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KEY TAKEAWAYS

- Sino-Russian cooperation in dual-use technologies has geopolitical implications that go beyond the Ukraine conflict and international sanctions.
- Collaboration between Beijing and Moscow in lunar research, AI and quantum technology often leads to models alternative to US-backed initiatives, prompting the formation of distinct international groupings with overlapping goals.
- This geopolitical bifurcation could trigger competitive rather than cooperative state behaviour and negatively impact international strategic stability.

COMMENTARY

China and Russia have steadily deepened their strategic partnership in recent years despite mounting international pressure in the form of sanctions, tariffs and heightened rhetoric. Their strengthening cooperation involves dual-use projects, boosting their capabilities in areas such as lunar research, artificial intelligence (AI) and quantum technology.

While these efforts may not be in pursuit of overt military aims, they have significant geopolitical implications. By virtue of being major powers in the international system and their tense relations with the United States, their collaboration represents an alternative to US-led technology initiatives, prompting the creation of distinct international groupings pursuing overlapping goals. This geopolitical fragmentation may adversely affect international strategic stability as it could promote competition, rather than cooperation, in critical fields.

Lunar Exploration and Research

The International Lunar Research Station (ILRS) initiative was announced by China in 2017, and China signed a memorandum of understanding on the construction of the ILRS with Russia in 2021. Beijing and Moscow agreed upon the organisational and legal framework for the station in 2022. In May 2025, the two countries went further and inked an agreement to build a nuclear power plant on the Moon to power the ILRS.

The goal of the ILRS is to construct multiple facilities that support extended missions to the lunar surface and beyond. The constructions include an orbital station, a support base, and a transportation and operation facility. The ILRS will be set up in multiple phases. By 2035, the goal is to have a basic facility built in the vicinity of the lunar south pole. By 2045, the plan is to upgrade the station with a routine Earth–Moon transportation system that will support on-site construction, resource utilisation, and technological testing.

The nature of the ILRS's activities is ostensibly civilian and scientific, but it has geopolitical repercussions. The ILRS is deemed to be an alternative to the United States' Artemis programme (also initiated in 2017), which Moscow finds too US-centric and is off limits to Beijing due to US regulations that restrict space cooperation between Washington and Beijing.

The parallel establishment of the ILRS and the Artemis programme led to the formation of two international groups in the pursuit of lunar exploration and research. The Artemis Accords have at least 56 signatories, such as Japan, India, Germany, France and Belgium. At least 12 nations have joined the ILRS, including Pakistan, South Africa, Belarus and Turkey.

While these initiatives are not mutually exclusive – Senegal and Thailand are involved in both – they have led to considerable bifurcation and friction in lunar research, as most states join one and not the other. In April 2025, Beijing accused Washington of interfering with China's effort to get European nations on board with the ILRS. In August 2025, the United States reportedly expedited efforts to construct a nuclear reactor on the Moon before China and Russia, and Washington is increasingly framing these efforts as a "second space race".

From a geopolitical perspective, lunar research efforts could cause complications later, as reaching the Moon and setting up scientific research stations there allow states to expand exclusive control over lunar territory and resources.

Artificial Intelligence

Sino-Russian dual-use technology cooperation includes AI as well. Such cooperation was catalysed by both sanctions and technological breakthroughs. After Huawei was sanctioned by the United States due to national security concerns, it moved to secure new partners in Russia. This approach bore fruit in 2020, when Huawei and the Moscow Institute of Physics and Technology established a laboratory to jointly develop AI technology. In early 2025, as DeepSeek achieved spectacular success in the AI space, Sberbank – Russia's biggest bank – announced plans to cooperate on joint AI projects with China.

While these projects have no avowed military use, Moscow and Beijing acknowledge the dual-use nature of AI. Chinese and Russian officials had an exchange about the military use of the technology in February 2024, but details about their cooperation remain scarce.

Similar to lunar research, the Sino-Russian approach to the military use of AI is not entirely aligned with US-led efforts. In February 2023, the United States initiated the Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy, which has the support of almost 60 states. Subsequently, the United States unveiled its AI action plan in July 2025, which involves coordinating with Washington's allies to cement dominance in the field.

China and Russia are not active participants in these initiatives. Moscow was sidelined from US-backed multilateral summits on the military use of AI due to the Ukraine conflict, while Beijing usually participates in these multilateral discussions without endorsing US-backed initiatives.

Instead of getting on board with US-supported proposals, China formalised its own approach to AI governance. In October 2023, Beijing put forward the Global AI Governance Initiative, and in July 2025, it proposed to set up a global organisation to foster the development of AI governance.

The geopolitical bifurcation in the field of AI is less obvious than the case of lunar research for now as Russia's role as a partner is less prominent. Nevertheless, the potential for a similar dynamic is there as China's initiatives can be seen as alternatives to US-backed proposals. This could lead to similar groupings and divisions as in the case of lunar research.

Quantum Technology

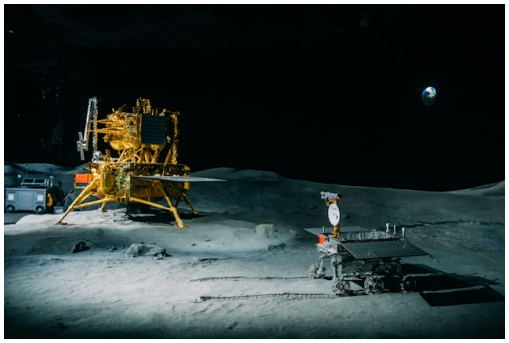
In December 2023, scientists from Russia and China successfully achieved quantum communication over a distance of 3,800 kilometres, utilising secure keys sent via China's quantum satellite. In the experiment, two images were securely transmitted using quantum key encryption. In March 2025, China established another successful quantum communication link, this time with South Africa. These two successful experiments indicate that a quantum communication network involving countries of the BRICS grouping is technically achievable.

While these quantum links have no proclaimed military use, quantum communications ensure the secure transmission of sensitive data, even in environments with heavy surveillance or active interference, which is particularly useful in the military domain. In a conflict setting, this could permit efficient communication and coordination between forces, without adversary units eavesdropping on them.

The United States too is actively seeking cooperation in quantum technology. Washington pursues bilateral quantum partnerships, which so far include its close partners, such as Japan, India, South Korea, the Netherlands, Switzerland and Israel. The East-West dynamic here too is competitive, rather than cooperative, with the United States restricting quantum technology-related investments and exports to China, and American lawmakers appealing for greater quantum funding to compete with Beijing.

Dual-Use Technology Cooperation and International Stability

The deepening Sino-Russian cooperation in dual-use technological projects, combined with the limitations of international cooperation in the current geopolitical context – China's military rise and its tense relationship with the United States, as well as China's continued close relations with Russia throughout the Ukraine conflict – sowed the seeds of geopolitical fragmentation in dual-use technology. The bifurcation is most prominent in lunar research, but other technological fields, such as AI and quantum technology, may follow suit. This dynamic could exacerbate geopolitical friction and deepen international divisions.



Sino-Russian cooperation in dual-use technological projects amid East-West geopolitical tensions could deepen international divisions. However, these trends are not irreversible.
Image source: Unsplash.

Taken together, these dynamics negatively impact global strategic stability as competing blocs develop space, AI and quantum technologies with military potential, raising the risk of a new, destabilising arms race.

These trends are not irreversible. A US-China thaw could rebuild strategic trust, while de-escalation in Ukraine could do the same in Eurasia. Since most international groupings overlap rather than exclude one another, their efforts could be coordinated if major powers choose trust over rivalry. Such a shift would open the door to collaboration instead of competition.

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