

China, Russia Deepen Technological Ties

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China and Russia are deepening and expanding their ties — economic, military, technological — as external pressures limit their access to overseas markets and technology. Both countries hope the collaboration will help to compensate for domestic deficiencies and to compete successfully with the United States in today's critical technologies.

This bilateral relationship, currently celebrating its 70th anniversary, has ebbed and flowed in the decades since the Soviet Union and the People's Republic of China opened diplomatic relations. This relationship, now upgraded to and characterized as a "comprehensive strategic partnership of coordination for a new era," is continuing to evolve amid today's great power rivalry.

For Moscow, certain Chinese products, services and experience may be the lifeline for its industry, government, and military need to wean themselves from high-tech Western imports.

For Beijing, Russia's skilled engineers and mathematicians are a valuable resource for tech and defense industry giants that are hungry for talent and faced with increasingly unfavorable conditions in the United States and Europe. And its military hopes to draw on Russian proficiency in designing advanced weapons and experience using emerging capabilities on today's battlefields.

Consequently, the Sino-Russian strategic partnership has increasingly concentrated on technology and innovation. In the wake of Xi Jinping's visit to Moscow in May 2015, the Chinese and Russian governments have signed a series of agreements to develop new realms of cooperation. In June 2016, China's Ministry of Science and Technology and Russia's Ministry of Economic Development signed the "Memorandum of Understanding on Launching Cooperation in the Domain of Innovation." The notion of these nations as linked in a "science and technology cooperation partnership for shared innovation" has been elevated as a major pillars of this relationship.

To some degree, this designation has been rhetorical and symbolic, but it has also corresponded with greater substance. Over time, the partnership has become more mature and institutionalized. This policy support for collaboration in innovation has manifested in bilateral dialogues and exchanges, the development of industrial science and technology parks, and the expansion of academic cooperation between the Russian and Chinese Academies of Sciences. The countries have even founded a joint incubator aimed at young hi-tech entrepreneurs and business communities.

As China's ambassador to Russia said last year, "Strengthening collaboration, promoting mutual investment, actively implementing promising innovation projects, expanding direct links between the scientific, business and financial communities of the two countries is particularly important today." China seems eager to take this relationship even further by proposing to the Russian Academy of Sciences the creation of permanent S&T and R&D centers in Russia, where scientists from the two countries would hold meetings and jointly develop technologies.

The dynamics in play are reflected in the ongoing feud between the United States and China over Huawei. In response to official suspicion and hostility from Western governments, the mobile-computing giant has expanded its engagement with the Russian Federation. The company is enlarging its R&D centers and has begun recruiting to hire a thousand Russian specialists within five years. It has also expanded 5G tests and pilot programs in Russia.

Al is also emerging as a new priority in technological cooperation. For instance, the countries are seeking to expand the sharing of big data. In September, both countries signed a document establishing a hi-tech accelerator working with neural networks that would facilitate the entry of new products to China's rapidly growing IT market. Around that same time, the head of the state-owned Russian Venture Company touted Al's potential at a Shanghai investment forum, saying that "artificial intelligence seems to be promising, given the potential of the Chinese market, the results of cooperation, and the accumulated scientific potential of Russia."

But obstacles remain. For instance, Russia initially had reservations about China's "One Belt, One Road" initiative, which has been closely linked to scientific and technological collaboration. China's track record on IP theft may also be a concern. Perhaps Moscow, which has long watched China reverse-engineer its defense technologies, is merely resigned. But it is notable that the Chinese government is publicizing promises to enforce IP protection vis-à-vis their Russian counterparts, implying that a détente may have been reached.

At this point, Russia seems to be more concerned about China stealing its best and brightest scientists. This month, the head of the Russian Academy of Sciences expressed concern that Beijing has begun to woo Russian STEM talent with better pay and work conditions, a sentiment that seems to run counter to so many joint S&T initiatives outlined earlier. And yet both China and Russia are grappling with the fact that young, promising scientists often seem to prefer working in the United States.

There are also fundamental asymmetries in this bilateral relationship that may limit or at least complicate cooperation. Russia lacks tech giants, such as China's Alibaba, Tencent, and Huawei, that are starting to expand globally, including into the Russian market, and so Beijing is emerging as the dominant player.

Nonetheless, this technological partnership could prove consequential for Chinese and Russian ambitions to promote and sustain indigenous innovation. The United States should track the trajectory of China-Russia tech collaborations to mitigate the risks of technological surprise and ensure early warning of future developments.

This article previews the findings of a report to be released by the Australian Strategic Policy Institute later this fall that will offer a more detailed assessment of certain elements of Sino-Russian high-tech cooperation.¹⁰

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