing economic patterns may translate into political reprioritisation; Russia's altered policy on the Nagorno-Karabakh conflict, in Azerbaijan's favour, might already provide some indication. Conversely, many of its neighbours have relied on Russian arms exports to equip their militaries. They will now need to seek new suppliers, as Russia concentrates its military-industrial complex on the needs of its wartime front. This process is already underway in Armenia and Tajikistan. This will lessen Russia's

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[7] *The Economist*, "Russians have emigrated in huge numbers since the war in Ukraine," 23 August 2023, *https://www.economist.com/graphic-detail/2023/08/23/russians-have-emigrated-in-huge-numbers-since-the-war-in-ukraine*.

[8] Kucera, Joshua, "'Ruzzki not welcome': The Russian exiles getting a hostile reception in Georgia," *The Guardian*, 8 August 2023, https://www.theguardian.com/world/2023/aug/08/ruzzki-not-welcome-the-russian-exiles-getting-a-hostile-reception-in-georgia.

[9] *TASS,* "Putin podpisal zakon ob elektronnykh povestkakh dlia voennoobiazannykh," 14 April 2023, *https://tass.ru/armiya-i-opk/17530807*.

[10] Engvall, Johan, "Russia's Menu of Manipulation in Kyrgyzstan," *The Central Asia-Caucasus Analyst*, 27 November 2023, pp. 6–7, https://www.cacianalyst.org/resources/231127_FT_Kyrgyzstan_Engvall.pdf.

[11] Rickleton, Chris, "Kyrgyzstan Facing 'All Possible' Pressure From Russia After Jailing Citizen Who Fought In Ukraine", *RFE-RL,* 7 August 2023, https://www.rferl.org/a/kyrgyzstan-soldier-russia-war-prison/32538119.html.

primacy in the regional security architecture, but may also create new dependencies for the countries at hand.[12]

Most of Russia's neighbours have stated that they will not become a platform for evading Western sanctions. Nevertheless, considerable "ghost trade," that is, when goods in transit through Russia in fact end up on the Russian market, and re-export of Western goods seemingly occurs through Central Asia and the South Caucasus.[13] Researchers have concluded that informal networks play a significant role in sanctions evasion in Georgia and Kazakhstan, with authorities turning a blind eye. To monitor the development with a mind to closing loopholes, analysts need to go beyond the examination of official communication and consider the role of organised crime.[14] They also need to consider what Russia may be learning from other states with experience of evading sanctions, such as Iran.[15]

5.2 Focus on the Risk of Conflict and Instability

As Russia's ability to project power and act militarily in the region decreases due to attrition in Ukraine, latent border friction may flare up or frozen conflicts may reheat, sparking a new and unforeseen course of events. The Azeri advance in Nagorno-Karabakh, in September 2023, or the clashes between Kyrgyzstan and Tajikistan, in September 2022, are instructive examples. Plans for a Russian naval base in Abkhazia, the Georgian breakout territory, have raised alarm in Tbilisi.[16] These regional tensions easily fall beyond the spotlight beside the war in Ukraine. To better gauge the risk and consequences of regional instability, there is a need for deeper understanding of Russia's neighbours, in and of themselves.

In particular, it will be pertinent to study the approach taken by the Moldovan and Georgian governments to the frozen conflicts on their territories. On the one hand, Russia's military overreach may create conditions where Moldova and Georgia can re-establish central control over Transnistria and South Ossetia and Abkhazia, respectively. On the other, Russia may attack or destabilise another former Soviet neighbour. The Kremlin has issued threating statements to Moldova, calling it

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[12] Melin; Engvall; Khan, "Shifting balances."

[13] *Radio Svaboda*, "FT: pri tranzite cherez Rossiio "ischezli" tovary iz ES na 1 mlrd dollarov," 11 May 2023, https://www.svoboda.org/a/ft-pri-tranzite-cherez-rossiyu-ischezli-tovary-iz-es-na-1-mlrd-dollarov/32405969.html.

[14] Kupatadze, Alexander; Marat, Erica, Under the Radar: How Russia Outmanoeuvres Western Sanctions with Help from its Neighbours, *Serious Organised Crime & Anti-Corruption Evidence Research Programme,* University of Birmingham, August 2023.

[15] Keatinge, Tom, Developing Bad Habits What Russia Might Learn from Iran's Sanctions Evasion, *RUSI Occasional Paper*, Royal United Services Institute, London, 2023.

[16] Seskuria, Natia, "Is Russia Expanding its Battlefront to Georgia?" *Royal Unites Services Institute*, 23 October 2023, https://www.rusi.org/explore-our-research/publications/commentary/russia-expanding-its-battlefront-georgia.

"anti-Russia," something they have also said of Ukraine.[17] The risk of aggression will persist as long as the Kremlin continues on its current political path, although it is dependent on Russia's ability to reconstitute its forces.

Ukraine's ability and will to resist the Russian invasion in 2022 surprised many. Analysts had failed to study the process of national consolidation, together with extensive military reforms, which occurred between 2014 and 2022.[18] Western analysts need to avoid making the same mistake about countries that may yet become targets of Russian aggression. There should be a renewed analytical focus on the military capability, security policies, and civilian resilience of Russia's neighbours who are at risk. As Norberg and Kjellén notes in Chapter 1, an assessment of military capability is useful only if measured against the capabilities of a specific opponent. An opportunity to harvest low-hanging fruit would be to produce an update of earlier FOI studies on defence-sector reform in the countries neighbouring Russia.[19] Learning from the Ukrainian example, analysts must also consider the role that civil society may play in generating national consensus around security-policy priorities. Such studies are especially important for the prospective European Union member states of Georgia and Moldova.

5.3 Belarus in Russia's War

Russia is working to subjugate Belarus politically, economically, and especially militarily. The fact that Russia can freely use Belarusian territory for attacks against Ukraine, training of mobilised personnel, and the potential deployment of Russian nuclear weapons, points to the erosion of Belarus's control in the military sphere. During the war, the Belarusian Armed Forces (BAF) has provided the Russian Armed Forces with vital logistical support, as well as training, maintenance, and military equipment, all important to the war effort.

At the same time, there are limits to Belarus's dependency. The BAF has not participated directly in Ukraine, despite large Russian losses. The risks to regime stability in Belarus associated with such a decision likely prevents Moscow from pressuring the regime to commit. In addition, the BAF is already performing the supportive function they are trained and equipped for, and they are ill-suited to

[17] Engvall, Johan; Khan, Ismail; Melin, Kristina, "Post-Soviet no more – The transformative impact of war on Russia's neighbors," *The SAIS Review of International Affairs*, 18 September 2023, https://sais-review.sais.jhu.edu/post-soviet-no-more-the-transformative-impact-of-war-on-russias-neighbors/.

[18] Khan, Ismail, "Consolidating Ukraine 2014-2015," in Engqvist, Maria and Wannheden, Emil (eds.), *Russia's War Against Ukraine and the West: The First Year*, FOI-R--5479--SE, (Stockholm: Swedish Defence Research Agency), 2023, pp. 17–32.

[19] It would be good, for example, to have an update of: Hedenskog, Jakob and Lind de Albuquerque, Adriana, *Moldova – A Defence Sector Reform Assessment*, FOI-R--4350--SE, (Stockholm: Swedish Defence Research Agency), 2016.

offensive operations. This interdependency propagates the current *status quo* of a near, but not full, Russian military control over Belarus.[20]

However, should either of the restraining factors change – the risk to regime stability, the benefit of BAF's current assistance, or their offensive capacity – the calculus in Moscow on how to best employ Belarus in the war might change. In order to understand how Belarus's role in Russia's war may evolve, we thus need to assess the development of Belarusian military capabilities, their present contribution in the war, and regime stability. In particular, analysts need to consider the effect that intensive training, readiness checks, and the provision of advanced Russian weapons systems have had on the capability of the BAF since the beginning of the invasion. A key issue will be the level of independent Belarusian control over the ballistic missile system, Iskander-M, which Russia has transferred to Belarus, and to what extent Russia's nuclear deployment in Belarus is realised.[21] In terms of regime stability, the ever-tighter repression in Belarus, including in the military, may decrease the risk of taking unpopular decisions on the war.[22]

As the fighting in Ukraine transforms into a war of attrition, more attention needs to be given to the Belarusian contribution to the Russian military industry. The Belarusian supply of sensors, optoelectronic equipment, and chassis to the Russian Armed Forces have become increasingly important as other suppliers are cut off through sanctions. Some analysts point to Russia's becoming vulnerable to disruption in Belarusian supply, and to the risk of Russia's taking control over key Belarusian military industries.[23]

Beyond the present conflict, it is essential to evaluate the efficacy of the BAF's logistical support to Russia, as this is likely similar to the role they would fill in a war with NATO. Given the ever-closer military-educational integration and exercise patterns of Belarus and Russia, it would also be pertinent to examine the level of Russian penetration of Belarusian military command and control, if this is possible given the lack of sources.

With Belarus so clearly at Moscow's disposal, it is tempting to conclude that Belarus and Belarusian society no longer merit analytical inquiry as separate entities. However, this would be a mistake. In contrast with Russia's aims for the war, the Belarusian regime likely prefers that the current status quo in the conflict persists, as it permits a display of loyalty to Moscow without the commitment of Belarusian

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[20] Shraibman, Artyom, "Is Belarus the Real Beneficiary of Putin's War?" *Foreign Affairs*, 31 October 2023, https://www.foreignaffairs.com/belarus/belarus-real-beneficiary-putins-war.

[21] Melin, Kristina, "Tools of Coercion and Control. Russian nuclear weapons in Belarus", FOI Memo 8271. (Stockholm: Swedish Defence Research Agency), 2023.

[22] *Prezident Respubliki Belarus*, "Soveshaniie po voprosu sozdaniia voennykh prokurator", 2 November 2023, https://president.gov.by/ru/events/soveshchanie-po-voprosu-sozdaniya-voennyh-prokuratur.

[23] See, for example, Bornukova, Kateryna, "Chapter 2: The Economic Dimension of the Russian Policy towards Belarus," in Moshes, Arkady and Ryhor Nizhnikau, *Russian policy towards Belarus after 2020 – At a Turning Point?* Lexington books, London, 2023, pp. 29–46.

troops.[24] There is also a significant difference in how the Belarusian and Russian populations view the war and the West, while in Belarus there remains tangible opposition to the Belarusian regime among ordinary citizens.[25] Although unlikely at present, these tensions would again become politically relevant should fissures appear in the Russian-Belarusian relationship or regime stability falters in either country. In such a scenario, a critical factor will be the capacity and willingness of the exiled democratic movement to step in and work together with remaining elements of the regime. Nonetheless, repression makes it difficult to assess the mood of the Belarusian people with any accuracy, and there are indications that views are changing amid the omnipresent propaganda.[26]

5.4 Sources

In contrast to the growing challenges to the open-source study of Russia, which are discussed in other chapters of this publication, the war has not brought about the same rapid reduction in publicly available information for Russia's neighbours. The sources available remain largely the same as before the invasion. However, many of the same challenges persist, as several countries remain partly or fully unfree societies with severe limitations on freedom of information and expression.

The difficulty in studying Belarus is largely the same as for Russia: there are few reliable and openly available sources and restrictions are increasing. Earlier studies of military cooperation between Belarus and Russia have made use of a variety of sources, from official documents and reports on military exercises to investigative journalism.[27] However, since the 2020 political crisis and throughout the war, even less public information has been available. The few independent media outlets that were still present in the country have now moved into exile. The Belarusian security apparatus is increasingly a "black box," resistant to study from within, while the integration process between Russia and Belarus is opaque.[28] The prospects for the open-source study of the Belarusian military-industrial complex are also slim. The

[24] Shraibman, "Is Belarus the Real Beneficiary of Putin's War?"

[25] *Belarus Initiative,* "Sixteenth survey wave – Socio-political values of Belarusian youth (poll conducted May 24 - June 3, 2023)," https://en.belaruspolls.org/wave-16.

[26] Ioffe, Grigory, "Belarus's Situation: Is Fear an Explanatory Variable?", *Eurasia Daily Monitor,* 2022, vol. 19, is. 152, https://jamestown.org/program/belaruss-situation-is-fear-an-explanatory-variable/.

[27] See, for example, Wilk, Andrzej *Russia's Belarusian army: The practical aspects of Belarus and Russia's military integration* (Warsaw: Centre for Eastern Studies 2021).

[28] Douglas, Nadja, "Belarus: "Securitization" of State Politics and the Impact on State-Society Relations," *Nationalities Papers*, 2023, vol. 51, is. 4, 857.

last iteration of the Belarusian-Russian programme for military-technical cooperation was not publicly released, in contrast to earlier versions.[29]

However, other, non-traditional sources are now available. Reporting by the citizen-intelligence network, *Belaruski Hajun*, on Russian military movement and activity on Belarusian territory proved vital in understanding the extent of Belarus's complicity in the early stages of the invasion of Ukraine. Other alternative sources on Belarus include disclosed Western or Ukrainian intelligence, as well as Belarusian defectors.[30] However, the non-official and political nature of such material presents challenges for the reliability and independence of the sources. Triangulating sources and methods can somewhat mitigate these difficulties.

Considering the limitation of information freedom among many of Russia's neighbours, researchers should also consider the risk that, if the political leadership fears that maintaining open ties with Russia will come at a cost in their relations with the West, countries will opt to keep their contacts with Russia increasingly non-official and classified. If actualised, this will limit the utility of official documents and statements in assessing ties with Moscow.

5.5 Conclusions

The war has underlined the need to study Russia's neighbours in their own right, and in greater detail. Doing so allows for a better appreciation of its neighbours' efforts to form a more independent foreign and security policy in the aftermath of Russia's full-scale invasion of Ukraine. Yet it remains important to understand the extent of Russia's enduring influence, as it is a decisive factor in the formation of policy priorities for both Russia's neighbours and Russia itself. New aspects, such as the Russian wartime diaspora and changed economic patterns, are becoming factors in this calculus.

Turning the perspective to its neighbours may also enable us to go beyond merely establishing that Russian influence is decreasing and ask instead how it is changing. Russia is concentrating its efforts on controlling its western neighbours, Ukraine and Belarus. Its military presence in other parts of its neighbourhood is shrinking. Russia appears to be prioritising its relations with Turkey and Iran over the support of its Armenian ally and a decisive role in the Nagorno-Karabakh conflict.[31] Meanwhile, although unwilling to endorse Russia's war, but still wishing to

[29] *Reformation*, "Belarus i Rossiia podpishut soglasheniie o programme voenno-tekhnicheskogo sotrudnichestva do 2025 goda," 4 February 2022, https://reform.by/294881-belarus-i-rossija-podpishut-soglashenie-o-programme-voenno-tehnicheskogo-sotrudnichestva-do-2025-goda.

[30] See, for example: "Belaruski Hajun Project," *https://hajunby.motolko.help/*; "Obiedineniie silovikov Belarusi," *https://bypol.org/ru/*.

[31] Broers, Laurence, "Russia concedes Karabakh for stake in new regional order," *Chatham House*, 29 September 2023, https://www.chathamhouse.org/2023/09/russia-concedes-karabakh-stake-new-regional-order.

remain allies, the Central Asian states are calling on the CSTO to assume a larger role in managing the threat from Afghan militants.[32] Perhaps we should ask ourselves whether Moscow is in a process of reprioritising the geographical focus of its regional influence ambitions, and whether the Central Asian countries are taking the opportunity to renegotiate the terms of Russian security engagements.[33]

The security and policy shifts in Russia's neighbourhood may also unlock frozen conflicts and fuel latent tensions. It is more important than ever to have an in-depth understanding of the security sphere of its neighbouring countries, including military capacity and resilience. The failure to appreciate the national consolidation and military build-up in Ukraine should not be repeated for countries that may yet become targets of Russian aggression, or else face instability or conflict. Correspondingly, language skills beyond Russian will become increasingly important, as well as fieldwork and recurring visits. Apart from Belarus, there are still good opportunities for conducting open-source research in the rest of Russia's neighbourhood.

Among Russia's neighbours, Belarus matters most to the war effort and to Russia's military capability. For now, the centre of attention should be how Belarus's military contribution to the war and its cooperation with Russia evolve. Still, analysts need to uphold an understanding of Belarus and Belarusians as separate entities from Russia and Russians. While Russia and Belarus are long-standing allies, the present level of Russian dominance over Belarus is contingent on the steadiness of the deeply illegitimate Belarusian regime. It is not a stable foundation.

While the contours of a new security landscape are emerging, more defined by the actions of the neighbours themselves, we are still in the middle of the process. Researchers must not resort to "wishful thinking" about Russia's declining influence, nor about regional stability. Ties with Russia run deep, and unresolved tensions in its neighbourhood will continue to inform foreign-policy choices. New dependencies may arise. As this process unfolds, it is time for a renewed analytical focus on Russia's neighbours, especially on their changing relations to Russia, their dealings with new actors, and on challenges to regional security.

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[32] *President of Russia*, "Sammit ODKB. V Kremle sostoyalas vstrecha liderov gosudarstv – chlenov Organizatsii Dogovora o kollektivnoi bezopasnosti," 16 May 2022, http://kremlin.ru/events/president/news/68418.

[33] Costa Buranelli, Filippo, 2018, "Spheres of Influence as Negotiated Hegemony – The Case of Central Asia," *Geopolitics,* 23:2, pp.378-403.

6. Russian military capability at war

Maria Engqvist and Carolina Vendil Pallin

Whenever FOI's Russia and Eurasia Studies Programme tried to gauge, from a ten-year perspective, what military capability Russia could muster, the approach was always one of applied research. The aim was to answer a specific question, using a transparent methodology and sources that were as reliable as possible. Actual military capability will always be a closely guarded secret for most countries, and the research question thus always comes with its inherent challenges. The overall methodology was to first try and answer the question of what military capability Russia had at present. The next step was to examine not only security policy priorities, military thinking, defence spending, and the defence industry's ability to deliver, but also the military capability that could result from these factors over a ten-year perspective, taking all things into account. Within each research field, political scientists, economists, and military analysts applied tested methodologies and aimed to get as close as possible to finding primary sources. As most of the essays in this volume have highlighted, it was never an easy task. A number of delimitations were necessary, sometimes because the empirics were missing or hazy and because every aspect could not be covered within one single report.

After the Russian invasion of Ukraine in February 2022, members of the Programme deemed that it was not possible to conduct a study such as those in our previous reports of Russian military capability, since the war makes Russian military capability a moving target. Defence industry production and military thinking change faster than projections in peacetime would suggest. As is evident from the essays here, different subject areas face different challenges. Military capability is, on the one hand, dependent on the war in Ukraine and therefore impossible to predict from a ten-year perspective, but there is also ample data on how Russian military units perform in an operational environment on the battlefield, which essentially is the foremost purpose of examining a country's actual military capability. Generally, however, data on, for example, Russia's creation of new operational units, reconstitution of defence production and defence spending, as well as its opinion polling, has become more difficult to find and more precarious to rely upon.

6.1 Common and specific concerns

The dissolution of the Soviet Union in 1991 ushered the newly formed Russian Federation into a period of historical openness. A new Russian information space was formed almost overnight, which proved to be more accessible. Western researchers

were able to visit the country with more regularity, which enabled a deepened understanding in the West, and elsewhere, of Soviet and Russian affairs. In an effort to promote economic reform and curb corruption, transparency increased, for example, through open public tenders and access to draft legislation in the Duma. The Russian internet was allowed to form dynamically and was, as late as 2015, still ranked by Freedom House as "partly free."

Since the early 2000s, however, the policies of Russia's political leadership under President Vladimir Putin have aimed at gradually centralising political power and restricting and classifying information, especially concerning its military capabilities. With the second invasion of Ukraine in 2022, accessibility to Russian open sources became even more restricted, and exchange with Russian researchers and analysts curtailed. Almost all of the essays in this volume point to the fact that not being able to visit Russia, talk to colleagues, and conduct interviews is a serious drawback. The exception, of course, is Kristina Melin's essay in Chapter 5 on Russia's neighbouring countries, among which only Belarus has become closed to Western researchers.

Following Russia's war against Ukraine, the available sources have become even more curated by Russian authorities. Russian federal laws incriminate detailed reporting on defence and security policy, and journalists writing on the topic for even speaking to foreigners; public databases and government websites are either geoblocked to restrict access by an international audience, or simply shut down. These measures aim to mitigate scrutiny not only by journalists but also by independent analysts within Russia. Repression, coupled with increased secrecy, is a problem when it comes to accessing everything from election data to statistics on, for example, economics and industrial production. However, there are also significant problems with the reliability of the sources.

Kjellén and Norberg conclude in Chapter 1 that the vast majority of Russia's military resources are directed to Ukraine as long as the war there continues, but also that access to reliable sources will be imperative in order to understand and analyse any future reconstitution of Russia's military capability. In Chapter 2, Carolina Vendil Pallin mentions how opinion polling in authoritarian systems must be interpreted with caution as repression and self-censorship increase in society. In Chapter 3, Emil Wannheden warns against trusting official statements on economic growth, while Tomas Malmlöf underlines in Chapter 4 that we cannot be certain what Russia's production volumes amount to, since there are several reasons for the Russian leadership to want to project an image of an economy that is thriving and that its defence industry outmatches that of the West. The reduced availability and reliability of sources is troublesome for anyone seeking to understand the causes of change in Russia. This highlights the importance of adhering to the basic principles of source criticism for analysts trying to understand Russia.

6.2 Pitfalls

A question of importance relating to the points made above, which the war has shed light on, is the need to strike a balance between quantitative and qualitative aspects when assessing Russian military capability. Kjellén and Norberg point out how the delimitations that were set in the Russian military capability reports meant that neither intangible aspects of warfighting nor paramilitary forces, or political considerations such as the decision not to use conscripts, were included in the analysis. At the same time, any analysis will have to include difficult choices since not all aspects can be studied and weighed in. Paying more attention to these aspects will be important in the future, but, at the same time, there is every reason to caution against abandoning the quantitative approach and the "counting of tanks" (a task that has perhaps become more important than ever). Quantitative aspects alone will not provide full answers to the question of military performance, but in combination with other approaches, the picture will become more nuanced than before.

A balanced analysis of Russia's development has probably become even more demanding to produce as a result of the war. Trying to avoid different biases when analysing Russia is a testing exercise. Researchers and analysts must avoid being driven by activism, wishful thinking, or the political agenda of the day. It is also important to resist the pressure to portray Russia in a way that is currently politically appropriate. As the demand for knowledge and analysis of Russian military affairs has increased, so has the supply side. Since the start of the second invasion, there has been a demand for fast analysis, leading many to rely on guesswork and speculation over longer periods of time. The analyses of data that inundate journals and think-tank websites needs to be scrutinised, not least for reproducing possibly erroneous data; that the same data shows up in two or three different texts does not make it a triangulated fact. Moreover, when it comes to economic data, Wannheden warns against misleading measures of defence spending and comparisons between the defence burdens of different countries.

6.3 New methodology and sources

The essays in this volume also highlight a number of new possibilities to explore in examining the ramifications for Russia's future military capability. Kjellén and Norberg point out how social media and the compilation of open source intelligence by organisations such as Bellingcat and Conflict Intelligence Team open up new possibilities for studying Russian military capability. They also suggest exploring satellite data to a higher degree, as does Malmlöf in his essay on the defence industry. Apart from the possibilities provided by social media, Vendil Pallin highlights how leaked data sources have added to our knowledge of what goes on inside Russia and its political system, although she also notes that the ethical aspects of using such sources must be considered. Additionally, there is a wealth of data and

analysis available through skilled independent Russian journalism and the networks that still exist between journalists in exile and those still working, mostly anonymously, inside Russia.

In future studies, another way to map developments inside Russia will be to use methodological ingenuity and proxy variables.[1] For example, mapping Russia's defence industry must rely on a multitude of sources. Malmlöf suggests a number of possible avenues, such as digging deeper into the relevant companies' annual reports, looking more closely at subcontractors, job advertisements, and customs data together with battlefield forensics, in combination with a good overall understanding of the political economy that underpins the defence industry. Melin observes that, although Russia has become less accessible, its neighbouring countries may offer alternatives for researchers seeking to understand the processes of change that are currently taking place in the region as a whole. All of these countries will need to manage relations with Russia as part of their security policy, and their policy choices as well as the considerations underpinning them will be of interest. Most importantly, as noted by Kjellén and Norberg, Ukraine's experiences will be an important piece of the puzzle in understanding how Russia's military evolves.

6.4 The way ahead

With the second invasion of Ukraine, in 2022, accessibility to Russian open sources not only took a turn for the worse, but it also became evident to the Western world that Russia's political leadership had made a strategic choice, defining the country's path of development. Russia's confrontation with the West will persist as long as the situation in Russia does not change radically. The risk of the conflict's escalating remains. Hence, the need to understand the preconditions of Russia's political, financial, societal, cultural, and military trajectories is vital. While its leadership's main security policy objectives have not changed, Russia is going through a process of change that is both fast and opaque. The challenge now is to try to map and understand this process. This is by no means a small task, and there are several important implications for researchers with a genuine research interest in the region.

The essays in this volume point out how the research process as a whole has become more resource-intensive and time-consuming. There is a need to rely on a multitude of sources, many of which demand more work to access and compile than those used before. Furthermore, the war dimensions and dictates new policy choices from Russia's political leadership to a higher degree than previously. This limits the lifespan of sources as a reliable basis for assessing the current situation, rather than the situation last month.

[1] See, for example Solanko, Laura, "Where do Russia's mobilized soldiers come from? Evidence from bank deposits," BOFIT Policy Brief 2024 No.1, *Bank of Finland, BOFIT, Bank of Finland Institute for Emerging Economies*, *https://publications.bof.fi/handle/10024/53281*.

Moreover, the opportunities that Melin outlines in conducting research in former Soviet republics as subjects of security policy instead of merely objects of Russian policy will also come at a premium, not least that of learning the language, history, and culture of each individual country. As the regional security architecture shifts, there is a risk of increased tension and even conflict. It will be ever so important to study their security policy, not least regarding frozen conflicts. Likewise, neither Belarus's contribution to the war nor the dynamics of its fading sovereignty must fall out of analytic focus.

Despite the grim overview just presented, there are still plenty of opportunities that researchers can leverage, as this report's authors have shown. National and international cooperation between individual researchers, institutes, and think tanks who focus on the region has become even more important. Looking ahead, cross-disciplinary collaboration and the use of previously untested methods will also be crucial.

For more than twenty years, the Russia and Eurasia Studies Programme at FOI has sought to gauge, from a ten-year perspective, what Russia could muster in terms of military capability. Although the Russian information landscape has undergone several periods of transformation since the fall of the Soviet Union in 1991, the task of assessing a country's military capability has always come with inherent challenges in terms of sources and methodology. The Russian invasion of Ukraine in 2022 ushered in a wave of censorship and repressive measures unprecedented in the history of the Russian Federation. This, combined with the fact that the war has turned the object of study into a moving target, has caused a temporary halt in the report series, Russian Military Capability in a Ten-Year Perspective. In this volume, members of the Russia and Eurasia Studies Programme reflect on the methodological challenges and opportunities that have emerged as consequences of the Russo-Ukrainian War, in order to outline the preconditions for studying Russian military capabilities both in wartime and in the future.

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