



## Weakened But Never Alone: Russia's Evolving Arms Market and Customer Base

Elisabeth Gosselin-Malo

## Abstract

Russia's invasion of Ukraine in February 2022 marked one of the most drastic transformations the international defense industry has witnessed in the twenty-first century. This report highlights how the Russia-Ukraine war has affected Moscow's customer base, where previous buyer countries have either canceled orders or decreased their dependency on Russian-made weapons to invest in their own domestic industries. The report also illustrates how new players have capitalized on Russian military companies' focus on the conflict in order to win export contracts. As long as the invasion of Ukraine continues and the attrition rate remains high, it is likely that we will continue to see an overall waning of Russian military exports, with exceptions for material that can be spared and deliveries to states that the Kremlin believes to be strategic.

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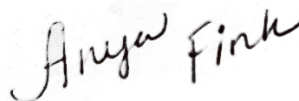
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**Cover image:** Russian EMD Uragan MRLS crews eliminate mock enemy while defending Sakhalin Island within Vostok 2022 exercise, Russian MoD.

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Anya Fink, Research Program Director (Acting)  
Russia Studies Program  
Strategy, Policy, Plans and Programs Division

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## Introduction

Russia's invasion of Ukraine in February 2022 marked one of the most drastic transformations the international defense industry has witnessed in the twenty-first century. This paper seeks to analyze the two realities that have emerged as a result of the war and have affected Russian defense export capabilities and who is willing to buy its military systems.

First, the report will highlight how the Ukraine war has reasonably affected Moscow's customer base, where previous buyer countries have either canceled orders or decreased their dependency on Russian-made weapons in order to invest in their own domestic industries. Second, the report will illustrate how new players have been propelled forward by capitalizing on Russian military companies' focus on the conflict in order to win export contracts.

Over the last 19 months, the Russian military-industrial complex has been geared toward sustaining the massive war effort. Plants have been pushed to increase production of tanks and armored vehicles, all while old Soviet-era equipment has been pulled out of storage to replace the large number of losses recorded on the battlefield.<sup>1</sup>

Documented estimates of vehicle losses range in the thousands, especially among tanks, infantry fighting vehicles (IFVs), armored personnel carriers, and artillery, all key pieces of equipment employed on the frontlines.<sup>2</sup> Similarly, Russian forces have also seen a widespread use of drones, tactical and strategic air defense systems, electronic warfare, and, of course, light weaponry, which has served to equip its mobilized soldiers. Aerial (helicopters and aircraft) and naval units have also made an important contribution but have not witnessed the same level of employment or rate of attrition. The Russian Aerospace Forces (VKS), in fact, remains a largely intact force.

These elements have all played an important role in determining how much room for maneuver the Russian state and its defense industry maintain for military exports. As old T-62 tanks and BMP-1s are refurbished, the production and fielding of newer systems, such as the T-90, BMP-2, and BMP-3, become critical, as Russian land forces remain hungry for modern heavy vehicles. This continued elevated internal demand causes the national industry to be unavailable for export. At the same time, items such as helicopters, light trainers, and some jets have not seen the same level of attrition and thus do not require the same degree of

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<sup>1</sup>Andrew Jeong et al., "Ukraine Live Briefing: Kremlin Boosting Tank Production, Putin Says; Kyiv Frustrated by UN Human Rights Report," *Washington Post*, Mar. 25, 2023, <https://www.washingtonpost.com/world/2023/03/25/russia-ukraine-war-news-united-nations/>.

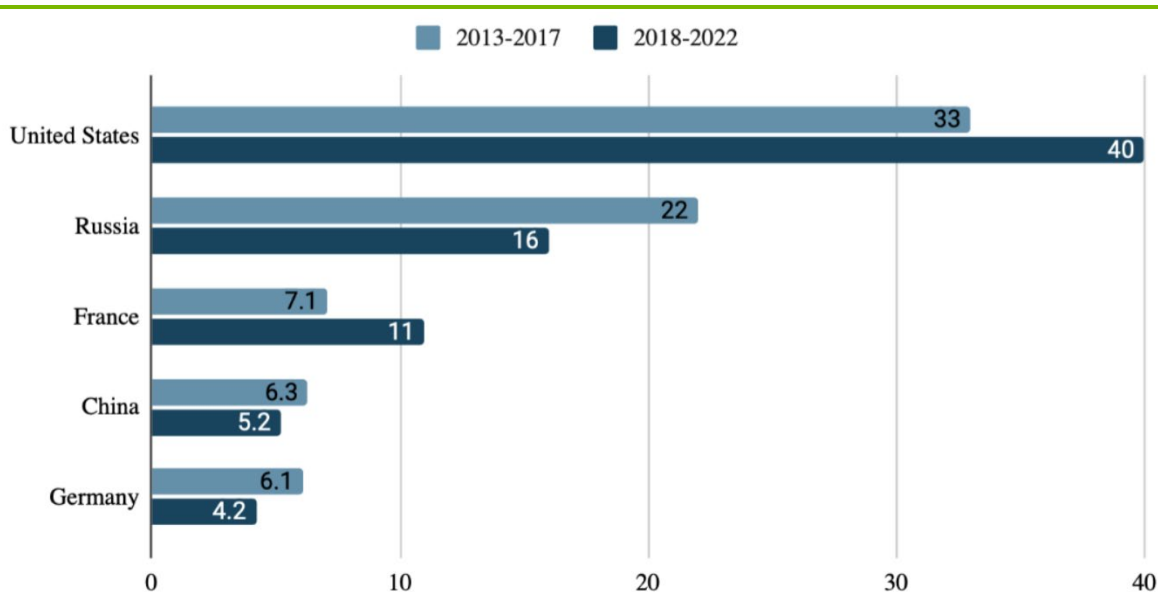
<sup>2</sup>"Attack on Europe: Documenting Russian Equipment Losses During the Russian Invasion of Ukraine," *Oryx*, Feb. 24, 2022, <https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-equipment.html>.

replacement, leaving more room for export.<sup>3</sup> These battlefield realities, as will be shown throughout this report, have shaped the export capacity of the Russian companies now organized, above all else, to sustain their national forces first.

## Russia's three largest customers (2018–2022)

Between 2018 and 2022, the Stockholm International Peace Research Institute (SIPRI) arms transfer database showed that Russia was the second-largest exporter of major weapons, behind the US but ahead of France, China, and Germany.<sup>4</sup> As seen in Figure 1, during this period, Russia accounted for 16 percent of the global arms exports, a decline of 6 percent from 2013 to 2017. The SIPRI report, published in March 2023, listed the main recipients of Russian weapons as the following: the largest was India, which received 31 percent of the country's overall exports; China received 23 percent; and Egypt received 9.3 percent.<sup>5</sup> Together, these three countries accounted for nearly two-thirds of Moscow's arms exports.

Figure 1. Global share of exports of major arms by top 5 largest exporters (percent)



Source: Pieter D. Wezeman, Justine Gadon, and Siemon T. Wezeman, "Trends in World Military Expenditure, 2022," Stockholm International Peace Research Institute.

<sup>3</sup> "List of Aircraft Losses during the Russian Invasion of Ukraine," Oryx, Mar. 20, 2022, <https://www.oryxspioenkop.com/2022/03/list-of-aircraft-losses-during-2022.html>.

<sup>4</sup> Pieter D. Wezeman, Justine Gadon, and Siemon T. Wezeman, "Trends in World Military Expenditure, 2022," SIPRI, Mar. 2023, [https://www.sipri.org/sites/default/files/2023-04/2304\\_fs\\_milex\\_2022.pdf](https://www.sipri.org/sites/default/files/2023-04/2304_fs_milex_2022.pdf).

<sup>5</sup> Ibid.

## India

According to SIPRI data, India has been the most important customer of Russian weapons over the last decade, coming in as the largest recipient between 2013 and 2017. Russian state news agency Interfax reported in February that over the last five years, India has placed orders for military equipment worth over \$10 billion.<sup>6</sup> However, it is important to highlight that arms transfers to New Delhi declined by approximately 37 percent between the two time periods analyzed.<sup>7</sup>

The South Asian state remains one of the few countries to not have explicitly condemned the Kremlin's invasion of Ukraine. Speaking to Interfax, Dmitry Shugayev, the head of Russia's Federal Service for Military-Technical Cooperation, stated in February that "despite the unprecedented pressure on India from Western countries in connection with Russia's special operation in Ukraine, it continues to be one of our main partners in the field of military-technical cooperation."<sup>8</sup>

Analysts have referred to India and China as Moscow's economic lifelines since February 2022, following the imposition of a wide range of sanctions against the Putin regime.<sup>9</sup> Their importance as partners and now-rarer customers of Russian weapons suggests that the Kremlin may be somewhat more dependent on them than it was previously for financial resources.

The aforementioned decreased export volumes could also have been affected by the rapid push to bolster India's domestic military industry through the "Make in India" program.<sup>10</sup> In January 2023, for example, Indo-Russian Rifles Private Limited, a Russo-Indian joint venture for the production of assault rifles, completed the first batch of its AK-203 rifles for the Indian army.<sup>11</sup> In May, Russian media further reported that New Delhi was increasingly looking to localize the production of some Russian arms through the creation of a dedicated program. The project would allegedly allow India to continue producing Russian military platforms as well as spare

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<sup>6</sup> "Russian Arms Supplies to India Worth \$13 Bln in Past 5 Years—News Agencies," Reuters, Feb. 13, 2023, <https://www.reuters.com/world/russian-arms-supplies-india-worth-13-bln-past-5-years-news-agencies-2023-02-13/>.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Cullen Hendrix, "Russia's Boom Business Goes Bust," *Foreign Policy*, May 3, 2023, <https://foreignpolicy.com/2023/05/03/russia-arms-sales-weapons-exports-worldwide-ukraine-war/>.

<sup>10</sup> Suchitra Karthikeyan, "What Are the Key Defence Projects Under 'Make in India' Scheme," *The Hindu*, Apr. 26, 2022, <https://www.thehindu.com/news/national/make-in-india-defence-manufacturing-push-projects-need-explained/article65348645.ece>.

<sup>11</sup> Kapil Kajal, "Indo-Russian Venture Completes Production of AK-203 First Batch," *Janes*, Feb. 3, 2023, <https://www.janes.com/defence-news/news-detail/indo-russian-venture-completes-production-of-ak-203-first-batch>.

parts for its national requirements.<sup>12</sup> It would, in part, include the following participants: Uralvagonzavod, Tekhmash, Bazalt, NPO Mashinostroenie, Russian Helicopters, Almaz-Antey, and the Zvezda Ship Repair Center.

In a recent and worrying turn of events, the leaders of BRICS—the grouping of Russia, India, China and South Africa—announced that the alliance was expanding to include Argentina, Iran, Egypt, Ethiopia, Saudi Arabia, and the UAE.<sup>13</sup> This represents a fundamental shift. From the bloc’s initial formation until now, it had added only a single member more than 13 years ago. Non-Western countries, including India, appear to be sticking by Russia’s side, even though there has been international pressure for them to distance themselves. This was reiterated by the Russian deputy ambassador to India during an event in New Delhi in August. During this event, the deputy ambassador declared that although Western nations are using Ukraine to weaken Russia, they will not succeed: “Russia’s relationship with non-Western states has been robust and the country will never be alone.”<sup>14</sup>

The discourse around BRICS has recently extended beyond economic interests, gradually shifting into the security field, albeit somewhat indirectly. Although no formal military-technical cooperation agreements are in place, established and future member states are pursuing projects that will have some implications for defense exports. This is likely to be the case, for instance, when it comes to lithium supplies. Once Argentina officially joins the group, this South American country will significantly increase available stocks to other members, since it has the third-largest lithium reserves globally.<sup>15</sup>

Currently, lithium-ion batteries are found in many military systems, ranging from portable communication equipment to automatic weapons. Among these are the Iranian-made Shahed-136 and Shahed-131 drones, referred to in Russia as Geran-2 and Geran-1, which have been analyzed and documented as containing lithium-ion batteries.<sup>16</sup> Greater access to this chemical

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<sup>12</sup> “Russia Is Working for War: India Wants to Localize the Production of Russian Weapons,” Focus, May 5, 2023, <https://focus.ua/voennye-novosti/564498-rf-rabotaet-na-voynu-indiya-hochet-lokalizovat-proizvodstvo-rossiyskogo-oruzhiya-smi>.

<sup>13</sup> Gracelin Baskaran and Ben Cahill, “Six New BRICS: Implications for Energy Trade,” CSIS, Aug. 25, 2023, <https://www.csis.org/analysis/six-new-brics-implications-energy-trade>.

<sup>14</sup> “‘Russia Will Never Be Alone,’ Diplomat Tells Gathering in New Delhi,” RT, Aug. 19, 2023, <https://www.rt.com/india/581501-russian-diplomat-india-g20-conclave/>.

<sup>15</sup> Baskaran and Cahill, “Six New BRICS.”

<sup>16</sup> Trap Aggressor, “More Than 30 Western Components Found in Iranian-Made Shahed-136 UAVs—Investigation,” Euromaidan Press, Nov. 17, 2022, <https://euromaidanpress.com/2022/11/17/more-than-30-western-components-found-in-iranian-made-shahed-136-uavs-investigators/>; Nathasha Turak, “Iran Says It’s Discovered What Could Be the Second-Largest Lithium Deposit,” CNBC, Mar. 6, 2023, <https://www.cnbc.com/2023/03/06/iran-says-its-discovered-worlds-second-largest-lithium-deposit.html>.



could potentially help Russia with the production of certain weapons, especially in light of reports that it might be locally manufacturing these drones.<sup>17</sup>

## China

China represents perhaps the most interesting case for the Russian defense industry due to its duality as both an important customer of Russian weapons and a considerable competitor in this space. The export data provided by SIPRI paints a somewhat conflicted picture: from 2013 to 2017 and from 2018 to 2022, Russian arms transfers to Beijing rose by 39 percent, making China Russia's second-largest customer.<sup>18</sup> However, the authors of the report paint a gloomy picture concerning future orders from China, highlighting that the size of deliveries to Beijing was much lower in 2020–2022 than in 2018–2019.<sup>19</sup>

Traditionally, each country has relied on the other for key components: Moscow has looked to China to provide primarily machine tools and electronic components, and Beijing has depended on Russian fighter engines, air defense systems, missiles, submarine technology, and heavy helicopters.<sup>20</sup>

In addition, China has proven to be a critical ally to Russia since its invasion of Ukraine, shipping approximately \$500 million worth of microelectronic components necessary for the production of Russian military equipment in 2022.<sup>21</sup> The *New York Times* further uncovered that a Chinese firm had sent large shipments of gunpowder—enough to produce 80 million rounds of ammunition—to a Russian factory.<sup>22</sup> Hong Kong also lent a hand in 2022 by doubling its export volumes of semiconductors to Moscow, totaling around \$400 million worth of circuits.<sup>23</sup>

These numbers illustrate a deepening of defense ties between Russia and China and a shift in the nature of their cooperation. Clearly, the Kremlin now depends much more on China than it did previously, with some experts predicting that in the long term, China will become Russia's most important trade partner. This may have negative consequences for Russia, as the more it

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<sup>17</sup> John Hardie, "More Evidence That Russia's Making Iranian Drones," FDD's Long War Journal, July 25, 2023, <https://www.longwarjournal.org/archives/2023/07/more-evidence-that-russias-making-iranian-drones.php>.

<sup>18</sup> Wezeman et al., "Trends."

<sup>19</sup> Ibid.

<sup>20</sup> Andrew S. Bowen, Russian Arms Sales and Defense Industry, Congressional Research Service, Oct. 14, 2021, <https://crsreports.congress.gov/product/pdf/R/R46937>.

<sup>21</sup> Sebastian Bienkowski et al., Effectiveness of US Sanctions Targeting Russian Companies and Individuals, Free Russia Foundation, Jan. 2023, <https://www.4freerussia.org/wp-content/uploads/sites/3/2023/01/frf-sanctions-web.pdf>.

<sup>22</sup> Ana Swanson and John Ismay, "Chinese Firm Sent Large Shipments of Gunpowder to Russian Munitions Factory," *New York Times*, June 23, 2023, <https://www.nytimes.com/2023/06/23/business/economy/china-russia-ammunition.html>.

<sup>23</sup> Bienkowski et al., Effectiveness of US Sanctions, 50.

relies on Beijing for military-related exports and imports, the more its national defense industry is likely to lose its strategic autonomy.<sup>24</sup>

Another factor that experts expect to affect the Sino-Russian dynamic is the growth of China's industrial defense base, with the country having dedicated a record \$224 billion to military expenditures for 2023.<sup>25</sup> Its focus on building domestic production capabilities has also translated, to some extent, into a more assertive arms export policy. China appears to be particularly interested in expanding its presence in the Middle East. At the International Defense Exhibition (IDEX) in Abu Dhabi in February—where Russia was also present, but on a smaller scale—the Asian country showcased over 500 pieces of military gear, including new equipment such as the Hummingbird, a micro unmanned aerial vehicle.<sup>26</sup>

Beijing also appears to be looking to increase its military and security involvement in West Africa, as state-owned defense conglomerate Norinco recently inaugurated a sales office in Dakar, Senegal.<sup>27</sup> It is important to highlight that China allegedly sold an undisclosed number of VN2 infantry fighting vehicles to the country earlier this year.<sup>28</sup>

A 2023 report by the RAND Corporation comparing the US, China, and Russia's uncrewed systems industrial bases found that the Russian base appears to lack critical assemblies (e.g., sophisticated electronics) and relies "heavily" on China for engine pieces. It emphasizes that in light of the high number of sanctions imposed on Moscow, affecting in part its import of semiconductors and microchips, of which the US sold \$114 million worth to Russia in 2021, it could seek help from Beijing for substitutes.<sup>29</sup>

In recent years, there have been instances that suggest China is attempting to move away from Russian dependency, at least for the procurement of certain systems. Among these is China's reported integration of the WS-10 domestic fighter engine into its J-20 fighter jets to replace Russian engines.<sup>30</sup> While a large number of aircraft operated by Beijing are of Russian design,

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<sup>24</sup> Hendrix, "Russia's Boom."

<sup>25</sup> Yew Lun Tian, "China Plans 7.2% Defence Spending Rise This Year, Faster Than GDP Target," Reuters, Mar. 5, 2023, <https://www.reuters.com/world/china/china-says-armed-forces-should-boost-combat-preparedness-2023-03-05/>.

<sup>26</sup> Valerio Fabbri, "Why Are China's Arms Exports Declining?," Geopolitica.Info, Apr. 13, 2023, <https://www.geopolitica.info/china-arms-exports/>.

<sup>27</sup> Jevans Nyabiage, "Chinese Weapons Supplier Norinco Expands Influence in West Africa, Challenging Russia and France," South China Morning Post, Aug. 21, 2023, <https://www.scmp.com/news/china/diplomacy/article/3231408/chinese-weapons-supplier-norinco-expands-influence-west-africa-challenging-russia-and-france>.

<sup>28</sup> Ibid.

<sup>29</sup> Bradley Wilson et al., *Characterizing the Uncrewed Systems Industrial Base*, RAND Corporation, 2023, <https://doi.org/10.7249/rra1474-1>.

<sup>30</sup> Ashish Dangwal, "Powered by Indigenous WS-10 Engines, China Goes 'Full Throttle' in J-20 Stealth Fighter Jet Production," Eurasian Times, Dec. 13, 2021, <https://www.eurasiantimes.com/powered-by-indigenous-ws-10-engines-china-goes-full-throttle-in-j-20-stealth-fighter-jet-production/>.

it must be noted that based on publicly available information, the Chinese aircraft industry appears to be doing relatively well and undergoing a greater level of autonomy than in years past. As a result, some experts believe that the growth of the country's manufacturing capabilities will result in a shift from primarily weapons-sales transactions to increased joint development, transfer of technology, and defense services between the two allies.<sup>31</sup>

Looking ahead, several analysts have argued that Russia's "withdrawal" and laser focus on Ukraine represent a unique opportunity for China to seize market share. Others have predicted that Moscow will lose availability, relevance, and its reputation as a weapons provider altogether, in part due to the performance of some of its equipment in the war, and that "China is prepared for when that time arrives."<sup>32</sup>

## Egypt

Although Egypt was the third-largest importer of Russian arms between 2018 and 2022, it is interesting to point out that Moscow did not make any deliveries to Cairo from 2021 to 2022.<sup>33</sup> On the contrary, in January 2022, many reports emerged stating that the Egyptian government had abandoned plans to purchase the Russian Sukhoi Su-35 fighter, which represented a major order. The actual motives behind the abandonment have never been officially confirmed, but they are believed to be connected to sanctions imposed on the Kremlin, a shortage of spare parts, and US pressure to not move forward with the deal.

In January 2022, there was already speculation that the missed sale of the Su-35 to Algeria and Egypt could be attributed to the threat of CAATSA sanctions (Countering America's Adversaries Through Sanctions Act), which sees the application of sanctions against any government that makes large weapon purchases from Russia.<sup>34</sup> While both countries cited the lack of an active electronically scanned array radar on the aircraft as a major source of dissatisfaction with the jet, the prospect of sanctions is understood to have played a part, since in November 2019, US

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<sup>31</sup> Michael Kofman, "The Emperors League: Understanding Sino-Russian Defense Cooperation," War on the Rocks, Aug. 6, 2020, <https://warontherocks.com/2020/08/the-emperors-league-understanding-sino-russian-defense-cooperation/>.

<sup>32</sup> Ian Storey, "The Russia-Ukraine War and Its Potential Impact on Russia's Arms Sales to Southeast Asia," Perspective, no. 2022/47, Yusof Ishak Institute, May 5, 2022, <https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2022-47-the-russia-ukraine-war-and-its-potential-impact-on-russias-arms-sales-to-southeast-asia-by-ian-storey/>; Vasabjit Banerjee and Benjamin Tkach, "Amid Russia-Ukraine War, China Could Dominate the Value Arms Market," The Diplomat, Aug. 8, 2022, <https://thediplomat.com/2022/08/amid-russia-ukraine-war-china-could-dominate-the-value-arms-market/>; Michael Peck, "China Has a Reputation for Exporting Shoddy Weapons, but Its Sales May Get a Boost from Russia's Blunders in Ukraine," Business Insider, July 12, 2023, <https://www.businessinsider.com/china-arms-sales-may-get-boost-from-russia-war-ukraine-2023-7>.

<sup>33</sup> Wezeman et al., "Trends."

<sup>34</sup> Paul Iddon, "CAATSA or PESA: Why Have These Countries Decided Against Acquiring Russia's Su-35 Fighter?," Forbes, Jan. 11, 2022, <https://www.forbes.com/sites/pauliddon/2022/01/11/caatsa-or-pesa-why-have-these-countries-decided-against-acquiring-russias-su-35-fighter/>.

Assistant Secretary of State R. Clark Cooper notified Cairo of the possibility of bans in case of an Su-35 purchase.<sup>35</sup>

The diversification of suppliers and the most financially viable options are core elements that have guided Egyptian defense purchases over the years. On this, the US Congressional Research Service found that American defense hardware, specifically fighter aircraft, has advanced so much that Cairo is no longer in a position to afford the last-generation of fighter jets such as the F-35. It further noted that the Middle Eastern country “lacks the technical expertise to maintain most advanced technology or may be prohibited from purchasing certain items if those negate Israel’s qualitative military edge.”<sup>36</sup> The US’s commitment to preserving Israel’s strategic advantage is unlikely to change anytime soon, given how important a partner it is for Washington.

As such, Egypt has looked to Russia as well as other countries for military supplies—primarily for aerial weapons such as the MiG-29M/M2 fighter jets and the S-300VM air defense missiles—while also relying on Washington’s assistance to sustain US equipment. The two even held the joint Arrow of Friendship military exercise in January 2022, one month before Russia invaded Ukraine.

However, Cairo has also increasingly prioritized developing its national arms industry and creating a local supply chain network to support it. Since 2015, Egypt has funded the creation of indigenous systems, such as the Temsah family of vehicles, which now includes mature versions of armored mine-resistant and ambush-protected light tactical vehicles and all-terrain vehicles.<sup>37</sup> This has decreased to a degree its need for Russian-made weapons.

In February, it was reported that in order to assist Cairo’s transition from obsolete Soviet-era weapons to Western-made equipment, the US government would supply it with \$1.3 billion in military aid per year.<sup>38</sup> In this context, Egypt’s defense spending, including the money it is receiving from Washington, is expected to reach a compound annual growth rate of 3.9 percent. This would translate into an increase from \$9.4 billion in 2024 to \$11 billion in 2028.<sup>39</sup>

Nonetheless, a greater volume of defense exports between Russia and Egypt cannot be ruled out altogether in the future, especially in light of the recent 2023 Russia-Africa Summit held in July in Moscow, which the president of Egypt attended. Prior to the conference,

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<sup>35</sup>Kirill Semenov, “Moscow Struggles to Sell Fighter Jets in the Mideast,” *Al Monitor*, Jan. 13, 2022, <https://www.al-monitor.com/originals/2022/01/moscow-struggles-sell-fighter-jets-mideast>.

<sup>36</sup> Bowen, *Russian Arms*.

<sup>37</sup> Kazim Abdul, “EDEX 2021: Egyptian MoD Showcased Temsah Armored Vehicles Series,” *Military Africa*, Dec. 4, 2021, <https://www.military.africa/2021/12/edex-2021-egyptian-mod-showcase-temsah-4-armored-vehicle/>.

<sup>38</sup> “Egypt Efforts to Modernise Aircraft Inventory to Drive Defence Expenditure at 3.9% through 2028,” *Global Defence Technology*, Feb. 1, 2023, [https://defence.nridigital.com/global\\_defence\\_technology\\_feb23/egypt\\_defence\\_spending](https://defence.nridigital.com/global_defence_technology_feb23/egypt_defence_spending).

<sup>39</sup> *Ibid.*

Rosoboronexport Director General Alexander Mikheyev told reporters that the company would demonstrate “tools developed and tested in Russia to counter terrorism, organized crime, cyber threats, provide border and critical facility security and surveillance.”<sup>40</sup> Putin also held a number of bilateral meetings at the Summit, including with el-Sisi, to discuss trade, nuclear energy and other topics. According to Russian-state media TASS, during their encounter, the Egyptian leader said that his country welcomes all Russian initiatives on cooperation on the African continent and is interested in enhancing bilateral ties.<sup>41</sup>

## Western sanctions to weaken Russian arms sales

It remains highly difficult to compile the overall list of sanctions that have been issued by the US, EU, and their allies on Russia and to quantify the impact they have had on its defense industry. This is primarily because almost all data on critical indicators of the Russian economy have been classified since it invaded Ukraine, citing the need to protect such information against Western sanctions as the motive.<sup>42</sup>

Some experts have nonetheless attempted to combine the sanctions implemented by Western allies to analyze the available figures. The Atlantic Council’s database on Russian sanctions includes and combines designations from the US, EU countries, Canada, the UK, Australia, and Japan. It lists the following affected categories: 9,669 sanctioned Russian individuals, 3,119 entities, 158 vessels, and 22 aircraft. In other terms, 75 percent of the restrictions have targeted individuals, and approximately 24 percent of them are against entities.<sup>43</sup> Despite these encouraging numbers, the report points to a clear discrepancy: the US has applied more bans by far than any other country or institution. Out of the listed Russian organizations, around 1,009 are sanctioned *only* by Washington (nearly 50 percent), and it is also the only country or group to have extended embargoes to Russian ships and planes. In contrast, as of April 2023, Switzerland still had not restricted the export of technology to Russia or revoked its Most Favored Nation status.<sup>44</sup>

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<sup>40</sup> “Russia Signed over 150 Contracts with African Nations since 2019—Rosoboronexport,” TASS, July 25, 2023, <https://tass.com/defense/1651657>.

<sup>41</sup> “Egyptian President Says All Russia’s Initiatives on Cooperation with Africa Welcome,” TASS, July 26, 2023, <https://tass.com/world/1652435>.

<sup>42</sup> Anastasia Stognei, Max Seddon, and Daria Mosolova, “Black Box Economics: Russia’s Internal Struggle over Classified Financial Data,” Financial Times, Jan. 29, 2023, <https://www.ft.com/content/42b53987-8280-469e-8014-9ddb0c98463b>.

<sup>43</sup> Maia Nikoladze and Kimberly Donovan, “Russia Sanctions Database,” Atlantic Council, last updated Apr. 11, 2023, <https://www.atlanticcouncil.org/blogs/econographics/russia-sanctions-database/>.

<sup>44</sup> Ibid.

One of the major challenges encountered by Western nations is ensuring that Russian sanctions, whether old or new, are not circumvented through third-countries. Last year, the British defense think tank, the Royal United Services Institute (RUSI), published a report that uncovered at least 450 different kinds of foreign-made components from at least nine Western states in Russian military platforms.<sup>45</sup> Of these, a minimum of 80 different types were subject to export controls by the US, which prompted the conclusion that Moscow’s “military-industrial complex has, in recent decades, been able to successfully evade these [sanctions].”<sup>46</sup>

In 2022, the US Department of Commerce’s Financial Crimes Enforcement Network (FinCEN) and the Bureau of Industry and Security (BIS) issued a joint alert warning about ongoing efforts of persons and entities to evade export controls implemented against Russia and Belarus.<sup>47</sup> The document stated that they had “identified certain transshipment points through which restricted or controlled exports are known to pass before reaching their destinations” in either country.<sup>48</sup> These included but are not limited to the following countries: Armenia, Brazil, China, Georgia, India, Israel, Kazakhstan, Mexico, Nicaragua, Serbia, Singapore, South Africa, Taiwan, Tajikistan, Turkey, the UAE, and Uzbekistan.

For this reason, on August 3, the EU expanded the ban on exports to Belarus to include a higher number of highly sensitive goods and technologies. It also imposed additional restrictions on firearms and ammunition exports, as well as technology suited for use in aviation and the space industry.<sup>49</sup>

While targeted sanctions are likely to have contributed to help relatively weaken Russian arms sales by restricting access to advanced technology and components, they have not been the only factor. An additional element to have played a role in limiting Moscow’s military export capabilities, besides the evident mobilization of its resources to sustain the Ukraine war, is that it is suffering from acute brain drain. Currently, the number of working citizens in Russia under 35 years old represents less than 30 percent of the overall labor force.<sup>50</sup> Many experts expect that in the next few years, the country’s labor supply will decline even further due to “potential

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<sup>45</sup> Steven Chase, “Canadian-Made Parts Found in Iranian Attack Drones Used by Russia in Ukraine,” *Globe and Mail*, Dec. 4, 2022, <https://www.theglobeandmail.com/politics/article-canada-parts-iran-russia-attack-drone/>.

<sup>46</sup> *Ibid.*

<sup>47</sup> “FinCEN and the U.S. Department of Commerce’s Bureau of Industry and Security Urge Increased Vigilance for Potential Russian and Belarusian Export Control Evasion Attempts,” FinCEN and BIS Joint Alert, June 28, 2022, <https://www.fincen.gov/sites/default/files/2022-06/FinCEN%20and%20Bis%20Joint%20Alert%20FINAL.pdf>.

<sup>48</sup> *Ibid.*

<sup>49</sup> “Sanctions Adopted Following Russia’s Military Aggression Against Ukraine,” European Commission, last updated Sept. 12, 2023, [https://finance.ec.europa.eu/eu-and-world/sanctions-restrictive-measures/sanctions-adopted-following-russias-military-aggression-against-ukraine\\_en](https://finance.ec.europa.eu/eu-and-world/sanctions-restrictive-measures/sanctions-adopted-following-russias-military-aggression-against-ukraine_en).

<sup>50</sup> Josh Lipsky and Niels Graham, “Indonesia’s Economy Will Surpass Russia’s Sooner Than Expected. Here’s What That Says about the Global Economy,” *Atlantic Council*, Aug. 31, 2023, <https://www.atlanticcouncil.org/blogs/econographics/indonesias-economy-will-surpass-russias-sooner-than-expected-heres-what-that-says-about-the-global-economy/>.

migrants viewing it less favorably and as its living standards converge with other former Soviet republics.”<sup>51</sup>

Despite the issue of labor shortage also being aggravated by military recruitment, Bloomberg reported over the summer that Russia’s war economy expanded more than had been forecasted, despite sanctions.<sup>52</sup> According to the data provided, Russian GDP grew by 4.9 percent in the second quarter of this year, highlighting the limited impact international bans have had on its industry.<sup>53</sup>

Some more nuance can be helpful in understanding the complexity of measuring how effective the Russian defense industry is. In December, Russia was recorded as having experienced its sharpest year-over-year decline in industrial manufacturing since the pandemic.<sup>54</sup> Yet as noted by Maia Nikoladze and Kimberly Donovan, both involved with the GeoEconomics Center at Atlantic Council, this did not mean that all sectors performed badly that year. For example, the production of finished metal goods, which includes bombs, arms, and ammunition, rose by 7 percent in 2022.<sup>55</sup> However, it must be said that this increase was likely driven entirely by the national requirements necessary for Russia’s war efforts and not due to international demand.

## Impact of the Russia-Ukraine war on Russia’s customer base

### Asia and Oceania

As shown in Figure 2, from 2018 through 2022, Asia and Oceania accounted for 65 percent of the overall Russian arms exports, a very slight decrease from previous years.<sup>56</sup> Prior to its invasion of Ukraine, Russia was the largest weapons supplier to South East Asia, delivering approximately \$10.9 billion worth of arms to the region between 2001 and 2021.<sup>57</sup> The Kremlin has traditionally been able to count on the loyalty of regional customers, such as Vietnam, which

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<sup>51</sup> Ibid.

<sup>52</sup> “Russia’s War Economy Expands More Than Forecast Despite Sanctions,” Bloomberg, Aug. 11, 2023, <https://www.bloomberg.com/news/articles/2023-08-11/russia-s-war-economy-is-on-course-to-recover-from-sanctions-hit>.

<sup>53</sup> Ibid.

<sup>54</sup> “Putin’s War Machine Helps Keep Russian Industry Humming,” Bloomberg, Feb. 1, 2023, <https://www.bloomberg.com/news/articles/2023-02-01/putin-s-war-machine-helps-keep-russian-industry-humming>.

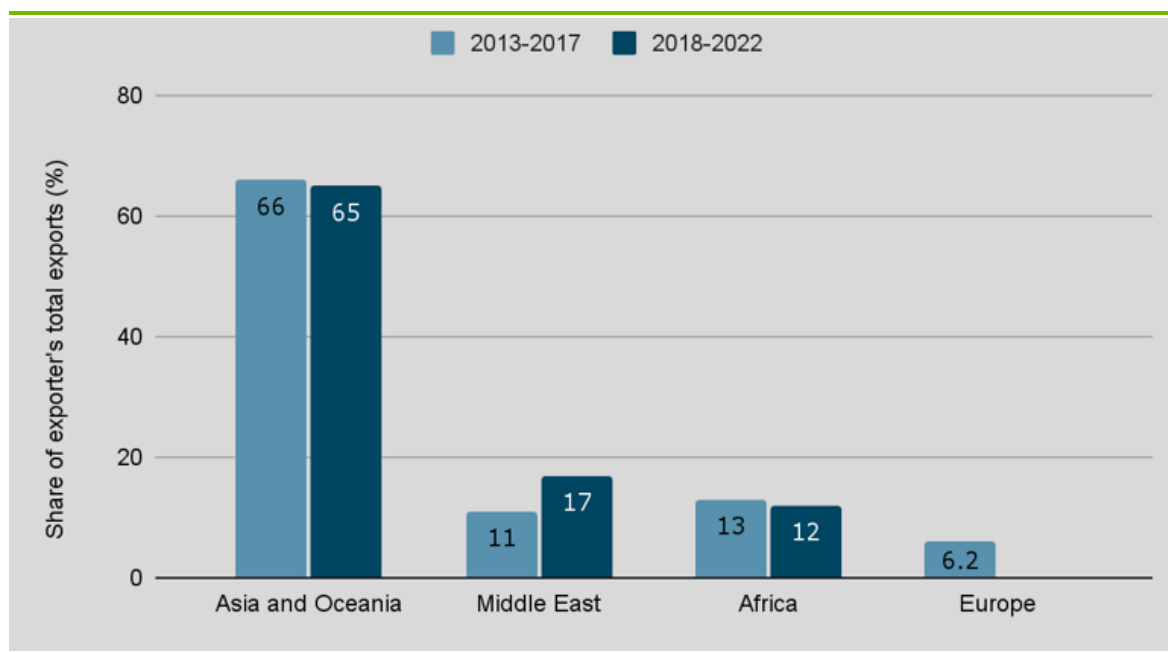
<sup>55</sup> Ibid.; Nikoladze and Donovan, “Russia Sanctions Database.”

<sup>56</sup> Wezeman et al., “Trends.”

<sup>57</sup> Sebastian Strangio, “Are Russian Arms Exports to Southeast Asia a Thing of the Past?,” *The Diplomat*, May 9, 2022, <https://thediplomat.com/2022/05/are-russian-arms-exports-to-southeast-asia-a-thing-of-the-past/>.

different analysts estimate relies on Russia for around 70 percent of its weaponry.<sup>58</sup> Moscow’s main advantage in the area has been two-fold: low pricing and an uncommon willingness to sell arms to states under embargoes resulting from dubious human-track records. Among these is Myanmar, which a recent United Nations report found has imported at least \$1 billion in arms and military-related equipment since the coup in 2021. Of this, \$406 million in sales listed were from Russian entities, nearly double the amount included from China.<sup>59</sup>

Figure 2. Main recipients of Russian arms exports per region



Source: Pieter D. Wezeman, Justine Gadon, and Siemon T. Wezeman, “Trends in World Military Expenditure, 2022,” Stockholm International Peace Research Institute.

For some experts, the Russian approach means that it will likely remain a popular weapons supplier to Southeast Asia in the long-term, especially as many states' limited defense budgets do not allow them to buy more expensive equipment.<sup>60</sup> In return, some of these nations may contribute funding to Russia’s struggling defense sector. However, not all signs point to this.

<sup>58</sup> Le Hong Hiep, “Will Vietnam Be Able to Wean Itself off Russian Arms?,” Fulcrum, Apr. 4, 2022, <https://fulcrum.sg/will-vietnam-be-able-to-wean-itself-off-russian-arms/>.

<sup>59</sup> Heather Chen, “UN Expert Says Myanmar Imported \$1 Billion in Arms Since Coup, Much of It from Russia and China,” CNN, May 19, 2023, <https://edition.cnn.com/2023/05/18/world/un-myanmar-report-military-junta-deadly-arms-sales-russia-china-intl-hnk/index.html>.

<sup>60</sup> Richard A. Bitzinger and Kenneth Boutin, “Russia’s New Arm’s Distance from Asia,” East Asia Forum, Aug. 27, 2022, <https://www.eastasiaforum.org/2022/08/27/russias-new-arms-distance-from-asia/>.



Vietnam reportedly halted its military modernization program, in part due to an anti-corruption campaign but also amid concerns that the Kremlin may not be able to fulfill orders because of the Ukraine war.<sup>61</sup> Its last confirmed orders for Russian weapons date back to 2016, recording a request for 64 T-90S tanks, the first batch of which was not delivered until three years later, and in 2019, when it ordered 12 Yak-130 light combat aircraft. Myanmar officials have alluded to similar concerns about future contracts and have not placed any orders over the last two years.<sup>62</sup>

Regardless, Russia appears to be looking to deepen its military cooperation with Association of Southeast Asian Nations (ASEAN) countries. Dmitry Shugaev, director of Russia's Federal Service for Military-Technical Cooperation, stated in a recent interview that his country was open to new joint manufacturing schemes with ASEAN members and shares close diplomatic ties with them.<sup>63</sup> However, it is not the only player focused on expanding its influence in the region: the Biden administration has voiced interest in enhancing its strategic partnership with Vietnam, and China has vested economic interests there as well. It is likely that the US will manage to keep exerting its influence on certain of these countries to abandon the purchases of Russian-made weapons. The most recent case of this was Indonesia, who in 2021 opted out of buying a Russian aircraft and chose US and French alternatives.

## Middle East

The Middle East is the only region that recorded a decent increase in Russian arms purchases from 2013 to 2017 and 2018 to 2022, now accounting for 17 percent of these exports.<sup>64</sup> This is not necessarily surprising, given that most Arab countries have continued to do business with the Kremlin post-invasion and the region was among the priority ones listed by Putin last year. At the Army 2022 defense exposition in Moscow, the Russian president vowed to increase defense ties with allies and declared a readiness to supply them with advanced weapons. "Russia sincerely values its historically strong, friendly and trusting relations with countries of Latin America, Asia, and Africa," Putin stated at the time.<sup>65</sup> Additionally, the country had its

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<sup>61</sup> Hiep, "Will Vietnam Be Able."

<sup>62</sup> "Junta Watch: Myanmar Military 'Not Worried' as World Shuns Main Supplier Russia," *The Irrawaddy*, Mar. 4, 2022, <https://www.irrawaddy.com/news/burma/junta-watch-myanmar-military-not-worried-as-world-shuns-main-supplier-russia.html>.

<sup>63</sup> "Russia Is Optimistic about Future of Military-Technical Cooperation with ASEAN," *Asian Military Review*, May 26, 2023, <https://www.asianmilitaryreview.com/2023/05/russia-is-optimistic-about-future-of-military-technical-cooperation-with-asean/>.

<sup>64</sup> Wezeman et al., "Trends."

<sup>65</sup> "What Did China and Iran Bring to Russia's Army 2022 Defense Expo?," *Defense News*, Aug. 23, 2023, <https://www.defensenews.com/industry/techwatch/2022/08/23/what-did-china-and-iran-bring-to-russias-army-2022-defense-expo/>.

own pavilion and a larger presence than anticipated at the 2023 edition of the IDEX arms conference in Abu Dhabi, showing off a considerable number of weapons.

Among these, the Kalashnikov Group was showcasing its Zala KYB loitering munition rather than the Lancet that is often seen in action in Ukraine. In response to queries as to why this model was chosen, a company representative said it was partly due to the Lancet being considerably bigger in size, making it harder to ship for a short-term event.<sup>66</sup>

No major partnerships or transfers of technology have since been announced with Gulf countries. On the contrary, states that previously had shown interest in Russia's Su-57 fighter program now seem to be looking at Western options. Both Qatar and the UAE have expressed interest in the F-35 and Rafale, and Saudi Arabia is potentially looking to join the UK-Italy-Japan Global Combat Air Programme (GCAP).<sup>67</sup> In addition, especially in the unmanned sector, these countries are increasingly looking to Turkey as a key supplier for drones. In July, Saudi Arabia placed a considerable order for Akinci combat drones manufactured by Baykar, whose chief executive called it the "biggest sale between the two countries in Turkish defense history."<sup>68</sup> Under this deal, Riyadh became the third operator of Baykar drones within the Gulf area, along with Qatar and Kuwait. In June, Riyadh announced it was acquiring TB2s as part of a contract valued at \$367 million.<sup>69</sup>

Over the past two years, Iran has shown increasing importance as a major Russian defense partner. In September 2023, Iranian state media reported the delivery of the first YAK-130 trainer jets to Tehran.<sup>70</sup> The delivery of the new light jets represents a major upgrade in the Iranian Air Force fleet. The aircraft, which can also function in the light-attack role, could be a further step in a long-speculated transfer for Su-35s to Tehran, serving as a platform to prepare pilots for operations in the more advanced jet.<sup>71</sup> Iran's support for Russia's war effort has included the shipment of drones, loitering munitions, and tank and artillery rounds.<sup>72</sup>

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<sup>66</sup> The author's own interviews with military representatives at IDEX 2023 in Abu Dhabi, UAE, Feb. 2023.

<sup>67</sup> Jasper Jolly, "Saudis Ask to Join UK, Italy and Japan's Joint Air Combat Programme," *The Guardian*, Aug. 11, 2023, <https://www.theguardian.com/uk-news/2023/aug/11/saudi-arabia-asks-to-join-uk-italy-japan-joint-air-combat-programme-tempest-gcap>.

<sup>68</sup> The author's own phone interview with the CEO of Baykar in July 2023.

<sup>69</sup> Elisabeth Gosselin-Malo, "Saudi Arabia Signs Major Order for Turkish Drones," *Defense News*, July 18, 2023, <https://www.defensenews.com/global/mideast-africa/2023/07/18/saudi-arabia-signs-major-order-for-turkish-drones/>.

<sup>70</sup> "Yak-130 Training Jets Reportedly Arrives in Iran," Islamic Republic News Agency, Sept. 2, 2023, <https://en.irna.ir/news/85218259/Yak-130-training-jets-reportedly-arrives-in-Iran>.

<sup>71</sup> Stetson Payne, "Iran Receives Russian Yak-130 Advanced Trainer Jets," *The Drive*, Sept. 2, 2023, <https://www.thedrive.com/the-war-zone/iran-receives-russian-yak-130-advanced-trainer-jets>.

<sup>72</sup> Howard Altman, "Ukraine Situation Report: Iran's Barter of Military Assistance to Russia Grows Deeper," *The Drive*, Feb. 25, 2023, <https://www.thedrive.com/the-war-zone/ukraine-situation-report-irans-barter-of-military-assistance-to-russia-grows-deeper>.

In exchange, the Islamic Republic has been offered increased cooperation on missiles, air defense, electronics, and even fighter jets, according to the White House Security Council spokesman, John Kirby.<sup>73</sup> The type of fighter was not specified by Kirby; however, he went on to add that Tehran was also mulling over the purchase of attack helicopters and Yak-130s.<sup>74</sup> In February 2023, satellite images showed what was likely a mock-up of an Su-35 parked outside a new underground air force base called Eagle-44.<sup>75</sup> The potential deal for 24 Su-35s has been reported by Iranian media since September 2022 but remains unconfirmed by Russian officials.<sup>76</sup> Although these could be just some of the major transfers from Moscow, it appears that cooperation between the two states is growing, and Iran is becoming one of the major receivers of Russian weapons.

## Africa

Russian arms exports to Africa fell between 2018 and 2022 to 12 percent and could decline further in the future. Siemon Wezeman, one of the authors of the SIPRI report in which these figures were presented, emphasized that this slight decrease was likely due to the Ukraine war, and that it did not imply that weapons transfers to the region would fall to zero.

In terms of strategy, given the importance the Kremlin has attached to Africa, it is plausible that Russia could devote a low number of military assets to these states to meet their demands and, in so doing, reinforce their loyalty and support of Russian interests.<sup>77</sup> Most African nations have not typically placed very large orders or orders for advanced equipment. Instead, they are interested in lower-value weapons, such as armored vehicles or light artillery. Such weapons are specifically what Russia critically needs to sustain its war efforts. As a result, it is unlikely African nations will receive considerable supplies of these types of arms in the near future.

More telling was the fact that Russia overtook China as the largest arms provider in sub-Saharan Africa as of March 2023, with a market share of 26 percent, an increase of 4 percent from the previous period.<sup>78</sup> The three most important importers in the subregion were Angola, Nigeria, and Mali, the state where the Russian paramilitary group Wagner has been active for some time.

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<sup>73</sup> Ibid.

<sup>74</sup> Ibid.

<sup>75</sup> Christoph Koettl and Alexander Cardia, "In Satellite Images and Video, Hidden Clues about an Iranian Air Force Upgrade," *New York Times*, Feb. 17, 2023, <https://www.nytimes.com/2023/02/17/world/iran-air-force-base-jets.html>.

<sup>76</sup> Ibid.

<sup>77</sup> Marion Douet, "Russia Overtakes China as Leading Arms Seller in Sub-Saharan Africa," *Le Monde*, Mar. 28, 2023, [https://www.lemonde.fr/en/le-monde-africa/article/2023/03/28/russia-overtakes-china-as-leading-arms-seller-in-sub-saharan-africa\\_6021018\\_124.html](https://www.lemonde.fr/en/le-monde-africa/article/2023/03/28/russia-overtakes-china-as-leading-arms-seller-in-sub-saharan-africa_6021018_124.html).

<sup>78</sup> Ibid.

Wezeman explained that a link exists between Russian arms transfers and Wagner's presence. "We see in Mali, in Libya, and the Central African Republic (CAR)...Even if there is a UN embargo, the weapons are coming in and they are coming in from Wagner," he said.<sup>79</sup>

Days prior to his death, the leader of Wagner, Yevgeny Prigozhin, released a video possibly shot in Africa, stating that he was there to make Russia even stronger on all continents and Africa even freer.<sup>80</sup> With the announcement of his alleged passing on August 23, it remains too soon to tell if and how Russian defense sales in the region will be impacted.

## Europe

Between 2013 and 2017, Europe only accounted for 6.2 percent of total Russian arms sales, the lowest share of all regions.<sup>81</sup> Although no data was included in the SIPRI report following this period, it is reasonable to assume that this figure is likely lower, or at least has not increased, in light of sanctions imposed on Moscow by European states.

The invasion of Ukraine has opened the door for a strategic shift to take place in Europe that would allow it to finally take charge of its own defense industry and lead it more effectively.<sup>82</sup> France has emerged as a leader and central proponent of this shift and is pushing the EU to take on greater strategic autonomy.

Several experts have pointed out the "outstanding" orders France has recently gotten for expensive and important weapons, suggesting that Paris has achieved profits on Russia's market share.<sup>83</sup> One of these valuable wins was the Indian government approving the purchase of 26 French Rafale fighter jets for its naval forces and three Scorpene-class submarines in July.

Nonetheless, countries still operating Soviet-legacy weaponry that depends on Russia, Belarus, or Ukraine for maintenance and spare parts will have to rapidly find substitutes, as they evidently can no longer buy from them. This pressing need was exemplified in April, when Slovakia's defense minister accused Russian technicians of having intentionally sabotaged the operation of MiG-29 fighter jets owned by the Slovak army.

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<sup>79</sup> Ibid.

<sup>80</sup> Pjotr Sauer, "Wagner Making 'Africa Even More Free,' Says Prigozhin in First Post-Rebellion Video," *The Guardian*, Aug. 22, 2023, <https://www.theguardian.com/world/2023/aug/22/wagner-prigozhin-recruiting-post-russia-rebellion-video-africa-putin>.

<sup>81</sup> Wezeman et al., "Trends."

<sup>82</sup> Stephen Wertheim, "Europe Is Showing That It Could Lead Its Own Defense," *Washington Post*, Mar. 3, 2022, <https://www.washingtonpost.com/outlook/2022/03/03/europe-defense-nato-ukraine-war/>.

<sup>83</sup> Gregor Thompson, "France May Soon Overtake Russia as the World's No. 2 Arms Exporter," *France 24*, Aug. 2, 2023, <https://www.france24.com/en/europe/20230802-france-may-soon-overtake-russia-as-the-world-s-no-2-arms-exporter>.

“There were parts in the engines of the aircraft that Slovak technicians accessed, and then there were parts that Russian ones only accessed. The defects appeared only in those accessed by Russians [who were at the Sliach Air Base in Slovakia until 2022],” Jaroslav Nad said.<sup>84</sup>

The US Department of State has lent a hand to help certain European countries transition from Soviet legacy to NATO standards. One of the ways it is doing this is through the Global Defense Reform Program created in April, which focuses on better aligning the security sector to the needs and challenges of the partner nations and their citizens. Currently, the states taking part in the program are Albania, North Macedonia, and Kosovo, where advisors are primarily assisting ministries of defense (MoDs) in modernizing recruitment and retention capabilities.<sup>85</sup>

## Latin America and the Caribbean

Another contested region for arms exporters is Latin America and the Caribbean (LAC), where China, the US, Russia, and, to some degree, Iran have been battling to expand their influence. At the end of April, Russian Foreign Minister Sergei Lavrov visited Havana, Caracas, Managua, and Brazil to meet with his counterparts. A few weeks later, Iranian President Ebrahim Raisi also traveled to the area, stopping in Venezuela, Nicaragua, and Cuba.

Russia has enjoyed close defense ties with Venezuela, primarily thanks to its military and economic leverage, but their activities have been limited due to the country’s severe financial constraints. As of July 2019, Venezuela still owed \$10 billion for the procurement of 36 Su-30MK2 fighter jets and \$1.1 billion for Rosneft’s investment in Venezuelan oil field development.<sup>86</sup> In addition, the country had already received over \$4 billion in loans from Moscow, according to data from the Russian Economic Development Ministry.<sup>87</sup>

The Kremlin had also initially sent military specialists to support the military equipment provided, including Buk surface-to-air missile systems, S-300 missile systems, T-72 tanks, and

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<sup>84</sup> Michal Hudec, “Russia May Have Sabotaged Slovak Fighter Jets, Says Defense Minister,” Euractiv, Apr. 7, 2023, <https://www.euractiv.com/section/politics/news/russians-may-have-sabotaged-slovak-fighter-jets-says-defence-minister/>.

<sup>85</sup> Sarah Bufano and Lauren Gray, “Helping Countries Transition from Soviet Legacy to Democratic Governance,” Bureau of Political-Military Affairs, Apr. 7, 2023, <https://www.state.gov/dipnote-helping-countries-transition-from-soviet-legacy-to-democratic-governance>.

<sup>86</sup> John E. Herbst and Jason Marczak, “Russia’s Intervention in Venezuela: What’s at Stake?,” Atlantic Council, Sept. 12, 2019, <https://www.atlanticcouncil.org/in-depth-research-reports/report/russias-intervention-in-venezuela-whats-at-stake/>.

<sup>87</sup> Lilya Yapparova, “Why Russia Is Really Sending Military Advisers and Other Specialists to Venezuela,” ed. Alexey Kovalev, trans. Hilah Kohen and Kevin Rothrock, Meduza, July 29, 2019, <https://meduza.io/en/feature/2019/07/29/geopolitical-debts>.

even a helicopter training facility.<sup>88</sup> However, due to the 2019 financial crisis that left the Venezuelan government unable to pay for the services of Russia's Rostec, it made the decision to withdraw most of its personnel and contractors from the country.<sup>89</sup>

More recently, at the Army 2023 forum in Moscow, the Venezuelan deputy minister of defense and his Russian counterpart assessed their current military-technical cooperation agreements in order to take steps to strengthen them.<sup>90</sup> It remains to be seen whether this is more than just rhetoric. Although no exact numbers were disclosed, Foreign Minister Lavrov stated earlier this year that the countries have signed more than 300 collaboration agreements to date across various fields.<sup>91</sup> Their last joint military exercise took place in August 2022.

Another long-standing Latin American strategic partner for Russia has been Nicaragua. According to the United Nations Comtrade database on international trade, Russian exports to the country totaled \$145.36 million in 2021, although figures for military transfers alone are not available.<sup>92</sup> Only a matter of days following the invasion of Ukraine, the Russian deputy prime minister visited Nicaragua to announce the continuation of technological-cooperation agreements between the two militaries. In May, the Russian Ministry of Defense released more details on this, stating it had delivered a large number of military systems to Ortega, including upgraded engineering, construction vehicles, and small watercraft for their naval protection forces.<sup>93</sup> It must be emphasized that in 2022, the Nicaraguan government gave Russia the authorization to deploy its troops, aircraft, and ships to the country for training, security, or emergency response purposes for an undetermined period of time.<sup>94</sup>

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<sup>88</sup> Dmitry Fediushko, "Rosoboronexport Opens Helicopter Training Facility in Venezuela," *Jane's Defence Weekly*, Apr. 1, 2019; "Arms Trade: Russia Helps Venezuela Restore Combat Capacity," Interfax, as reported in *Russia and CIS Defense Industry Weekly*, Apr. 26, 2019; Martin Arostegui, "Russia Missiles in Venezuela Heighten US Tensions," *Voice of America*, Apr. 29, 2019.

<sup>89</sup> Thomas Grove, "In a Blow to Maduro, Russia Withdraws Key Defense Support to Venezuela," *Wall Street Journal*, June 2, 2019, <https://www.wsj.com/articles/in-a-blow-to-maduro-russia-withdraws-key-defense-support-to-venezuela-11559486826>.

<sup>90</sup> "Venezuela and Russia Strengthen Military Cooperation," *Orinoco Tribune*, Aug. 19, 2023, <https://orinocotribune.com/venezuela-and-russia-strengthen-military-cooperation/>.

<sup>91</sup> Laura Gamba, "Russia Calls for Lifting of Sanctions against Venezuela," Anadolu Agency, Apr. 19, 2023, <https://www.aa.com.tr/en/americas/russia-calls-for-lifting-of-sanctions-against-venezuela/2876006>.

<sup>92</sup> "Trade Data," UN Comtrade Database, accessed on Sept. 3, 2023, <https://comtradeplus.un.org/TradeFlow?Frequency=A&Flows=X&CommodityCodes=TOTAL&Partners=558&Reporters=643&period=2021&AggregateBy=none&BreakdownMode=plus>.

<sup>93</sup> "Russian Defense Ministry announces shipment of military products to Nicaraguan Army," TASS, May 18, 2023, <https://tass.com/defense/1619619>.

<sup>94</sup> "Nicaragua Authorizes Entry of Russian Troops, Planes and Ships," Associated Press, June 11, 2022, <https://apnews.com/article/russia-ukraine-politics-caribbean-nicaragua-mexico-b424de6b64611ba1202fb9e2b634f130>.

Nicaragua previously purchased Russian T-72B tanks and a number of helicopters, although no recent orders are known to have been made.<sup>95</sup> For several years, the Kremlin has also operated a law enforcement training center in Las Colinas and a satellite base on Nicaragua's Caribbean coast in the Nejapa crater. Officials have expressed concerns that the tracking facilities may include a port where Russian vessels can go for resupply when deployed in the region.<sup>96</sup> Earlier, there were unconfirmed reports that the LAC country could have received a lower price on 50 additional Russian tanks in exchange for hosting the GLONASS base.<sup>97</sup>

It is worth noting that almost no LAC states have declared sanctions on Russian entities except for the Bahamas, which urged all financial institutions to stop all business and cooperation with them last March.<sup>98</sup>

## Strengths and challenges of the Russian defense industry

Although the SIPRI 2022 report does not provide a comprehensive picture of the current state of the Russian industrial-military complex, because the full effects of sanctions and losses inflicted by the Ukraine war were felt after the report was published, it does reflect that the country's defense industry is capable. From 2018 to 2022, Moscow ranked as the world's second-largest arms exporter, behind the US, and still managed to capture 16 percent of the global market.<sup>99</sup> One factor that has benefited Russia is the long-established pattern of selling weapons to a number of countries it has enjoyed relationships with since the Soviet Union era.

The US Congressional Research Service highlighted this pattern, referring to it as path dependency, which in this case has been sustained in part by "the provision of upgraded versions of already purchased legacy systems."<sup>100</sup> Other listed advantages of doing business with the Kremlin include lower costs than Western options for advanced systems, which

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<sup>95</sup> Daniel Dola, "Opinion: Russian Tank Deal with Nicaragua 'Back to the Future' Moment for U.S.," USNI News, May 9, 2016, <https://news.usni.org/2016/05/09/opinion-russian-tank-deal-with-nicaragua-back-to-the-future-moment-for-u-s>.

<sup>96</sup> Ibid.

<sup>97</sup> John R. Haines, "Everything Old Is New Again: Russia Returns to Nicaragua," Foreign Policy Research Institute, July 22, 2016, <https://www.fpri.org/article/2016/07/everything-old-new-russia-returns-nicaragua/>; Joshua Partlow, "The Soviet Union Fought the Cold War in Nicaragua. Now Putin's Russia Is Back," *Washington Post*, Apr. 8, 2017, [https://www.washingtonpost.com/world/the\\_americas/the-soviet-union-fought-the-cold-war-in-nicaragua-now-putins-russia-is-back/2017/04/08/b43039b0-0d8b-11e7-aa57-2ca1b05c41b8\\_story.html](https://www.washingtonpost.com/world/the_americas/the-soviet-union-fought-the-cold-war-in-nicaragua-now-putins-russia-is-back/2017/04/08/b43039b0-0d8b-11e7-aa57-2ca1b05c41b8_story.html).

<sup>98</sup> Jasper Ward, "Bahamas Orders Halt to Financial Operations with Sanctioned Russian Entities," Reuters, Mar. 13, 2022, <https://www.reuters.com/world/americas/bahamas-orders-halt-financial-operations-with-sanctioned-russian-entities-2022-03-13/>.

<sup>99</sup> Wezeman et al., "Trends."

<sup>100</sup> Bowen, *Russian Arms*.

attracts militaries with lower budgets and minimal political and bureaucratic constraints.<sup>101</sup> For instance, in contrast, the US Foreign Military Sales regime comes with many more strings attached and more legislative control designed to push countries to meet appropriate human-rights and end-user criteria.

Russian weapons that have traditionally found the greatest level of success on an international scale are aircraft and air defense systems.<sup>102</sup> These range from the MiG-29 and Su-27 fighters to attack and transport helicopters and encompass short- and long-range anti-aircraft systems, such as the Pantsir and the S-300. There have been legitimate concerns from current and potential customers that Russia's war in Ukraine and contingent losses would translate into its inability to complete planned deliveries of weapons on time or result in delays. At the time of this writing, deliveries show that the war has nonetheless spared a few sectors.

In May 2023, Zimbabwean officials confirmed that the country had accepted delivery of 18 Kazan Ansat helicopters produced by Russia's Rostec as part of a deal valued at \$320 million. Fourteen more are scheduled to be delivered by 2025.<sup>103</sup> This type of helicopter does not appear to have been playing a role in Ukraine. Within the same month, reports emerged that Moscow had successfully delivered six additional second-hand L-39 Albatross light-attack aircraft to the CAR. It has been claimed that the first L-39 was delivered in August 2022, with the goal of broadening Russian influence and economic interests in the country.<sup>104</sup>

More recently, a senior Russian defense official was quoted by Reuters confirming that the country would be able to deliver India's S-400 missile systems on time.<sup>105</sup> Since the L-39—a trainer/light-attack jet—has not been used over the skies of Ukraine, the VKS likely has room to cede some units. The delivery of the S-400 missile, however, goes against this trend somewhat, as this type of weapon system plays a key role within Russian air defenses. It should be noted that the \$5.4 billion deal was signed back in 2018, and it likely represents an important source of revenue for manufacturer MKB Fakel.<sup>106</sup>

It is important to keep in mind that limited production capability, quality control problems, and issues with manufacturing entirely new designs are often cited as key challenges for the

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<sup>101</sup> Ibid.

<sup>102</sup> Ibid.

<sup>103</sup> "Zimbabwe: A Fleet of Russian Helicopters for Disaster Management, Policing," Africanews, May 19, 2023, <https://www.africanews.com/2023/05/19/zimbabwe-a-fleet-of-russian-helicopters-for-disaster-management-policing/>.

<sup>104</sup> "Russia's Strategic Move: Supplying L-39 Albatross Aircraft to the Central African Republic," Military Africa, May 15, 2023, <https://www.military.africa/2023/05/russias-strategic-move-supplying-l-39-albatross-aircraft-to-the-central-african-republic/>.

<sup>105</sup> "Russia Supplying S-400 Air Defence Systems to India on Schedule—Defence Official," Reuters, Aug. 14, 2023, <https://www.reuters.com/business/aerospace-defense/russia-supplying-s-400-air-defence-systems-india-schedule-defence-official-2023-08-14/>.

<sup>106</sup> Ibid.



Russian industry.<sup>107</sup> In addition to facing those challenges, Moscow has had to increasingly turn inward and become more self-sufficient, which is no easy task when the country is highly dependent on foreign systems. As part of a recent study, the RAND Corporation examined the Russian uncrewed defense industrial base, where 18 different platforms were analyzed. Although information was not available for all systems, the report found that the foreign components most widely mentioned in the sample set were cameras and sensors sourced from China and Japan, satellite receivers from China and the US, batteries and chargers from China, and computer parts, microchips, and engine parts from various countries.<sup>108</sup>

For instance, 40 percent of the components of the Orlan-10E drone that is commonly used by Russian troops in Ukraine are from foreign manufacturers. The report stated that it remained unclear how the war would affect future or scheduled contracts for unmanned aerial systems, including Myanmar's order for an undisclosed number of Orlan-10s placed in 2021. It concluded that in the short term, the most important buyer of Russian uncrewed systems would remain the Russian MoD, resulting in greater national than international demand.<sup>109</sup>

This could explain why some countries are said to be seeking alternative sources of arms supply, as is the case for Algeria. The *North Africa Post* reported in May that Russia was "de-prioritizing" exports and "burning" through its weapons stockpile to sustain its war efforts in Ukraine, hence why the Algerian defense minister would have visited France and Brazil for possible deals.<sup>110</sup>

As expected, it is difficult to assess the actual state of Russian arms manufacturing currently, since reports coming from inside versus outside the country contradict one another. An assessment conducted by the Center for Strategic and International Studies (CSIS) on the impact of sanctions on the Russian defense industry found that they have resulted in shortages of more advanced foreign parts, forcing Moscow to substitute them with lower-quality options.<sup>111</sup> The authors of the report agreed that the country's efforts at finding state-backed, high-tech replacements are still largely unsuccessful. In an attempt to solve this critical issue, the Russian government announced a national plan for technology development until 2030,

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<sup>107</sup> Bowen, *Russian Arms*.

<sup>108</sup> Wilson et al., "Characterizing the Uncrewed Systems."

<sup>109</sup> Ibid.

<sup>110</sup> "Algerian Army in Disarray as Russian Supplies Plummet," *North Africa Post*, May 16, 2023, <https://northafricapost.com/67687-algerian-army-in-disarray-as-russian-supplies-plummet.html>.

<sup>111</sup> Max Bergmann et al., "Out of Stock? Assessing the Impact of Sanctions on Russia's Defense Industry," Center for Strategic and International Studies, Apr. 14, 2023, <https://www.csis.org/analysis/out-stock-assessing-impact-sanctions-russias-defense-industry>.

which called for the “share of such domestic goods in the total volume of consumption [to] be at least 75 percent.”<sup>112</sup>

In June, Putin stated that while the production of weapons and military equipment with the highest demand had increased ten-fold in one year, industry was also facing deficits in essential weapons such as tanks and long-range missiles. Against these declarations, the Jamestown Foundation found that not only was there little data to support the figures provided by the Kremlin, but that in comparison to 2022 revenues, Russian arms manufacturing appears to have slowed down.<sup>113</sup> More recently, the Russian central bank announced it would hold an extraordinary meeting on August 15 concerning the level of its interest rate, after the ruble declined to its weakest value in nearly 17 months.<sup>114</sup>

Economic analysts have pointed out that the ruble has continuously been losing value since January 2023, and even “slid past the psychologically important level of 100 to the dollar” in mid-August. Overall, the ruble has fallen by 26 percent in the last year alone because of two central factors: decline in export revenues and increased military spending. These figures have made the Russian ruble the third-worst-performing currency globally in 2023.<sup>115</sup>

## Impact of the war on Russian product perception

The Ukraine war has fueled fierce debates over the “death” and “birth” of different types of systems. Analysts have argued extensively over the relevance or irrelevance of the tank and helicopter, for example. And while the concentration of cameras in the war has offered a window into the performance of various equipment, it is important to remember that videos may skew perception by offering only a glimpse into what is occurring. Nonetheless, perception itself is a sales virtue, and the heavy fighting has served as a stage for different platforms to earn their combat-proven status.

Russia has unleashed the full spectrum of its available equipment. While it is too early to tell how the performance of its systems will affect its sales and whether they have generated interest abroad, the chance to prove itself in combat will be of considerable added value to platforms. In this regard, some equipment has shown itself to be especially effective. A RUSI

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<sup>112</sup> Pavel Luzin, “The True State of Russian Arms Manufacturing, June 2023,” *Eurasia Daily Monitor*, June 15, 2023, <https://jamestown.org/program/the-true-state-of-russian-arms-manufacturing-june-2023/>.

<sup>113</sup> Ibid.

<sup>114</sup> Pjotr Sauer, “Russia’s Central Bank to Hold Extraordinary Meeting after Rouble Falls to 16-Month Low,” *The Guardian*, Aug. 14, 2023, <https://www.theguardian.com/business/2023/aug/14/rouble-falls-to-16-month-low-dollar-russian-exports-collapse-war-ukraine-russia-economy>.

<sup>115</sup> Ibid.

report outlined how the heavy fielding of Russian drones in coordination with artillery or other striking drones have performed well, especially if combined with its Strelets reconnaissance, control, and communication system.<sup>116</sup> The Lancet-3 loitering munition, while raising some questions regarding the strength of its warhead, has nonetheless become a prolific hunter on the battlefield, and Ukrainian artillery has gone to great lengths to fit their vehicles with protective cages.<sup>117</sup> The same RUSI report went on to emphasize the positive performance of the Russian Electronic Warfare kit, with an article reporting that it was capable of disturbing the signal of JDAM bombs, degrading their accuracy.<sup>118</sup> Likewise, anti-tank guided missiles have continued to prove their lethality in blunting Ukrainian attacks, although their efficacy had already been demonstrated during conflicts around the Middle East.

Other equipment has had more mixed results. Russian helicopters have been heavily constrained by a contested airspace, forcing many types, such as the Mi-24 or Mi-8, to sometimes be employed by firing volleys of dumb rockets from a distance. At the same time, however, the Ka-52 was shown targeting Ukrainian armored convoys from afar, highlighting how the type of weapon loaded and the doctrine of use are important elements in considering the relevance of equipment. Nonetheless, the air defenses that stretch out across the two sides of the frontlines are some of the toughest in the world, unlikely to be encountered in other places where clients still view the Russian birds as key-enablers in low-intensity warfare.

Similarly, while Russian air defense has managed to keep the Ukrainian Air Force in check, thanks to its sheer numbers, at times it has shown itself to be vulnerable, especially when called to tackle small drones and loitering munitions. An example of this was the destruction of an S-400 battery in Crimea on August 26 by a Neptune anti-ship missile modified for a land attack role.<sup>119</sup> The countless drone incursions into Russian territory have further confirmed their difficulty in countering this threat, exposing a gap within the layered defenses.

What has not been seen, however, has been equally as telling. The T-14 Armata, Bumerang, and Kurganets-25 have been the great absentees of the conflict. While initially seen as significant challenges to their Western counterparts, with the Armata in particular considered a game

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<sup>116</sup> Jack Watling and Nick Reynolds, "Meatgrinder: Russian Tactics in the Second Year of Its Invasion of Ukraine," Royal United Services Institute (RUSI), May 19, 2023, <https://rusi.org/explore-our-research/publications/special-resources/meatgrinder-russian-tactics-second-year-its-invasion-ukraine>.

<sup>117</sup> Sam Cranny-Evans, "Russia's Artillery War in Ukraine: Challenges and Innovations," Royal United Services Institute (RUSI), Aug. 9, 2023, <https://rusi.org/explore-our-research/publications/commentary/russias-artillery-war-ukraine-challenges-and-innovations>.

<sup>118</sup> Ibid; Thomas Withington, "Jamming JDAM: The Threat to US Munitions from Russian Electronic Warfare," Royal United Services Institute (RUSI), June 6, 2023, <https://rusi.org/explore-our-research/publications/commentary/jamming-jdam-threat-us-munitions-russian-electronic-warfare>.

<sup>119</sup> Stetson Payne, "Ukraine Situation Report: Claims Swirl around What Destroyed S-400 In Crimea," The Drive, Aug. 26, 2023, <https://www.thedrive.com/the-war-zone/ukraine-situation-report-claims-swirl-around-what-destroyed-s-400-in-crimea>.

changer in the tank field, the next generation of Russian heavy vehicles has still not made its combat debut. The Armata has been plagued by constant delays in serial production since its unveiling in 2015, with Russia pushing back its production goal of 2,300 tanks from 2020 to 2025.<sup>120</sup> RIA, the Russian state news agency, reported in April that the tank had allegedly started to fire at Ukrainian positions without actually participating in direct assault operations.<sup>121</sup> At the time of this writing, however, there was still no evidence of the tanks being in the theater.

Nonetheless, the sale of military equipment is not always related only to battlefield performance. Prices and political choices (or lack thereof) will continue to ensure a potential base of clients for Moscow's defense firms, since ties will continue to be cemented and built upon through the sale of military material. The case of Iran, which has struggled for years to find a partner to reequip its armed forces, is a striking example of this. Furthermore, the global political isolation that some of Russia's allies face will also serve to restrict the pool of choices available.

## Looking ahead: shaping factors of future successes or failures

The invasion of Ukraine has limited the Russian products available for export, since the Russian military continues to consume large amounts of armored vehicles, artillery, drones, and other equipment in a brutal battle of attrition. This ongoing clash has required the Kremlin to push its national companies to produce as many vehicles as possible while refurbishing old Soviet equipment to regenerate the losses sustained. The focus on the war and the imposition of sanctions that have stopped the supply of Western dual-use components to Russia have put pressure on the national industry and shifted the focus of production.

While in certain areas Moscow has been able to maintain some degree of defense sales, as long as its military remains tied down in its occupation of Ukrainian territory, it will likely be the overwhelming receiver of material. Its continuing sales have focused on products that are either not in use in the battlefield in Ukraine, such as the Ansat helicopter, or have been limited to small quantities and key partners, as in the case of jets and helicopters sold to Mali and Iran. These products (e.g., attack jets and helicopters useful for counterinsurgency) represent smaller deliveries that are low-wield and high-reward—since being limited in absolute numbers makes them important force multipliers—that are provided to key area partners. In

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<sup>120</sup> "Russia's New T-14 Armata Battle Tank Debuts in Ukraine—RIA," Reuters, Apr. 25, 2023, <https://www.reuters.com/world/europe/russias-new-t-14-armata-battle-tank-debuts-ukraine-ria-2023-04-25/>.

<sup>121</sup> Ibid.

addition, the air units of the Russian Armed Forces have not seen the same level of attrition as their land counterparts and are not being employed on as large a scale. This allows a surprising amount of room, albeit still relatively small, for maneuver in terms of exports.

At the same time, the three countries that have traditionally been the top customers of Russian weaponry—India, China, and Egypt—have all seen a progressive rise of their own national defense industries. This, at least in certain areas of production, will likely entail a further decrease of purchases from Russia. In the case of China, it could even mean a progressive dependency on Beijing for critical components and a loss of markets to Chinese competitors.

The lukewarm relations that many nations outside of NATO and the EU still maintain toward Russia will leave a fertile ground for the future resumption of military exports from Russia once hostilities have ceased. For the time being, however, this has opened the door for third-party countries to step in and fill the gaps left by Russia, with nations such as France and Turkey taking advantage of the void.

As long as the invasion of Ukraine continues and the attrition rate remains high, it is likely that we will continue to see an overall waning of Russian military exports, with exceptions for material that can be spared and deliveries to states that the Kremlin believes to be strategic.

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