

NSF's China Entity Ban Risks Undermining Scientific Collaboration



By LIANG Yilian & HU Dingkun

The U.S. National Science Foundation (NSF) recently issued a "Dear Colleague" letter, announcing plans to introduce a so-called new "research security policy" in fiscal year 2027. Citing concerns including "national security," the proposed policy would prohibit NSF-funded projects from collaborating with entities listed on what it describes as U.S. "Restricted Party Lists," including the U.S. Department of Commerce's Bureau of Industry and Security (BIS) Entity List, the Department of Defense's Section 1260H list, and the Federal Communications Commission's (FCC) Covered List.

The proposed restrictions are broad in scope and stringent in nature, targeting both institutional cooperation and individual researchers. At the institutional level, NSF funding would not be allowed to support any form of collaborative research between NSF-funded projects and "restricted entities," nor would cooperation with employees of such entities be permitted. At the individual level, NSF-funded "senior/key" personnel would be barred from holding any position or appointment at a "restricted entity," receiving research funding from such entities, or collaborating with them or their employees on NSF-supported research.

Although the policy does not explicitly name any country, China is clearly its primary — and arguably only — target. The BIS Entity List includes hundreds of Chinese technology companies and leading universities and research institutions. Most entities on the FCC Covered List are Chinese technology companies or their products,



A researcher checks the operating status of the intense current linear plasma device "Chixiao" in Hefei, Anhui province, on April 28, 2026. (PHOTO: XINHUA)

while the Department of Defense's Section 1260H list was created specifically to identify Chinese military companies, including major Chinese technology firms such as Baidu and BYD.

The day after the NSF announcement, John Moolenaar, who chairs the U.S. House Select Committee on China, said that "prohibiting federal funding from being used to collaborate with Chinese entities that are national security risks or human rights abusers is straightforward and all federal agencies should follow the lead of the Pentagon and NSF."

However, neither the BIS Entity List nor the Section 1260H list currently prohibits scientific cooperation with Chinese entities. The NSF's proposed policy would significantly expand the scope of these restrictions by extending national security considerations into the field of academic research.

For example, the U.S. Export Administration Regulations explicitly state

that information resulting from basic or applied scientific and engineering research is exempt from export control laws and regulations. As a result, BIS restrictions do not provide a legal basis for banning scientific cooperation such as jointly publishing academic papers.

Similarly, the Department of Defense's Section 1260H list primarily restricts listed entities from participating in U.S. military supply chains; it does not prohibit civilian scientific cooperation unrelated to the Department of Defense.

The FCC Covered List limits certain companies' products and services from entering the U.S. market, but it does not impose restrictions on academic research collaboration.

As one of the largest U.S. research funding agencies, the NSF plays a central role in supporting basic research. Its funding accounts for roughly one-quarter of federal government support for basic research at U.S. universities. If

implemented, the proposed policy could significantly damage international scientific cooperation between the U.S. and China.

Hundreds of Chinese technology companies, universities and research institutions could be excluded from NSF-funded international research programs, making it difficult for them to collaborate with U.S. scientists receiving NSF support. And this would represent only the immediate impact.

More importantly, as a government agency with substantial influence over the distribution of research funding, the NSF's decision could create a broader "chilling effect" across the U.S. academic community. Universities and researchers may become increasingly cautious about engaging with Chinese partners, affecting even projects that do not involve NSF funding or entities listed on U.S. restriction lists.

Ultimately, NSF's expansion of national security restrictions into scientific collaboration risks harming U.S. interests as much as those of China. Experience has already shown that attempts to contain China's technological development through scientific decoupling are unlikely to succeed.

Both the U.S. and China are among the world's leading contributors to scientific research. Scientific cooperation between the two countries benefits not only their own technological advancement but also global scientific progress and human welfare.

As a major U.S. institution supporting fundamental research, the NSF should serve as a facilitator — rather than an obstacle — of international scientific collaboration. The proposed China-related restrictions should not be allowed to undermine decades of productive scientific exchange or produce consequences that ultimately harm all sides.

Chinese Solution to Counter AI Forgeries

AI Ripples

By LI Linxu

With the rapid advancement of AI, AI deepfakes, synthesis, and other forgery technologies have triggered new security issues, posing severe challenges to digital identity security. Consequently, vein recognition technology, which offers superior security, is embracing new growth opportunities.

At a recent symposium on the construction of security infrastructure for AI trusted identity authentication, Zheng Zhiming, an academician of the Chinese Academy of Sciences, said that as AI increasingly transitions from digital realms into physical spaces, three fundamental capabilities — trusted data, trusted identity and trusted computing — will support its healthy development. In this new era

of physical intelligence, trusted identity is no longer just a "premium add-on." Instead, it serves as an essential trust infrastructure bridging data environments and physical environments. Without trusted identity, trusted data cannot exist, and trusted computing cannot be successfully implemented.

Huang Yi, chairman of the Digital Security Technology and Service Branch of the China Safety Industry Association, pointed out that the domestic biometrics and trusted identity market is projected to surpass 34 billion RMB in 2026, maintaining a stable compound annual growth rate of 18 percent. A massive structural shift is underway within this market: Privacy-focused biometrics (such as vein and palmprint recognition) are surging ahead with a 29.6 percent growth rate. This rapid expansion far outpaces traditional facial recognition, demonstrating powerful market momentum.

According to Zhao Guodong, chief

technology officer of biometric technology firm Saint Deem, external biometric features, such as facial profiles and voiceprints, are now facing systemic threats from advanced AI forgery and deepfake technologies. In contrast, vein recognition utilizes subcutaneous vein patterns inside the human body for liveness verification. This approach delivers distinct security advantages, including being impossible to replicate, exceptionally difficult to spoof, inherent liveness detection, and superior privacy protection.

Vein recognition technology relies on two core capabilities working together: high-precision imaging technology and intelligent algorithms. As AI algorithms continue to upgrade, vein recognition is rapidly evolving from a standalone authentication method into a foundational capability for multimodal trusted identity platforms.

Future identity authentication will no longer serve merely as a gateway for

system login. Instead, it will transform into an essential identity infrastructure for all AI entry points, such as AI agents, intelligent robots, smart vehicles and intelligent terminals.

Aligned with this vision, Saint Deem is pioneering a trusted cryptographic key-binding technology powered by vein recognition. By integrating unique human vein patterns with cryptographic keys, this innovation establishes a brand-new security paradigm for critical use cases in the AI era, including digital asset ownership verification and intelligent terminal authorization.

Currently, this technology has already been implemented across multiple scenarios. In the smart transit sector, public transport groups in places like Wenzhou city in Zhejiang province, and Chengde city in Hebei province, have begun promoting palm vein payment systems, allowing passengers to pay for their rides with a simple wave of their palm.

Jointly Advancing AI for Shared Prosperity

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An *Arab News* article said the open-source AI models developed in China are gaining increasing popularity among enterprises. The transparency and sharing nature of open-source technology itself is the "best way to build trust."

**Sharing development benefits globally**

Indonesia's *Jakarta Globe* said China's AI technology has helped Indonesian mines "improve mining safety and the level of sustainable development." The article also mentioned that Chinese enterprises plan to expand their AI training programs for Indonesian students,

engineers and industry personnel, and to strengthen cooperation with Indonesian universities.

Kenya's *The Standard* reported that the open-source AI models launched by Chinese enterprises are gaining influence in Africa. A researcher from the Jomo Kenyatta University of Agriculture and Technology said by using open-source models, African teams can deploy systems locally and create solutions that are tailored to the development needs of Africa.

Independent News Pakistan said China's introduction of AI technology in areas such as education, healthcare,

public services and industrial production has provided valuable experiences for Pakistan, helping address challenges related to the development of AI, especially in breaking the bottlenecks in talent development.

**Key areas of global governance**

"The international community urgently needs to reach a broader consensus on the governance of AI," Cuban newspaper *Granma* emphasized. "China actively advocates promoting the innovative application of AI based on common governance rules, so that it can better enhance human well-being and promote the progress of human civilization."

According to Brasil 247, Brazilian news and political analysis website, the

World AI Conference is one of the largest global events on AI, serving as a significant platform for discussing global AI governance. The report cited expert opinions, stating that the Chinese government has been improving its AI governance system and is committed to promoting a "win-win development model among countries." It has also established norms based on principles such as transparency, fairness, security and trustworthiness.

A report published by NBC News stated that a survey released by Pew Research Center on July 15 showed that the view that "China is a more reliable partner" is gaining recognition in many regions. China has the vision of regarding AI as a "global public good."

Comment

How 'China Squeeze' Narrative Was Manufactured

By LIANG Yilian & ZHANG Mengran

U.S. think tank Peterson Institute for International Economics recently introduced a new term — "China squeeze," arguing that China's manufacturing sector is not only challenging advanced industries in Europe and the U.S., but also crowding out the industrialization opportunities of other developing countries in the Global South.

The sophisticated report, accompanied by economic models and detailed datasets, gives the impression of academic rigor, and has gained traction after being quoted by mainstream U.S. media outlets. One of them, *Foreign Affairs*, claimed China was "pulling up the ladder" for developing countries.

Responding to the claim, Chinese Foreign Ministry spokesperson Mao Ning said at a regular press briefing that the "China squeeze" was clearly inconsistent with the facts, and "countries of the Global South would not endorse this narrative either."

From the "China shock" narrative to accusations of "Chinese industrial overcapacity," from the so-called "debt trap" theory to today's "China squeeze" rhetoric, the terminology keeps changing, but the underlying logic remains the same: portraying China's development as a threat to others.

This time, however, the narrative has been packaged more carefully. Rather than targeting only Western audiences, its proponents have placed Global South countries at the center of the argument, attempting to sow distrust between developing nations.

The background of the narrative's main advocate raises questions about political bias. The report was led by Arvind Subramanian, who was the chief economic adviser to the Government of India from 2014 to 2018, and who has long expressed anxieties about China's economic rise, frequently advancing arguments centered on China's alleged economic dominance over other countries.

The degree of academic objectivity behind such a conclusion is therefore open to question.

More importantly, the narrative fits neatly into Washington's broader strategy of containing China's rise. The report has emerged and gained attention at a time when the U.S. has been intensifying trade pressure against China.

Washington has erected protectionist barriers in the name of safeguarding its own industries, while simultaneously accusing China of harming global development. It has even attempted to present itself as a defender of the interests of Global South countries.

Yet behind the polished rhetoric

lies an old argument that cannot withstand scrutiny from facts and data.

A 2025 S&P Global report says over the past decade, China's imports of goods from Global South countries have more than doubled, reaching one trillion USD. As of May 1 this year, China has officially implemented zero-tariff treatment on 100 percent of tariff lines for the 53 African countries it has diplomatic relations with.

The extent of China's market opening is far from what certain reports have deliberately misrepresented. China is using its significant market demand to provide broad market access for products from Global South countries.

The actual development experiences of Global South countries also contradict the "China squeeze" theory.

Ethiopia, leveraging the Eastern Industrial Zone established with Chinese investment, has built its manufacturing sector from scratch, creating over 20,000 local jobs cumulatively. Far from being "crowded out," it has gained new opportunities for industrialization through the radiating effect of China's development.

The facts also reveal China's broader responsibility toward global development. China has signed cooperation documents on jointly building the Belt and Road Initiative with more than 150 countries and over 30 international organizations. Research reports show that from the launch of the Belt and Road Initiative in 2013 to the end of 2025, the cumulative value of contracts and investment reached 1.4 trillion USD.

In Africa alone, 33 economic and trade cooperation zones have attracted over 13 billion USD in cumulative investment, generating 90,000 direct local jobs. China exports not just products, but also infrastructure and development opportunities. This is not "pulling up the ladder," but "building a ladder."

The true insidiousness of the "China squeeze" theory lies in its attempt to tear apart the solidarity between China and other Global South countries. China has stood with fellow developing countries through thick and thin for decades. Today, China is going even further to support the development of its partners — opening markets, investing in infrastructure, and transferring technology — all of which are tangible efforts on the ground. A tendentious report cannot erase this bond that has stood the test of time.

The greatness of a nation lies in its commitment to the world — this captures the broader logic of China's shared development with the world. China will continue to provide opportunities for the world through its own development and join forces with other Global South countries in pursuing shared prosperity.



The Eastern Industrial Zone in Dukem, Ethiopia. (PHOTO: XINHUA)

Smart Logistics Hub Bolsters Sino-CEEC Connectivity

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The growing volume of goods stopping and being redistributed here has expanded the park's functions. Now, a full suite of procedures can be completed at the center. Procedures that used to take weeks are now completed in just a few days, thanks to integrated digital systems.

Li Haitao, deputy general manager of CECZ, said the Fulfillment Center has

established partnerships with multiple China-Europe Railway Express routes, serving as a consolidation hub in Central and Eastern Europe. It also handles distribution for the Ningbo-Budapest sea-rail intermodal route.

Inside the smart warehouse, the flow of goods never stops. Products move steadily along conveyor belts, destined for markets across Central and Eastern Europe and beyond.