

RESEARCH ARTICLE

Russian counter-trade as a mechanism for promoting arms sales and diplomatic influence

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Abstract

Why and how does Russia engage in the arms trade? Scholars have largely focused on why Russia participates in the arms trade, often neglecting the equally crucial question of how it conducts this trade. Yet understanding the mechanisms by which Russia promotes arms sales provides deeper insights into why it does so. While many portray Russia's arms trade as driven by economic or strategic motivations, few examine the specific tools it employs, particularly defence counter-trade, which includes non-monetary barter, counter-purchase obligations, and industrial or technological investments (offsets). This paper fills that gap by offering an eight-decade perspective on Russian arms trade practices, drawing on data and case studies to uncover a more nuanced set of motives. Russia integrates economic and political objectives in its arms trade, seeking not only to out-compete Western suppliers but also to expand or regain influence in various regions, circumvent Western-imposed sanctions, secure access to valuable resources, and sustain its military capabilities. Although barter and technological cooperation have long been part of its trade practices, Russia has only recently adopted offset practices in a systematic way. By leveraging defence counter-trade, Moscow aims to stabilise, and potentially grow, its arms exports as global conditions shift.

Keywords: arms trade; counter-trade; defence; diplomacy; offsets; Russia

Introduction

Why and how does Russia engage in the arms trade? International Relations and Security Studies scholars have mostly focused on the first question of *why*, while largely neglecting the second, *how*. However, this is a mistake because the two questions are deeply connected. Most importantly, explanations of how Russia engages in the arms trade inform explanations of why Russia does so. Most scholars have either emphasised economic or strategic motives for Russia's arms sales abroad. The Soviet Union and then Russia would either sell arms to make money and sustain the defence industry,¹ or would do so to cast influence over buyer states and the surrounding regions.² Some scholars have rejected this economic–strategic dichotomy, believing instead the

¹See, for example, Robbin F. Laird, 'Soviet arms trade with the non-communist Third World', *Proceedings of the Academy of Political Science*, 35:3, *The Soviet Union in the 1980s* (1984), pp. 196–213, <https://doi.org/10.2307/1174128>; and Christopher Mark Davis, 'The Russian defence industry, 1980–2025: Systemic change, policies, performance and prospects', in Keith Hartley and Jean Belin (eds), *The Economics of the Global Defence Industry* (Abingdon, Oxon; New York, NY: Routledge Studies in Defence and Peace Economics, 2019), pp. 69–125.

²See, for example, Debbie J. Gerner, 'Arms transfers to the Third World: Research on patterns, causes and effects, international interactions', *International Interactions*, 10:1 (1983), pp. 5–37, <https://doi.org/10.1080/03050628308434605>; and Stephen

financial-economic benefits of the arms trade to be part and parcel of Moscow's quest for influence.³ Yet, while generally focusing on limited and often different time frames, none of these scholars has systematically explored the mechanisms Russia uses to promote arms sales and diplomatic influence, specifically defence counter-trade: an obscure trading mechanism, study of which is hindered by the topic's strategic sensitivity. The aim of this paper, then, is to address this intellectual gap by adopting an eight-decade perspective, drawing on a broad array of data and specialised publications, and employing mini-case studies to ultimately reveal a more complex, nuanced, and articulated set of motives behind Russia's arms trade.

Counter-trade consists of three key components: first, non-monetarised barter trade; second, counter-purchase obligations involving commercial purchases; and third, reciprocal or 'offset' industrial and technological investments. The offset arrangement provides buyer states with industrial and technological benefits beyond mere access to the weapons themselves, while barter and counter-purchase arrangements help ease payment terms. For centuries, foreign suppliers have used defence counter-trade to secure contracts and clients in the face of fierce competition.⁴ Today, it remains an integral part of the global arms trade, with offsets alone accounting for about half of international military transactions.⁵ While the Soviet Union historically engaged in barter and technological cooperation, Moscow has only recently begun to adopt offset practices in a more comprehensive and systematic manner. Contemporary Russia leverages defence counter-trade to out-compete Western suppliers, expand or restore its influence in various regions, bypass Western-imposed sanctions (such as those on international finance), secure access to minerals and other resources, and sustain its military operations, such as in Ukraine.

Russia has turned to defence counter-trade in an attempt to halt, and possibly reverse, the decline in its arms sales. Yet the West's imposition of strategic trade sanctions following Russia's annexation of Crimea in 2014, and again after the full-scale invasion of Ukraine in 2022, led to a dramatic drop in Russian arms exports, reaching levels not seen since the Soviet Union's dissolution. Between 2014–18 and 2019–23, Russia's arms exports fell by a striking 53 per cent.⁶ This decline was exacerbated by several factors, including the poor performance of Russian equipment in combat, Moscow's prioritisation of supplying its own forces in Ukraine, and the efforts of its two largest customers, China and India, to achieve self-sufficiency through import substitution.⁷ Under such pressure, Russia's counter-trade strategies continue to evolve. In fact, given its reluctance to transfer sensitive technology through offsets, Russia is expected to increasingly revert

Blank and Edward Levitzky, 'Geostrategic aims of the Russian arms trade in East Asia and the Middle East', *Defence Studies*, 15:1 (2015), pp. 63–80, <https://doi.org/10.1080/14702436.2015.1010287>.

³See Stephen Blank, and Younkyyo Kim, 'Arms sales and Russia's future as an Asian power', *Asian Politics and Policy*, 6:2 (2014), pp. 267–84, <https://doi.org/10.1111/aspp.12108>; Theo Neethling, 'Assessing Russia's new interaction with Africa: Energy diplomacy, arms exports and mineral resource markets', *Strategic Review for Southern Africa*, 42:2 (2020), pp. 15–42, <https://doi.org/10.35293/srsa.v42i2.72>; Nikolay Kozhanov (ed.) *Russia's Relations with the GCC and Iran* (Singapore: Palgrave Macmillan, 2021).

⁴Whereas defence offsets emerged in the 19th century, arms barter has existed at least since the Greek city-states. See Keith, Krause, *Arms and the State: Patterns of Military Production and Trade* (New York: Cambridge University Press, 1992).

⁵See BIS, 'Offsets in defense trade: Twenty-second study', U.S. Department of Commerce Bureau of Industry and Security (Fiscal Year 2018), p. 3, www.bis.doc.gov/index.php/documents/other-areas/strategic-industries-and-economic-security/offsets-in-defense-trade/2388-twenty-second-report-to-congress-6-18/file; and Aleksandar Jovic, Alexis Strang, and Riley White, 'Defense offsets expectations are considerable, but implementation is uneven', *Avascent* (23 February 2021), www.avascent.com/newsinsights/perspectives/defense-offsets-expectations-are-considerable-but-implementation-is-uneven/.

⁶Peter D. Wezeman, Aude Fleurant, Alexandra Kuimova, et al., 'Trends in international arms transfers, 2019', Stockholm International Peace Research Institute (SIPRI) (2020), <https://doi.org/10.55163/YJYW4676>; Peter D. Wezeman, Katarina Djokic, Mathew George, Zain Hussain, and Siemon T. Wezeman, 'Trends in international arms transfers, 2023', Stockholm International Peace Research Institute (SIPRI) (2024), <https://doi.org/10.55163/PBRP4239>.

⁷Robert Dalsjö, Michael Jonsson, and Johan Norberg, 'A brutal examination: Russian military capability in light of the Ukraine war', *Survival*, 64:3 (2022), pp. 7–28, <https://doi.org/10.1080/00396338.2022.2078044>; Max Bergmann, Maria Snegovaya, Tina Dolbaia, and Nick Fenton, 'Seller's remorse: The challenges facing Russia's arms exports', Center for Strategic & International Studies (CSIS) (18 September 2023), <https://www.csis.org/analysis/sellers-remorse-challenges-facing-russias-arms-exports>; and Cullen Hendrix, 'Russia's boom business goes vust', *Foreign Policy* (blog) (28 March 2024), <https://foreignpolicy.com/2023/05/03/russia-arms-sales-weapons-exports-worldwide-ukraine-war/>.

to Soviet-style counter-trade strategies, namely bartering weapons for critical resources and basing rights.

Following this introduction, the paper is structured as follows: the next section reviews the existing literature on why Russia engages in the arms trade, exploring in particular the mechanisms employed for participating in such trade. The third section examines Soviet defence counter-trade practices after the Second World War, while the fourth focuses on Russia's post-Cold War pursuit of defence counter-trade. The penultimate section looks ahead by assessing the impact of the Ukraine war and the loss of export markets on Russia's evolving counter-trade strategies. The concluding section discusses the findings and their broader theoretical and political implications.

Why (and how) Russia engages in the arms trade

Russian official documents – including the Military Doctrine (2014),⁸ the National Security Strategy (2021),⁹ and the Concept of the Foreign Policy of the Russian Federation (2023)¹⁰ – do not explicitly state the reasons for Russia's engagement in the arms trade. Nonetheless, they suggest the importance of both economic and strategic motives. Most importantly, according to the latest Russian Military Doctrine, 'the main task of the military-industrial complex is ensuring its effective functioning as a high-tech multi-sector [branch] of the economy, able to meet the needs of the Armed Forces [while providing] strategic presence of the Russian Federation in the world markets high-tech products and services'.¹¹ Furthermore, Russia 'carries out military-political and military-technical cooperation with foreign States ... on the basis of foreign policy, economic advisability and in accordance with Federal legislation and international treaties of the Russian Federation'.¹²

The literature exploring why and how Russia engages in the arms trade has aimed to shed light on these motives and can be categorised into five distinct strands. The first strand attributes Russia's arms sales primarily to economic motivations.¹³ In contrast, the second emphasises strategic drivers as the main force behind Russia's arms trade.¹⁴ A third approach suggests that the focus on financial-economic versus political-military factors varies depending on the historical period under review, although scholars within this group disagree on the specific timelines.¹⁵ A fourth

⁸Government of the Russian Federation, *The Military Doctrine of the Russian Federation*, approved by President Vladimir Putin on 25 December 2014, unofficial English translation by Harvard Kennedy School, Belfer Center for Science and International Affairs, https://web.archive.org/web/20180501051233id_/https://www.offiziere.ch/wp-content/uploads-001/2015/08/Russia-s-2014-Military-Doctrine.pdf.

⁹Government of the Russian Federation, *National Security Strategy of the Russian Federation*, approved 2 July 2021, unofficial English translation, Russian Military & Security Blog, https://rusmilsec.blog/wp-content/uploads/2021/08/nss_rf_2021_eng_.pdf.

¹⁰Ministry of Foreign Affairs of the Russian Federation, *Foreign Policy Concept of the Russian Federation*, approved 31 March 2023, unofficial English translation, https://mid.ru/en/foreign_policy/fundamental_documents/1860586/?TSPD_101_R0=08765fb817ab200083ab7b0182e54063e0ab3e745be57dcd1853a733842a95b1ea079eb493ace2370882ef08391430005cc3fbca68a79bd9b8137068a5c7e51149307a4e72f4aed612b916cc4a532b715a7ff9713b8ba11694b76902d556066d.

¹¹Government of the Russian Federation, *The Military Doctrine of the Russian Federation*.

¹²Ibid.

¹³See Paradorn Rangsimaporn, 'Russia's debate on military-technological cooperation with China: From Yeltsin to Putin', *Asian Survey*, 46:3 (2006), pp. 477–95, <https://doi.org/10.1525/as.2006.46.3.477>; Davis, 'The Russian defence industry, 1980–2025'.

¹⁴See Paradorn Rangsimaporn, 'Russia's search for influence in Southeast Asia', *Asian Survey*, 49:5 (2009), pp. 786–808, <https://doi.org/10.1525/as.2009.49.5.786>; Blank and Levitzky, 'Geostrategic aims of the Russian arms trade in East Asia and the Middle East'; Mathew Jithin and John S. Moolakkattu, 'Russia in the Horn of Africa: Re-engagement in a new strategic environment', *South African Journal of International Affairs*, 29:4 (2022), pp. 535–48, <https://doi.org/10.1080/10220461.2022.2149615>; Martin C. Spechler and Dina R. Spechler, 'Russia's lost position in Central Asia', *Journal of Eurasian Studies*, 4:1 (2013), pp. 1–7, <https://doi.org/10.1016/j.euras.2012.08.001>; and Dimitar Bechev, Nicu Popescu, and Stanislav Secieru, *Russia Rising: Putin's Foreign Policy in the Middle East and North Africa* (New York: I.B. Tauris, 2021).

¹⁵See Laird, 'Soviet arms trade with the non-communist Third World'; Gerner, 'Arms transfers to the Third World'; D. R. Stone, 'Soviet arms exports in the 1920s', *Journal of Contemporary History*, 48:1 (2012), pp. 57–77; and Ian Anthony (ed.), *Russia and the Arms Trade* (Solna: Oxford; New York: SIPRI; Oxford University Press, 1998).

body of research shifts attention to the buyers, arguing that Moscow's motivations fluctuate: with some buyers, Russia trades for strategic reasons, while for others, it seeks to generate revenue, maintain economies of scale, or expand production.¹⁶ The fifth strand views the economic benefits of arms sales as inseparable from Russia's broader geopolitical strategy, positioning the arms trade as a tool for enhancing its global influence.¹⁷ Each of these strands offers valuable insights into Russia's motivations for participating in the arms trade. While the primary focus is on *why* Russia engages in arms sales, these scholars occasionally touch on the *how* – such as the use of barter agreements to support either economic or strategic objectives. However, these discussions are typically brief, lacking empirical depth and often displaying a limited understanding of these trading arrangements.

Barter has been employed to support various conflicting arguments regarding Russia's arms trade. Christopher Mark Davis highlights that 'during the 1990s, the primary goal in the foreign trade of the [Russian] destitute defense industry was to obtain either convertible currency payments or attractive barter goods through exports of [weapons]'.¹⁸ In contrast, Stephen Blank and Edward Levitzky argue that economic motives were not the main drivers of Russia's arms sales during this period.¹⁹ The authors assert, 'the evidence actually refutes the contention that economic motives were primary motives for Russian arms sales to China in the 1990s because much of what China bought it paid for in barter'.²⁰ Paradorn Rangsimaporn initially claimed that Russia's arms transfers and military technical cooperation with China in the late 1990s and early 2000s were primarily dictated by economic interests rather than a deliberate strategic calculus.²¹ However, he later acknowledged that 'the economic benefits to Russia from barter payments were particularly low and a focus of criticism'.²² In fact, Russia's Audit Chamber, which oversees state funding disbursement, revealed in 2003 that most bartered goods were not delivered to Russia but were instead resold to third countries during transactions. Despite this, Moscow chose to emphasise the strategic advantages of these arrangements.²³

Many scholars have noted that the debate between economic and strategic motives varies based on the historical context being analysed. However, they have often overlooked the role of defence counter-trade in clarifying when economic or strategic interests take precedence, frequently relying on weapons prices as a proxy. For example, David R. Stone highlights that in the 1920s, the Politburo permitted selling weapons below cost for political purposes.²⁴ Conversely, during the 1930s, the Soviets shifted their focus away from such sales as a tool of foreign policy.²⁵ Scholars such as Ian Anthony, who have emphasised the importance of buyers, instead examined counter-trade practices, including barter, clearing arrangements, and basing rights (i.e. weapons exchanged for the use of naval and land military facilities).²⁶ However, Anthony's 1998 work, focused solely on the Soviet Union, is now outdated and lacks coverage of offsets, a significant development of the post-Soviet era.

Finally, scholars highlighting the coexistence of economic and strategic motives in Russia's arms sales have noted the latter's role in achieving military balance and gaining access to energy resources

¹⁶See Anthony (ed.), *Russia and the Arms Trade*; and John Watts, Sofia Ledberg, and Kjell Engelbrekt, 'Brothers in arms, yet again? Twenty-first century Sino-Russian strategic collaboration in the realm of defence and security', *Defence Studies*, 16:4 (2016), pp. 427–49, <https://doi.org/10.1080/14702436.2016.1238747>.

¹⁷See Blank and Kim, 'Arms sales and Russia's future as an Asian power'; Neethling, 'Assessing Russia's new interaction with Africa'; and Kozhanov (ed.), *Russia's Relations with the GCC and Iran*.

¹⁸Davis, 'The Russian defence industry, 1980–2025'.

¹⁹Blank and Levitzky, 'Geostrategic aims of the Russian arms trade in East Asia and the Middle East'.

²⁰*Ibid.*, p. 64

²¹Rangsimaporn, 'Russia's debate on military-technological cooperation with China', p. 495.

²²Rangsimaporn, 'Russia's search for influence in Southeast Asia', p. 800

²³*Ibid.*

²⁴Stone, 'Soviet arms exports in the 1920s', p. 76.

²⁵*Ibid.*, p. 76

²⁶Anthony (ed.), *Russia and the Arms Trade*

or critical minerals.²⁷ According to Stephen Blank and Younkyoo Kim, both the Soviet Union and contemporary Russia view the defence industrial sector as a catalyst for economic revitalisation and technological progress, as well as a marker of the country's global prominence.²⁸ Arms exports not only secure essential foreign revenue and support the defence sector but also allow Russia to project its influence on the world stage.²⁹ Bechev et al. stress strategic motives but also observe how Russia's arms sales bolster cooperation in oil and gas, nuclear energy, and commodity trade.³⁰ Although insightful, this strand of literature fails to frame such cooperation within Russia's evolving counter-trade strategies. In fact, defence counter-trade, and especially offsets, are notably absent from these discussions. Yet only through such framing can we fully appreciate how and why Russia engages in the arms trade.

Soviet post-Second World War defence counter-trade

The Soviet legacy is an indispensable foundation of Russia's military counter-trade. The supply of arms was a key tool of foreign policy for Moscow during the Cold War. Ideologically, Leninism preferred violent revolution for expanding the boundaries of the Communist world – thus, weapons were essential.³¹ Post-revolution, the 'turned' states would likely demand further arms for internal security, against either civil war or armed resistance, and against external threats by capitalist powers. Soviet emphasis on military capability was forged by the devastating Second World War invasion by National Socialist Germany, requiring the Soviet Union to strengthen its defence as well as that of fellow Communist states. To enhance these countries' survival against invasion, an autarkic economic system was established with Soviet assistance, and, within this system, scarce resources were prioritised for the development of indigenous defence industries.³²

The history of external invasions led to a continuous build-up of the Soviet Union's armed forces, as well as those of friendly neighbours, strengthening strategic depth. The Soviet Union's huge operational environment highlighted the strategic importance of arms production volume, as quantity was critical in overcoming Germany's superior technologies. During the Cold War, weapons were more effective, compared to the politically unattractive commercial products, in strengthening relations with overseas allies and partners.³³ Subsequently, logistical needs, upgrades, and replacement, along with related operational doctrines, considerably projected and preserved Moscow's geopolitical influence. Except for arms donations, all other forms of military hardware transfer and training, whether via loans or grants, provided financial leverage for exerting Soviet influence over beneficiary countries.³⁴

To manage the large number of Soviet arms transferred, counter-trade rather than conventional sales was a common Soviet practice, primarily for political purposes. Internally, the Soviet military industries were not driven by profit but rather by the demand for national security under the country's planned economy system.³⁵ Therefore, manufacturers and planning authorities had little motive to secure commercial revenue. In the event, arms deals generated hard currency, but this was more related to national interest, such as foreign exchange preservation, than for generating direct income. Externally, the range of foreign customers for Soviet arms was under strict political guidance and control. Most customers, therefore, were either Communist or developing countries,

²⁷ Blank and Kim, 'Arms sales and Russia's future as an Asian power'

²⁸ Ibid

²⁹ Ibid.

³⁰ Bechev, Popescu, and Secieru, *Russia Rising*, p. 51.

³¹ Paul Kelly, *Conflict, War and Revolution* (London: LSE Press, 2022), pp. 337–40.

³² Christopher Mark Davis, 'The exceptional Soviet case: Defense in an autarkic system', *Daedalus*, 120:4 (1991), pp. 113–34 (pp. 114–15).

³³ Ibid., p. 115.

³⁴ Dzvinika Kachur, *Russia's Resurgent Interest in Africa: The Cases of Zambia and Tanzania* (Johannesburg: South African Institute of International Affairs, 2021), pp.15–18

³⁵ Davis, 'The exceptional Soviet case', p. 114.

and both had little recourse to hard currency to service such deals, making counter-trade the main solution.³⁶ Middle East countries were the principal early overseas customers possessing sufficient affordability to procure Soviet arms,³⁷ but they too had to rely on counter-trade for payment rather than hard currency.

Soviet defence-related counter-trade can be categorised into four flows, comprising European members of the Council for Mutual Economic Assistance (CMEA), China, India, and the rest. Under the CMEA, arms transfers were structured according to member states' nuanced socialist economic systems. For non-CMEA countries, bilateral clearing arrangements were usually applicable. For all other recipients of Soviet arms, delivery was conducted on a more direct basis, including against hard currency payments, delivery of commodities, and non-economic forms of payment, ranging from political to strategic assistance, with the latter including naval basing rights and shore support.³⁸ The European CMEA members and the Soviet Union constituted a complex 'international division of labour' mosaic rather than a conventional set of arms deal practices. Due to the tense strategic environment during the initial stages of the Cold War, especially the Korean War, Moscow established a comprehensive collective autarkic system among Warsaw Pact member states. This regional production and trading network lasted about four decades, during which time several generations of arms were produced.³⁹

Rather than usual counter-trade, the exchange pattern reflected several elements, including war preparations, a regional industrial division of labour, multilateral transfers, and conventional export. War-preparation measures amplified the quantity of forces, particularly weapons, by expanding defence industries in most European CMEA member states, as well as standardising their military logistics. The Soviet Union provided credits to the European beneficiary states to assist their recovery from Second World War infrastructural damage. In the process, local defence-related industries were rebuilt to service the growth of national armed forces.⁴⁰ The Communist model allowed payments through an interstate barter system.⁴¹ Supply was based on individual conditions and accommodated industrial division of labour/production among and within certain European CMEA states. Czechoslovakia and Poland, for example, possessed superior industrial foundations and were thus allowed to produce broader ranges of weapon systems based on indigenous systems design, such as L-39 jet trainers, which achieved sales across the Communist bloc. Other Warsaw Pact member states produced fewer types of arms, and these local models were mostly for domestic purposes. This remarkable defence industrial division of labour continued throughout and even beyond the Cold War.⁴²

Such bilateral and multilateral arms transfers were important for maintaining trade balances among the Communist countries and ensuring each European CMEA member state's defence industry was relatively efficient through a production focus on specific models.⁴³ Supply was also characterised by achieving product standardisation among different geographical locations to ensure military integration within the Warsaw Pact. For examples, BMP-1 infantry fighting vehicles produced in Czechoslovakia were not only for its own needs but also for export to Hungary and

³⁶Stefan Markowski and Peter Hall, 'The defense industry in Poland: An offsets-based revival', In Jurgen Brauer and Paul Dunne (eds), *Arms Trade and Economic Development: Theory, Policy and Cases in Arms Trade Offsets* (London: Routledge, 2012), pp. 171–184 (p. 174).

³⁷Paul Rivlin, *The Russian Economy and Arms Exports to the Middle East* (Tel Aviv: Institute for National Security Studies, 2005), p. 19.

³⁸Anthony (ed.), *Russia and the Arms Trade*.

³⁹Pal Germuska, *Unified Military Industries of the Soviet Bloc: Hungary and the Division of Labor in Military Production* (Lanham: Lexington Books, 2015), pp. 10–15.

⁴⁰*Ibid.*, pp. 2–3.

⁴¹Edward Ames, 'International trade without market: The Soviet bloc base', *American Economic Review*, 46:5 (1954), pp. 791–807 (pp. 792–5).

⁴²Markowski and Hall, 'The defense industry in Poland', p. 172; and SIPRI *Arms Transfers Database*, retrieved from Stockholm International Peace Research Institute: <https://armstransfers.sipri.org/ArmsTransfer/TransferRegister>.

⁴³Germuska, *Unified Military Industries of the Soviet Bloc*, pp. 9, 14.

the Soviet Union.⁴⁴ Finally, the European CMEA states also sought to export arms to countries in the Middle East, South Asia, and other areas under Moscow's sphere of geopolitical influence.⁴⁵ For instance, Poland exported Project-771 landing ships to India and Iraq.⁴⁶ Therefore, the defence industries of these CMEA countries considerably enlarged Soviet military capacity. The possibility of further expansion of Soviet influence through arms transfers collaboration was constrained by the competing attraction of arms from NATO states, the low level of demand in the global arms market, and individual countries' domestic conditions, such as the lack of funding.

China was another major destination of Soviet arms that was invariably tied to counter-trade, and principally offset, but trading patterns were uneven and unpredictable. Based on its territory and population, China was a significant Communist regime that had required Soviet support since 1949. Geostrategically, trade between the Soviet Union and China was limited to a few land routes, adjacent to the Pacific Ocean where the US had established dominance since the Second World War. The threat from Washington and its allies was highlighted by Beijing's involvement in the Korean War. The Chinese volunteer army fighting on the side of North Korea demanded a plentiful supply of arms, which were eventually paid through barter, justifying the strategic need to build up Chinese defence industries.⁴⁷

The condition of China's defence industries, compared with its East European Communist counterparts, was poor due to the relative lack of industrialisation. Thus, the Soviet Union provided a comprehensive range of projects to develop China's defence industries, including supporting ancillary sectors, such as mining and education, mainly through credits paid by barter.⁴⁸ The Chinese defence industries proved so successful that even after Moscow cut all its support in the early 1960s, Beijing was still able to continue producing and exporting Soviet arms at an acceptable level of quality to increasing numbers of developing countries. Some of these systems, such as J-6 fighters based on the Soviet MiG-19 design, were initially produced under licence. Local production continued even after the licence became invalid, and following the Sino-Soviet break in relations, China further upgraded the design into the domestic Q-5 attacker aircraft.⁴⁹ Some Soviet arms, such as the HQ-2 surface-to-air missile, based on the Soviet S-75 design, were totally reverse engineered without Moscow's consent.⁵⁰ This Soviet-fed industrial and technological infusion paved the way for China's subsequent rise as a military power. After the Sino-Soviet rapprochement in the late 1980s, several arms transfer deals were signed between Moscow and Beijing, most following the Soviet collapse.⁵¹

By contrast, the Soviet Union's arms transfers to India were far more complicated, but at their heart were elements of barter. The Indian rupee was not a hard currency suitable for interstate trade, and additionally New Delhi's low foreign exchange reserves restricted its payment capacity. However, India's South Asian location, large population, and huge territory ensured that the Moscow was willing to accept rupee payments for its arms at low interest rates.⁵² Since the

⁴⁴ SIPRI Arms Transfers Database.

⁴⁵ Markowski and Hall, 'The defense industry in Poland', pp. 172–4.

⁴⁶ SIPRI Arms Transfers Database.

⁴⁷ See Samuel F. Wells, *Fearing the Worst: How Korea Transformed the Cold War* (New York: Columbia University Press, 2020) p. 406; and Ji You, 'The Soviet model and the breakdown', in Thomas P. Bernstein and Hua-You Li (eds), *China Learns from the Soviet Union, 1949–Present* (Lanham, MD: Lexington Books, 2010), pp. 131–49 (pp. 132–4).

⁴⁸ Austin Jersild, *The Sino-Soviet alliance: An International History* (Chapel Hill: The University of North Carolina Press, 2014), pp. 15–16, 48, 71.

⁴⁹ Michael Peck, 'Chinese Q-5 fighter: The plane that won't quit', *The National Interest* (19 July 2021), <https://nationalinterest.org/blog/reboot/chinese-q-5-fighter-plane-wont-quit-189950>.

⁵⁰ Carlo Kopp, 'Almaz S-75 Dvina/Desna/Volkhov Air Defence System/HQ-2A/B/CSA-1/SA-2 Guideline', *Air Power Australia* (April 2012), <https://www.ausairpower.net/APA-S-75-Volkhov.html>.

⁵¹ SIPRI Arms Transfers Database.

⁵² Biplob Cogoi, 'Military-technical collaboration between India and Russia: An overview of the post-Soviet period', *India Quarterly: A Journal of International Affairs*, 58:3–4 (2002), pp. 303–20 (pp. 303–6).

rupee was restricted in the international market, Moscow had to accept Indian products, mainly agricultural ones, as the means of payment.⁵³ In other words, Indo-Soviet arms trade was principally undertaken via counter-trade. Compared to arms deals with Western countries based almost totally on hard currency, the Soviet Union's more attractive financing arrangements meant that it monopolised Indian arms procurement. Moreover, due to India's huge armed forces, and its two fronts with Pakistan and China, New Delhi for strategic reasons requested licence production and technological transfer rather than simply off-the-shelf sales. Moscow reluctantly agreed, though with restrictions, such as banning exports. Building production lines and related capacity for offset deals as the assembly of MiG-23/27 combat aircraft and T-72 tanks, contributed to the development of India's defence industries.⁵⁴

Moscow's supply of arms to other beneficiary states has also been conducted principally through counter-trade, but in a less balanced way. Communist countries, such as North Korea and Vietnam, and non-Communist states, such as Egypt, Indonesia, Somalia, Tanzania, and Zambia, obtained arms during the Cold War under a Soviet credit system that primarily incorporated barter arrangements. Yet most of this accumulated debt was not fully paid back on the 1991 dissolution of the Soviet Union, with considerable outstanding liabilities subsequently owed to Russia. Moscow used these debts as leverage in pursuing geopolitical objectives with the indebted states.⁵⁵ Among these states, Communist countries usually managed to obtain licence production and/or logistic systems, which in the case of Pyongyang afforded continuous production of Soviet arms, and in the case of Hanoi allowed maintenance of Cold War arms in an operable condition.⁵⁶ Non-Communist countries, by contrast, were allowed to procure eye-catching sophisticated weapon systems, such as Tu-16 bombers to Egypt and Project-68bis cruiser to Indonesia, but logistical capability was negatively affected when relations with the Soviet Union soured. Moscow's arms supply was also often tied to obtaining rights for logistical support, particularly the use of customer-country naval bases. For example, the Soviet navy's access to the Berbera naval base in Somalia was linked to arms transfers, mostly patrol craft and landing ships.⁵⁷ A similar approach was followed to secure the Soviet (and until recently Russian) navy's access to the Tartus naval base in Syria, among several others.⁵⁸

The Soviet Union was often portrayed as an immense military industrial complex,⁵⁹ and thus arms supply unsurprisingly played an indispensable role in its diplomacy/statecraft. From securing 'satellite' countries to expanding geopolitical influence, counter-trade proved a foundational factor accommodating most arms transfers, leaving a rich trading inheritance to Moscow beyond the Cold War.

⁵³ Angathevar Baskaran, 'The role of offsets in Indian defense procurement policy', in Jurgen Brauer and Paul Dunne (eds), *Arms Trade and Economic Development: Theory, Policy and Cases in Arms Trade Offsets* (London: Routledge, 2004), pp. 212–27 (p. 214).

⁵⁴ Baskaran, 'The role of offsets in Indian defense procurement policy', pp. 215–20.

⁵⁵ See Kachur, *Russia's Resurgent Interest in Africa*, pp. 15–18; Liudmila Zakharova, 'Economic cooperation between Russia and North Korea', *New Journal of Eurasian Studies*, 7:2 (2016), pp. 151–61 (pp. 153–5); Thi Hong, L., 'Center and periphery in the Cold War: Soviet economic aid to Vietnam, 1954–1975', *The International History Review*, 46:2 (2024), pp. 176–90 (p. 186); Karen Dawisha, 'Soviet policy in the Arab world: Permanent interests and changing influence', *Arab Studies Quarterly*, 2:1 (1980), pp. 19–37 (pp. 22–8); Alexei Muraviev and Colin Brown, *Strategic Realignment or Déjà Vu? Russia-Indonesia Defence Cooperation in the Twenty-First Century* (Canberra: Strategic and Defence Studies Centre, 2008), pp. 3–8.

⁵⁶ See SIPRI *Arms Transfers Database*; IISS, *Arming Vietnam: Widened International-Security Relations in Support of Military-Capability Development* (London: International Institute for Strategic Studies, 2023); Shang-Su. Wu, *Military Modernisation in Southeast Asia after the Cold War* (London: Routledge, 2024), pp. 165–73.

⁵⁷ See SIPRI *Arms Transfers Database*; Colin D. Robinson, 'The Somali navy from 1965 to the 1980s: A research note', *Journal of Central and Eastern European African Studies*, 1:1–2 (2021), pp. 124–38, <https://doi.org/10.59569/jceas.2021.1.1–2.7>.

⁵⁸ Ben W. Hunt, 'Port access and arms sales: The unspoken quid pro quo', *The Journal of Conflict Resolution*, 34:2 (1990), pp. 335–65, <http://www.jstor.org/stable/174198>.

⁵⁹ Stephen. J. Blank, *ROSOBORONEXPORT: Arms Sales and the Structure of Russian Defense Industry* (Carlisle, PA: US Army War College, 2007), p. 3.

Russian post-Cold War defence counter-trade

Defence counter-trade as an instrument of economic and foreign policy

Before the dissolution of the Soviet Union, Moscow was the sole owner of local weapons production. A period of 'market romanticism,' however, began in the latter years of President Mikhail Gorbachev's administration.⁶⁰ Around 1990, the priority was selling to anybody who paid. In 1992–4, under President Boris Yeltsin, Russian defence manufacturers enjoyed maximum freedom, treating arms export in the same way as other goods and services, often in competition with each other. At the same time, companies heavily engaged in arms production were privatised by auction without the consent of the State Committee on Defence Industries or the Ministry of Defence.⁶¹ While sometimes transferring sophisticated weaponry for almost nothing, these companies refused to deal in barter, insisting on hard currency payments and placing military technical cooperation (MTC) on a firm business footing.⁶²

The lack of a more systematic trade policy was deeply harmful at both the strategic and economic levels, jeopardising export markets and endangering Russia's military potential. These same Russian arms manufacturers recognised that to be internationally competitive in non-traditional markets, they needed new types of assistance from the state.⁶³ Thus, in the 1990s, Russia's MTC system underwent significant changes, and:

By the end of the decade, the country had two state-controlled intermediaries in the military trade sector, namely Rosvooruzhenie, a state-owned company and a federal state unitary enterprise (FSUE), and Promexport, also a federal state unitary enterprise (FSUE). In addition, there were a few other entities involved in MTC, in particular military-industrial enterprises.⁶⁴ In order to enhance efficiency of their operations in the external market, establishment of the 'presidential vertical'⁶⁵ for the management of MTC by the federal government was required, which helped reinforce coordination and control over arms exports and eliminated competition among Russian entities involved in MTC.⁶⁶

Nevertheless, Russian suppliers remained dissatisfied with the lack of support provided by Moscow to compete overseas, and especially in the offset market, which was increasingly recognised as crucial for export success.⁶⁷

Then in late 2000, Vladimir Putin, the new president of the Russian Federation, issued Decree No. 1834 to merge the two state-controlled intermediaries and establish a single state-controlled special exporter named Rosoboronexport.⁶⁸ This entity immediately launched a raft of supportive export policies, such as issuing guarantees to Russian banks for manufacturing enterprises on behalf of the state, executing contract obligations, and ensuring receipt by foreign customers of guarantees for advance payments and the proper execution of contracts by manufacturers.⁶⁹ Celebrating its first anniversary, the state-controlled agency Rosoboronexport invited buyers to

⁶⁰ Anthony (ed.), *Russia and the Arms Trade*.

⁶¹ Ibid.

⁶² The Soviet (Russian) system of MTC was originally launched in 1953, with the Chief Engineering Board, as a unit of the Ministry for Domestic and Foreign Trade. See 'History of the Company Rosoboronexport' (n.d.), <http://roe.ru/eng/rosoboronexport/history/>.

⁶³ Anthony (ed.), *Russia and the Arms Trade*.

⁶⁴ Industries with military potential.

⁶⁵ Top-down management.

⁶⁶ 'History of the Company Rosoboronexport'.

⁶⁷ Anthony (ed.), *Russia and the Arms Trade*.

⁶⁸ 'History of the Company Rosoboronexport'.

⁶⁹ CTO Newsletter, 'Rosoboronexport chief enters the confessional', *Countertrade & Offset* 19:6 (2001), p. 5.

pay in kind, exchanging ‘oil for arms’,⁷⁰ even though barter as a trading mechanism was steadily declining across Russian civil sectors.⁷¹ To mark its second anniversary, the agency announced that ‘innovative co-operation techniques and flexible financial engineering’ had resulted in an increase of book orders of \$2 billion.⁷²

Rosoboronexport, however, did not hide its preference for ‘real’ money. In 2004, Russia’s state arms exporter was reportedly focusing on counter-trade and offset to remain internationally competitive.⁷³ In 2005, a statement by the federal agency emphasised that in order to retain their share of the arms market, Russian exporters needed to pay special attention to offset proposals, programmes for technology transfer and licence transfer, the organisation of technical maintenance centres, and upgrades of previously sold hardware.⁷⁴ In fact, in 2008, Rosoboronexport general director Anatoliy Isaykin blamed Western competition for Russia’s requirement to offer industrial benefits to India.⁷⁵ The US and leading European countries’ efforts to penetrate the Indian market by offering packages including offset inducements obliged Rosoboronexport to compete by offering similar joint development and licensed production opportunities. An advisor to the Russian defence contractor tendered the more understanding comment that ‘offset always is a headache for the supplier, but we also understand the client’s [need to develop] his industry’.⁷⁶ Finally, in 2014, Putin advised a meeting of the Commission for Military Technology Cooperation with Foreign States that if Russia was to boost exports, counter-trade was the way:

If we want to continue our [programs] and promote our goods on foreign markets effectively, we need to learn how to use modern financial and marketing instruments, such as state and commercial loans for longstanding and reliable partners, supplies as payment of foreign debt, exports based on various types of offset deals, and [high-quality] service and maintenance.⁷⁷

Rosoboronexport thus continued to leverage arms sales through the use of barter and offset, employing a distinctive comprehensive approach.⁷⁸ Servicing dozens of Russian manufacturing entities and accounting for over 80 per cent of Russian exports of armaments and military hardware, the federal agency identifies potential offset projects encompassing the full spectrum of Russian economic sectors (e.g., defence, energy, and banking) and stores these projects in an ‘innovative bank’, before then offering them to potential buyer states.⁷⁹

According to the agency’s website, ‘Rosoboronexport’s activities are aimed at the consolidation of Russia’s military and political foothold in various regions across the globe, [to ensure the] preservation of the country’s position among global exporters of [defence equipment]’.⁸⁰ This approach aligns with Russia’s trade in other strategic goods – including oil and gas, nuclear

⁷⁰ CTO Newsletter, ‘Rosoboronexport issues general invitation to pay in kind’, *Countertrade & Offset*, 19:22 (2001), p. 4.

⁷¹ See CTO Newsletter, ‘Russia still barter but marginal decline is recorded’, *Countertrade & Offset*, 18:19 (2000), p. 5; and CTO Newsletter, ‘Russia: Fewer barter’, *Countertrade & Offset*, 20:12 (2002), p. 7.

⁷² CTO Newsletter, ‘Rosoboronexport levers foreign sales on back of offset’, *Countertrade & Offset*, 20:22 (2002), p. 4.

⁷³ CTO Newsletter, ‘Rosoboronexport to develop countertrade & offset’, *Countertrade & Offset*, 22:4 (2004), p. 4.

⁷⁴ CTO Newsletter, ‘Rosoboronexport expanding influence through offset’, *Countertrade & Offset*, 23:14 (2005), p. 5.

⁷⁵ CTO Newsletter, “‘Because Western primes offer industrial benefits Russia has to follow’”, *Countertrade & Offset* 27:8 (2009), p. 3.

⁷⁶ CTO Newsletter, ‘800 offset projects at the ready’, *Countertrade & Offset*, 27:10 (2009), p. 2.

⁷⁷ CTO Newsletter, ‘Russia orders compensation initiatives to boost exports’, *Countertrade & Offset*, 32:9 (2014), p. 6.

⁷⁸ ‘Corporate Strategy Rosoboronexport’ (n.d.), <https://roe.ru/eng/rosoboronexport/strategy/>.

⁷⁹ See CTO Newsletter, ‘800 offset projects at the ready’; and CTO Newsletter, ‘Rosoboronexport pulls back the curtain to reveal Russia’s offset process’, *Countertrade & Offset*, 28:3 (2010), p. 3.

⁸⁰ ‘Corporate Strategy Rosoboronexport’.

energy, and grain – which Moscow also leverages to extend its economic and political influence globally.⁸¹

Russia's global counter-trade tentacles

The following examples of barter and offset arrangements buttress the argument that Moscow has utilised defence counter-trade as a mechanism to promote arms sales and diplomatic influence. At the same time, Russia consistently avoids transferring its most advanced military technology – or demands a high price for it – in a deliberate effort to protect both the commercial interests and strategic priorities of its defence industry.

Gaining access to minerals and other resources

In July 2012, only a few months after Putin was re-elected president of the Russian federation,⁸² Russia was reported to have been in negotiation with Zimbabwe to barter arms for platinum.⁸³ The following year, the Russian firm, CBC Russia, which had the rights for chrome mining in Darwendale, Zimbabwe, reportedly entered a joint venture with the Zimbabwe Mining Development Corporation (ZMDC) to extract platinum. In exchange for platinum mining rights, Russia agreed to supply helicopter gunships to Zimbabwe.⁸⁴ According to a 2024 European Parliament report, Moscow has leveraged the supply of defence equipment to secure access to gold and diamonds in the Central African Republic, cobalt in the Congo, uranium in Namibia, gold and oil in Sudan, and chromite in Madagascar.⁸⁵

Circumventing Western-imposed restrictions

In 2015, Russia reportedly planned to offer Argentina a lease/lend deal for 12 Sukhoi Su-24 long-range bombers in exchange for beef and wheat – commodities Moscow had stopped importing from European Union countries following Western sanctions.⁸⁶ Three years later, Argentina expressed interest in purchasing three additional Russian helicopters (to add to the two Mi-171Es acquired in 2011) but lacked the funds for immediate payment.⁸⁷ In response, Moscow was reportedly considering payment options involving local currency and defence-related barter deals. Around the same time, Russia's state nuclear corporation, Rosatom, was exploring ways to localise Russian technology for uranium extraction in Argentina. Similarly, in 2015, Russia and Thailand worked on finalising a barter agreement involving \$160 million worth of weapons in exchange for 80,000 tons of rubber.⁸⁸ The Russian tank and train manufacturer, Uralvagonzavod, also appeared willing to trade both civilian and military equipment to Thailand in return for fruit and vegetables.⁸⁹ By the following year, Moscow and Bangkok were exploring broader opportunities for Thailand to export food and agricultural products in exchange for Russian military equipment.⁹⁰

Elsewhere in Asia, a 2017 deal involving Indonesian procurement of 11 Russian Sukhoi Su-35 fighter jets, partly in exchange for rubber, crude palm oil, coffee, tea, furniture, and spices, was called off by Jakarta after the US threatened to impose the Countering America's Adversaries

⁸¹ Richard Connolly, 'Looking at the global economy: Russia's role as a supplier of strategically important goods', in Andrew Monaghan (ed.), *Russian Grand Strategy in the Era of Global Power Competition* (Manchester: Manchester University Press, 2022), pp. 98–127.

⁸² Dmitrij Anatolevič Medvedev was president from May 2008 to May 2012.

⁸³ CTO Newsletter, 'Russia and Zimbabwe negotiate arms for platinum', *Countertrade & Offset*, 30:13 (2012), p. 8.

⁸⁴ CTO Newsletter, 'Zimbabwe fritters away its minerals to Russia and China in exchange for arms', *Countertrade & Offset*, 31:24 (2013), p. 7.

⁸⁵ Anna Caprile and Eric Pichon, 'Russia in Africa: An Atlas', European Parliamentary Research Service (2024), [https://www.europarl.europa.eu/RegData/etudes/BRIE/2024/757654/EPRS_BRI\(2024\)757654_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2024/757654/EPRS_BRI(2024)757654_EN.pdf).

⁸⁶ CTO Newsletter, 'Argentinean Sukhoi barter spooks the UK', *Countertrade & Offset*, 33:1 (2015), p. 7.

⁸⁷ CTO Newsletter, 'Latin America: Russia considers alternative payment options', *Countertrade & Offset*, 36:23 (2018), p. 7.

⁸⁸ CTO Newsletter, 'Russia to sell Thailand weapons for rubber and vegetables', *Countertrade & Offset*, 33:14 (2015), p. 8.

⁸⁹ Ibid.

⁹⁰ CTO Newsletter, 'Thailand courts Russian military equipment in return for food', *Countertrade & Offset*, 34:4 (2016), p. 8.

through Sanctions Act, or CAATSA,⁹¹ which applies to Russia, among others.⁹² In response, Moscow stopped using the US dollar with its partners in military contracts, opting for other national currencies or barter.⁹³ ‘We abandoned dollar payments two or three years ago. So, for the most part, we have different paying options’, said Sergey Chemezov, Rostec’s CEO, in 2019, adding that payment terms for weapon deliveries to China and India had been resolved.⁹⁴

‘Out-competing’ Western suppliers

In the tender for India’s Medium Multirole Combat Aircraft (later renamed the Medium-Role Fighter Aircraft), Russia put forward the MiG-35, a 4.5-generation fighter jet developed by Mikoyan and exclusively used by the Russian armed forces.⁹⁵ In 2017, aiming to strengthen the MiG-35’s position against American and European competitors, Rosoboronexport permitted Russian defence companies to establish direct partnerships with Indian defence manufacturers.⁹⁶ At Aero India 2019, a leading defence and aerospace exhibition, Russia’s minister of industry and trade, Denis Manturov, highlighted that MiG offered Indian partners ‘broad industrial cooperation’, signalling opportunities for deeper collaboration.⁹⁷

In a dramatic move in 2018, Russia attempted to bypass India’s competitive tender for six diesel-electric submarines – ultimately awarded to Germany’s Thyssenkrupp Marine Systems – by proposing joint development and construction of a Lada-class submarine, based on the Russian Amur-class design.⁹⁸ Vladimir Drozhzhov, deputy director of the Russian Federal Service of Military-Technical Cooperation, defended the offer, stating:

We are not putting forward [the] usual licensed production of [a] submarine, we are proposing to jointly devise a project with our Indian partners and jointly build the first pilot model on the basis of the Amur-1650 diesel-electric submarine project, equipped with an air-independent propulsion system.⁹⁹

However, observers have noted that the Russian manufacturer, Rubin Central Design Bureau, responsible for the air-independent propulsion system, had made limited progress in developing the prototype.¹⁰⁰ These observers argued that Russia’s offer was less about generous technology

⁹¹On 2 August 2017, US president Donald Trump signed into law the ‘Countering America’s Adversaries through Sanctions Act’ (Public Law 115–44) (CAATSA), which among other things, imposes new sanctions on Iran, Russia, and North Korea. See OFAC, ‘Countering America’s Adversaries through Sanctions Act: Related Sanctions’, US Department of the Treasury, Office of Foreign Asset Control, <https://ofac.treasury.gov/sanctions-programs-and-country-information/countering-americas-adversaries-through-sanctions-act-related-sanctions>.

⁹²See CTO Newsletter, ‘On or off? Conflicting reports on status of Russo-Indonesia jet barter’, *Countertrade & Offset*, 38:6 (2020), p. 6; and CTO Newsletter, ‘Indonesia buys Rafale aircraft and Scorpène-class submarines with joint production and technology transfer’, *Countertrade & Offset*, 40:4 (2022), p. 7.

⁹³See CTO Newsletter, ‘Russia and India in S-400 local production talks, seek creative payment terms’, *Countertrade & Offset*, 37:19 (2019), p. 5; CTO Newsletter, ‘India still open to Russian suppliers: The more “accommodating” offset partner’, *Countertrade & Offset*, 41:4 (2023), p. 6.

⁹⁴CTO Newsletter, ‘Russia and India in S-400 local production talks’.

⁹⁵Alexander Mladenov, ‘Why Russia’s MiG-35 is proving a hard sell’, *Key.Aero* (28 July 2022), <https://www.key.aero/article/why-russias-mig-35-proving-be-hard-sell>.

⁹⁶CTO Newsletter, ‘Rosoboronexport allows Russian defence companies to negotiate independently with India’, *Countertrade & Offset*, 35:3 (2017), p. 2.

⁹⁷CTO Newsletter, ‘Russian Helicopters identifies potential partners in India for the KA-226T’, *Countertrade & Offset*, 37:5 (2019), p. 5.

⁹⁸Pratap Chakravarty, ‘India picks Germany to supply new submarines as Russian arms exports wane’, *RFI* (11 June 2023), <https://www.rfi.fr/en/international/20230611-india-picks-germany-to-supply-new-submarines-as-russian-arms-exports-wane>.

⁹⁹See CTO Newsletter, ‘Russia proposes joint submarine development with India’, *Countertrade & Offset*, 36:14 (2018), p. 5; and CTO Newsletter, ‘Moscow’s bid to build India’s submarines has a price’, *Countertrade & Offset*, 37:15 (2019), p. 7.

¹⁰⁰CTO Newsletter, ‘Moscow’s bid to build India’s submarines has a price’.

transfer and more an invitation for India to shoulder the research and development (R&D) costs. A similar proposal was made to China,¹⁰¹ but collaboration on these terms has yet to materialise.¹⁰²

In 2019, Malaysia's *New Straits Times* reported that Russia had proposed a significant increase in its palm oil imports from Malaysia as part of an offset deal for new Su-35 and Su-57E jets for the Malaysian air force.¹⁰³ Viktor Kladov, Rostec State Corporation's¹⁰⁴ regional policy director, remarked: 'At present, 90 percent of Russian palm oil is imported from Indonesia, and we intend to change that [in Malaysia's favour]'. This barter proposal came at a critical moment, as the European Parliament was in the process of banning palm oil in biofuels, causing concern in Kuala Lumpur. At the time, Malaysia's defence minister, Mohamad Sabu, stated:

We are disappointed with the European Union, especially France, because Malaysia has purchased a lot of planes from the country, such as Air Asia's fleet of aircraft and military assets such as the Scorpene submarines. However, if they continue their anti-palm oil campaign, Malaysia can buy from other countries.¹⁰⁵

Expanding or recovering influence

In late 2012, Rosoboronexport proposed a remarkable 400 per cent offset to Croatia in exchange for a squadron of second-hand Hungarian¹⁰⁶ MiG-29s.^{107,108} In exchange for a €120 million package that included aircraft modernisation, Russia offered to reciprocate by procuring Croatian transformers and trams, triggering orders from the Croatian shipbuilding industry and energy sector, and investing in Croatia's ZTC Aeronautical Technical Centre to transform it into a regional centre for Russian aircraft and helicopter maintenance.¹⁰⁹ Similarly, in late 2013, Moscow facilitated the sale of 24 Mi-171Sh military transport helicopters to Peru by offering local assembly for 8 of the helicopters, along with establishing a centre for their servicing and repair within the country.¹¹⁰

Russia has strategically utilised offset opportunities to enhance military helicopter sales to India and China.¹¹¹ In December 2015, during a meeting at the Kremlin, President Putin and Indian prime minister Narendra Modi signed 16 agreements encompassing significant Russian defence and civil investment projects, including a \$1 billion deal for the joint manufacture of Kamov-226 T

¹⁰¹ CTO Newsletter, 'Has China's technology transfer demands scared off Russia from the deal of the decade?', *Countertrade & Offset*, 31:7 (2013), p. 5.

¹⁰² Peter Suciu, 'Lada-Class: Russia's failed diesel submarine (no one will buy it)', *The National Interest* (8 December 2023), <https://nationalinterest.org/blog/buzz/lada-class-russias-failed-diesel-submarine-no-one-will-buy-it-207816>. According to SIPRI, Algeria (2014) also ordered Russian submarines in the period under analysis. However, no offsets were reported. See *SIPRI Arms Transfers Database*.

¹⁰³ CTO Newsletter, 'Malaysian prime minister's "great vision" is to resume countertrade in defence procurement', *Countertrade & Offset*, 37:7 (2019), p. 11.

¹⁰⁴ Rostec, of which Rosoboronexport is a component, holds a significant share of Russia's industrial assets. In 2018, Rostec took under its umbrella the United Aircraft Corporation (UAC), which in turn includes aircraft companies such as Mikoyan and Sukhoi. See 'Rostec :: About :: History' (n.d.), <https://rostec.ru/en/about/history/>.

¹⁰⁵ CTO Newsletter, 'Malaysia unnerved by palm oil embargo, promotes countertrade for civil and defence procurements', *Countertrade & Offset*, 37:9 (2019), p. 2.

¹⁰⁶ Both countries were by then members of NATO.

¹⁰⁷ In 2015, the Russian United Aircraft Corporation sold 50 new MiG-29s to Egypt, apparently without offsets. In 2016, Russia transferred 6 second-hand MiG-29s to Serbia as military aid. In 2019, 14 new MiG-29s were sold to Algeria, while 6 second-hand aircraft were transferred to Mongolia as military aid. In 2020, batches of second-hand MiG-29s were also transferred to Syria (possibly after modernisation) as well as to the Libyan House of Representatives (HoR). See *SIPRI Arms Transfers Database*.

¹⁰⁸ CTO Newsletter, 'Rosoboronexport offers Croatia more than 400 percent in offsets', *Countertrade & Offset*, 30:21 (2012), p. 2.

¹⁰⁹ CTO Newsletter, 'Rosoboronexport offers Croatia more than 400 percent in offsets'.

¹¹⁰ See CTO Newsletter, 'Peru: Russia to support helicopter contract with domestic repair centre', *Countertrade & Offset*, 32:1 (2014), p. 5; CTO Newsletter, 'Russia prepares for helicopter offset project in Peru', *Countertrade & Offset*, 34:4 (2016), p. 7; and *SIPRI Arms Transfers Database*.

¹¹¹ Between 2012 and 2023, Russia sold military helicopters to dozens of countries worldwide. No offsets have been reported. See *SIPRI Arms Transfers Database*.

lightweight multi-role military helicopters.¹¹² Two years later, Putin approved the establishment of an Indo-Russian joint venture for the production of these helicopters.¹¹³ Indo-Russian Helicopters Ltd, with 50.5 per cent ownership by Hindustan Aeronautics Limited (HAL), 42 per cent by Rosoboronexport, and 7.5 per cent by Russian Helicopters, was set to manufacture 200 Kamov-226 T helicopters, 60 of which would be produced in Russia, while the remaining 140 were to be assembled in India with increasing levels of local content and technology transfer.¹¹⁴ However, the implementation of this plan diverged from policy, as Russia struggled – if not outright refused – to meet New Delhi’s requirement for 70 per cent local content, which stalled Kamov co-production activities. A 2021 decision to acquire 12 Kamov-226 Ts as a stopgap measure was subsequently halted a year later in favour of pursuing an indigenous solution.¹¹⁵

China was similarly interested in procuring Russian helicopters, as evidenced by a May 2015 deal between Russian Helicopters and Aviation Industry Corporation of China (AVIC) to co-develop and -produce an advanced heavy helicopter.¹¹⁶ While primarily intended for civil missions, such as transporting heavy equipment for the energy sector, observers believe it is highly likely that the helicopter will also be utilised by the People’s Liberation Army (PLA) for transporting equipment, including amphibious armoured personnel carriers and mobile ballistic missiles, to remote areas.¹¹⁷ Moscow’s decision to collaborate with China appears to be driven by both economic and political factors. Russian trade and industry minister Denis Manturov emphasised the importance of industrial cooperation within the frameworks of APEC, ASEAN, and BRICS, particularly during times of political instability.¹¹⁸ Concurrently, Russian Helicopters and Chinese Avicopter (a subsidiary of AVIC) finalised a 2021 offset agreement that included Russian technology transfer for the serial production of the 40-ton class AC332 AHL helicopter in China.¹¹⁹

Moscow has also offered its advanced Su-35 fighter jets, possibly including offsets as part of the sales package, to several countries, including China, Turkey, the United Arab Emirates (UAE), Iran, Malaysia, and Indonesia.¹²⁰ China’s 2015 order for 24 Su-35s marked the first instance of a foreign contract for the aircraft. However, Moscow did not allow any significant offsets in this procurement, apart from the possibility of joint development and production of military engines.¹²¹ Russia had previously declined to sell the AL-117S turbofan engine that powers the Su-35 due to concerns about reverse engineering.¹²² Indonesia was offered the Su-35 in a \$3 billion deal that

¹¹² CTO Newsletter, ‘Russia marches to India’, *Countertrade & Offset*, 34:1 (2016), p. 2.

¹¹³ CTO Newsletter, ‘Putin gives go-ahead for Indian helicopter joint venture’, *Countertrade & Offset*, 35:8 (2017), p. 8.

¹¹⁴ CTO Newsletter, ‘Russian suppliers make breakthrough in New Delhi’, *Countertrade & Offset*, 41:9 (2023), p. 3.

¹¹⁵ See Vivek Raghuvanshi, ‘India halts Ka-31 helicopter deal with Russia’, *Defense News* (16 May 2022), <https://www.defensenews.com/global/asia-pacific/2022/05/16/india-halts-ka-31-helicopter-deal-with-russia/>; and Ritu Sharma, ‘Ka-226: India “slashes” Russian chopper deal; opts for indigenous light utility Helos for high-altitude operations’, *Latest Asian, Middle-East, EurAsian, Indian News* (blog) (31 December 2023), <https://www.eurasiantimes.com/plans-for-russian-kamov-choppers-on-hold-opts/>.

¹¹⁶ CTO Newsletter, ‘China agrees terms for marketing Russian commercial aircraft throughout China and the region’, *Countertrade & Offset*, 33:10 (2015), p. 7.

¹¹⁷ See Asia Times, ‘China, Russia developing heavy-lift helicopter’, *Asia Times* (11 March 2019), <http://asiatimes.com/2019/03/china-russia-developing-heavy-lift-helicopter/>; and Inder Singh Bisht, ‘China, Russia to co-develop heavy-lift helicopter’, *The Defense Post* (9 November 2021), <https://www.thedefensepost.com/2021/11/09/china-russia-heavy-lift-helicopter/>.

¹¹⁸ CTO Newsletter, ‘Russia and China view industrial cooperation differently’, *Countertrade & Offset*, 33:14 (2015), p. 4.

¹¹⁹ CTO Newsletter, ‘Russia and China finalise agreement for cooperation on heavy-lift helicopter’, *Countertrade & Offset*, 39:23 (2021), p. 10.

¹²⁰ CTO Newsletter, ‘Possible joint development of military engines as China buys 24 Sukhois’, *Countertrade & Offset*, 33:23 (2015), p. 8.

¹²¹ Ibid.

¹²² Franz-Stefan Gady, ‘China takes delivery of 10 Russian Su-35 fighter jets’, *The Diplomat* (4 January 2018), <https://thediplomat.com/2018/01/china-takes-delivery-of-10-russian-su-35-fighter-jets/>.

included a loan facility, technology transfer, and other defence equipment.¹²³ The proposed technology transfer would have allowed Indonesia to produce components for the Su-35 and establish a maintenance, repair, and overhaul (MRO) facility for the aircraft.¹²⁴ Beyond these markets, Russia sought to challenge US military sales dominance in the Middle East by offering high-technology defence systems. For instance, Rostec extended an invitation to the UAE to co-develop and produce Russia's newest fifth-generation aircraft, the Su-75 Checkmate,¹²⁵ along with its subsystems.¹²⁶ However, following Russia's invasion of Ukraine in 2022, the UAE chose to withdraw from this agreement.¹²⁷ In a different context, Tehran received Moscow's approval to co-produce Su-35s.¹²⁸ Additionally, in 2018, Putin proposed to Turkish president Recep Erdoğan, joint manufacture of the Su-35 and collaboration on the development of the Su-57 fighter.¹²⁹

Neither of these projects advanced, but NATO member Turkey went ahead with its procurement of Russian S-400 air defence systems, receiving the first two turnkey S-400 batteries in 2018 and subsequently producing two additional batteries through Russian technology transfer. Ankara financed 55 per cent of the total cost with a Russian loan.¹³⁰ However, Moscow soon became apprehensive about the risk of its air defence technology falling into NATO (and US) hands.¹³¹ After completing the delivery of the first batteries in September 2019, negotiations over technology transfer for the second batch stalled. While Rosoboronexport expressed a willingness to localise some production in Turkey, it refused to provide the software codes for the Identification Friend or Foe (IFF) systems.¹³² Furthermore, Turkey's decision to procure S-400 missile systems had significant repercussions, prompting Washington to exclude Ankara from the F-35 programme and its supply chain.¹³³

Turkey was not the only country that Moscow sought to draw away from Washington's sphere of influence by offering S-400 technology transfer. In late 2017, Saudi Arabia announced its intention to join Turkey in purchasing the Russian air defence system, contingent on receiving technology transfer and localisation benefits.¹³⁴ Unlike Ankara, however, Riyadh firmly insisted on the transfer of S-400 technology as part of the procurement package.¹³⁵ This deal ultimately fell through, as Moscow was unable to meet this demand. In 2018, India agreed to procure Russian S-400 systems without offsets – an approach designed to expedite the deal – despite Washington's threats

¹²³ See CTO Newsletter, 'Russia reiterates pledge to transfer jet technology to Indonesia', *Countertrade & Offset*, 33:6 (2015), p. 5; and CTO Newsletter, 'Indonesia's Sukhoi procurement "dependent of technology transfer, offsets and countertrade"', *Countertrade & Offset*, 33:18 (2015), p. 6.

¹²⁴ CTO Newsletter, 'Indonesia: Lockheed Martin pledges local component production for F-16', *Countertrade & Offset*, 33:20 (2015), p. 4.

¹²⁵ CTO Newsletter, 'Russia planning for civil aircraft production in UAE', *Countertrade & Offset*, 35:22 (2017), p. 7.

¹²⁶ Agnes Helou, 'Rostec looks to UAE to co-produce Su-75 Checkmate subsystems', *Defense News* (15 November 2021), <https://www.defensenews.com/digital-show-dailies/dubai-air-show/2021/11/15/rostec-looks-to-uae-to-co-produce-su-785-checkmate-subsystems/>.

¹²⁷ CTO Newsletter, 'Iran inches towards production of Sukhoi-35 jet parts', *Countertrade & Offset*, 41:9 (2023), p. 2.

¹²⁸ Ibid.

¹²⁹ CTO Newsletter, 'Putin proposes jet joint production with Turkey', *Countertrade & Offset*, 37:18 (2019), p. 6.

¹³⁰ CTO Newsletter, 'Turkey signs loan agreement to buy Russian S-400 anti-air system', *Countertrade & Offset*, 36:2 (2018), p. 3.

¹³¹ See CTO Newsletter, 'Another twist as Russia's intelligence services object to Turkey's missile deal', *Countertrade & Offset*, 35:18 (2017), p. 2; and CTO Newsletter, 'Turkey faces technology block from both U.S. and Russia', *Countertrade & Offset*, 36:10 (2018), p. 6.

¹³² CTO Newsletter, 'Russia and Turkey lock horns over S-400 missile technology transfer', *Countertrade & Offset*, 40:9 (2022), p. 11.

¹³³ Aaron Mehta, 'Turkey officially kicked out of F-35 program, costing US half a billion Dollars', *Defense News* (17 July 2019), <https://www.defensenews.com/air/2019/07/17/turkey-officially-kicked-out-of-f-35-program/>.

¹³⁴ CTO Newsletter, 'Saudi purge under way as missile deal with Russia riles America', *Countertrade & Offset*, 35:20 (2017), p. 3.

¹³⁵ Agnes Helou, 'Saudi Arabia has no interest in the S-400, says Russian industry official', *Defense News* (16 November 2021), <https://www.defensenews.com/digital-show-dailies/dubai-air-show/2021/11/16/saudi-arabia-has-no-interest-in-the-s-400-says-russian-industry-official/>.

to impose CAATSA sanctions. New Delhi committed to spending \$5.5 billion for five S-400 air defence systems and approximately 1,000 missiles.¹³⁶ Currently, Russia and India are finalising an agreement to establish a joint venture for the maintenance and repair of S-400 systems within India.¹³⁷ Three of the systems have been delivered, but the ongoing Russo-Ukrainian war has delayed the expected delivery of the remaining two S-400 batteries from 2024 to 2026.¹³⁸

India did not forgo offsets in its 2019 procurement of 464 Russian-made T-90 main battle tanks.¹³⁹ These tanks are to be produced in India, with domestic content reaching 80 per cent.¹⁴⁰ India paid \$1.2 billion upfront for the technology transfer associated with the \$3.12 billion contract.¹⁴¹ Similarly, India requested offsets for the procurement of four Admiral Grigorovich-class guided-missile frigates.¹⁴² Following an intergovernmental agreement signed in October 2016, New Delhi and Moscow finalised a follow-on contract in January 2019 to assemble two of the frigates at India's state-owned Goa shipyard, with technical support from Russia's United Shipbuilding Corporation (USC). These frigates will be armed with supersonic cruise missiles produced by the India–Russia joint venture BrahMos. Meanwhile, Russia continued to supply India with Su-30s, Sukhoi's fourth-generation fighter aircraft. Since 1996, India has acquired 272 of these jets, 222 of which have been built under licence by HAL.¹⁴³ Currently, Russia and India are exploring the possibility of jointly producing Su-30 fighter aircraft, which would allow India to export them to other countries.¹⁴⁴ The jets are expected to be manufactured at the HAL plant in Nashik, Maharashtra, which could also serve as a regional MRO centre for neighbouring users.¹⁴⁵ However, while New Delhi regards Russia as a 'most accommodating' offset partner,¹⁴⁶ it has expressed frustration over Moscow's reluctance to share its most advanced jet technology.¹⁴⁷ In fact, little to no technology has been transferred by Sukhoi regarding the Su-30s assembled by HAL from imported kits.¹⁴⁸ In 2018, New Delhi withdrew from an 11-year collaborative project to develop

¹³⁶ See CTO Newsletter, 'India forgoes offsets for Russia's S-400 system', *Countertrade & Offset*, 36:20 (2018), p. 7; and CTO Newsletter, 'India scrambles over Russian defence deals as US releases sweeping sanctions', *Countertrade & Offset*, 40:5 (2022), p. 2.

¹³⁷ CTO Newsletter, 'JV to locally maintain S-400 systems amid delivery delays', *Countertrade & Offset*, 42:14 (2024), p. 9.

¹³⁸ Inder Singh Bisht, 'Russia delays S-400 air defense system delivery to India by 2 years', *The Defense Post* (21 March 2024), <https://www.thedefensepost.com/2024/03/21/russia-s-400-system-india/>. China (2015) and Belarus (2021) also ordered S-400 batteries in the period under analysis. Except for personnel training, no offsets have however been reported. See *SIPRI Arms Transfer Database*.

¹³⁹ CTO Newsletter, 'India pays for Russian technology – domestic content will double', *Countertrade & Offset*, 37:24 (2019), p. 6.

¹⁴⁰ Shishir Arya, 'War in Ukraine speeds up indigenisation of T-90 tanks', *The Times of India* (25 September 2023), <https://timesofindia.indiatimes.com/city/nagpur/war-in-ukraine-speeds-up-indigenisation-of-t-90-tanks/articleshow/103918345.cms>.

¹⁴¹ CTO Newsletter, 'India pays for Russian technology'. Algeria (2014), Armenia (2014), Iraq (2016), Syria (2015), and Vietnam (2017) also acquired T-90 MBTs in the period under analysis. Some of these transfers were gifts (Armenia) or possibly military aid (Syria), with none seemingly including offsets. See *SIPRI Arms Transfer Database*.

¹⁴² See Franz-Stefan Gady, 'Russia to deliver 2 guided-missile frigates to India by 2024', *The Diplomat* (7 February 2020), <https://thediplomat.com/2020/02/russia-to-deliver-2-guided-missile-frigates-to-india-by-2024/>; and Dinakar Peri, 'Further delay in delivery of stealth frigates from Russia; now expected in May and October 2024', *The Hindu* (15 August 2023), sec. India, <https://www.thehindu.com/news/national/further-delay-in-delivery-of-stealth-frigates-from-russia-now-expected-in-may-and-october-2024/article67198172.ece>.

¹⁴³ CTO Newsletter, 'Upgraded Russian-origin jets to have 78 percent Indian content', *Countertrade & Offset*, 41:23 (2023), p. 6.

¹⁴⁴ CTO Newsletter, 'Russia and India explore joint production of Sukhoi jets', *Countertrade & Offset* 42:14 (2024), p. 9.

¹⁴⁵ Ibid.

¹⁴⁶ CTO Newsletter, 'India still open to Russian suppliers'.

¹⁴⁷ See CTO Newsletter, 'India and Russia stuck over Sukhoi work-share', *Countertrade & Offset* 35:16 (2017), p. 4; CTO Newsletter, 'India tells Russia to provide source codes', *Countertrade & Offset*, 35:6 (2017), p. 6; and Franz-Stefan Gady, 'India pulls out of joint stealth fighter project with Russia', *The Diplomat* (23 April 2018), <https://thediplomat.com/2018/04/india-pulls-out-of-joint-stealth-fighter-project-with-russia/>.

¹⁴⁸ CTO Newsletter, 'India tells Russia to provide source codes'.

a fifth-generation fighter aircraft, a more advanced derivative of the Sukhoi T-50.¹⁴⁹ Throughout this period, India voiced concerns over Russia's unwillingness to agree to a favourable workshare arrangement, including the transfer of sensitive technology such as the aircraft's source codes.¹⁵⁰

Sustaining the military campaign in Ukraine

In late 2022, Ukrainian president Volodymyr Zelenskyy disclosed that Iran was exporting as many as 2,400 Shahed loitering munitions – often referred to as suicide or kamikaze drones – to Russia, seemingly in exchange for 24 Russian Su-35 jets, with plans for a second batch to be produced locally.¹⁵¹ By mid-2024, a video circulating on Russia's military Telegram channels showcased Iran's offset investment to support the mass production of Shahed drones within Russia.¹⁵²

Looking to the future: Barter – what goes around, comes around?

Moscow's reluctance to offer high-end offsets, coupled with Western sanctions limiting dollar transactions and heightened geopolitical competition for resources, including critical minerals, suggests that Russia will likely return to barter trade to sustain its arms sales. While Russian arms exports have decreased sharply across all regions, Moscow remains the most important supplier of defence equipment for African countries,¹⁵³ and here barter remains the obvious trading solution for effecting arms transfer to low-income states. Coincidentally, many of these impoverished African states possessing non-convertible currencies, also happen to be rich in strategically important critical minerals.¹⁵⁴ At the same time, Russian barter arrangements, wherever feasible, will likely include basing rights, as per Soviet-era antecedents. In late 2023, Russia established a military base in Burkina Faso and in April 2024 used the Libyan port of Tobruk to funnel weapons throughout Africa.¹⁵⁵ Significantly, in June 2024, Sudan agreed to allow Moscow to build a naval logistics base on the Red Sea in exchange for weapons, ammunition, and spare parts for its Russian-made planes.¹⁵⁶ Further, a Russian military base to train local soldiers might soon open in the Central African Republic.¹⁵⁷

Conclusions

Western sanctions imposed on Russia after its 2014 annexation of Crimea, and again following its 2022 full-scale invasion of Ukraine, among other factors, have caused Russian arms export to fall to levels not seen since the dissolution of the Soviet Union. To arrest and possibly reverse this trend, Russia has resorted to defence counter-trade. Leveraging arms transfers to project power and influence, Moscow has paired them with geoeconomic instruments, including aid, diplomacy, investment, and trade. However, Russia has largely been unsuccessful in this endeavour.

¹⁴⁹Gady, 'India pulls out of joint stealth fighter project with Russia'.

¹⁵⁰CTO Newsletter, 'India tells Russia to provide source codes'.

¹⁵¹CTO Newsletter, 'Drones for jets? Russia and Iran discuss barter and energy swaps', *Countertrade & Offset*, 40:20 (2022), p. 1.

¹⁵²David Hambling, 'Russian video appears to show mass production of Shahed attack drones', *Forbes* (5 March 2024), <https://www.forbes.com/sites/davidhambling/2024/03/05/new-video-claimed-to-show-mass-production-of-shahed-attack-drones/>.

¹⁵³The main suppliers to Africa in 2020–4 were Russia (accounting for 21 per cent of African imports of major arms), China (18 per cent), and the USA (16 per cent). See Wezeman et al., 'Trends in international arms transfers, 2023'.

¹⁵⁴See, for instance, <https://unctad.org/news/how-africa-can-harness-critical-mineral-wealth-revamp-economies>.

¹⁵⁵See Selcan Karabektas, 'Russia's growing military footprint in Africa: Arms deals and defense cooperation', Orion Policy Institute (24 March 2024), <https://www.orionpolicy.org/orionforum/255/russias-growing-military-footprint-in-africa-arms-deals-and-defense-cooperation>; and Tom Kington, 'Russia funneling weapons through Libyan port, eyeing gateway to Africa', *Defense News* (19 April 2024), <https://www.defensenews.com/global/europe/2024/04/19/russia-funneling-weapons-through-libyan-port-eyeing-gateway-to-africa/>.

¹⁵⁶Hamza Hendawi and Ahmed Al Shafie, 'Sudan army set to give Russia Red Sea base in exchange for arms', *The National* (5 June 2024), <https://www.thenationalnews.com/news/mena/2024/06/05/sudan-russia-red-sea-naval-base/>.

¹⁵⁷Karabektas, 'Russia's growing military footprint in Africa'.

While developing states in Asia and Africa are keen to exploit barter and counter-trade opportunities, richer Middle Eastern states seek technology transfer, and so do China and India. Hence, unless Russia agrees to transfer its most sensitive technologies, buyer states, including major markets such as India, China, and Saudi Arabia, will be tempted to either look elsewhere or double down on indigenisation strategies. Due to these constraints, Russia's future defence counter-trade 'model' can be expected to focus on barter arrangements, including arms-for-basing rights, targeting especially resource-rich developing states.

Here, however, Russia will increasingly face competition from China. While Western countries do not traditionally engage in barter,¹⁵⁸ China has long done so.¹⁵⁹ Between 2004 and 2006, China provided approximately 90 per cent of Sudan's small arms and light weapons imports, securing access to Sudanese oil in return. In 2009, the Zimbabwe Ministry of Defence procured 12 K-8 jet trainer aircraft, paying with minerals worth \$240 million. Additionally, Zimbabwe reportedly granted the Chinese defence firm Norinco mining rights to extract platinum, gold, copper, and diamonds from several sites in exchange for military equipment. In early 2014, Bolivia successfully launched its first telecommunications satellite, Tupac Katari (TKSat-1), into geostationary orbit aboard a Chinese Long March 3B rocket. The satellite's \$295 million cost was 85 per cent financed by a 15-year loan from the China Development Bank. Repayment terms included a mix of 40 per cent in cash and 60 per cent through steel production from Bolivia's El Mutun iron ore facility, with interest set at LIBOR plus 2.7 per cent. Additionally, long-range FD-2000 air defence missile systems were transferred to Uzbekistan and Turkmenistan in return for natural gas.

Continuously evolving in response to a changing geopolitical and geoeconomic landscape, Russia's defence counter-trade strategies have a significant bearing on scholarly debates regarding the motives underpinning Moscow's arms trade. While International Relations and Security Studies scholars often portray the Russian arms trade as either economically or strategically motivated, focusing on limited time frames that stifle systematic analysis, this paper has sought to offer fresh theoretical and empirical perspectives by examining Russian defence counter-trade processes over eight decades to reveal a far more complex and nuanced set of motives. To further enhance our understanding of the Russian arms trade—its motives, strengths, and limitations—future research could compare Russia's countertrade model with those of China and the United States—the latter emerging and currently exemplified by the recent US-Ukraine arms-for-minerals deal.¹⁶⁰

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¹⁵⁸The US–Ukraine 'arms for minerals' deal is a notable exception. See 'The full text of the US, Ukraine minerals agreement', *The Kyiv Independent* (1 May 2025), <https://kyivindependent.com/the-full-text-of-the-us-ukraine-minerals-agreement/>.

¹⁵⁹Ron Matthews and Jonata Anicetti, 'The role of defence countertrade in Chinese geoeconomic diplomacy', *Journal of Strategic Studies*, 47:5, pp. 612–42, <https://doi.org/10.1080/01402390.2024.2327842>.

¹⁶⁰'The full text of the US, Ukraine minerals agreement', *The Kyiv Independent*.

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