

INSIGHTS

When 'Security Risks' Mask Industry Self-interest

Clear Voice

By LIANG Yilian & HU Dingkun

On March 22, the U.S. House Committee on Homeland Security announced that its Subcommittee on Cybersecurity and Infrastructure Protection had recently held a hearing to assess the security risks posed by Chinese technologies, including artificial intelligence and robotics.

During the hearing, executives from several U.S. tech companies and industry association representatives — described as "industry leaders" — argued that Chinese technologies posed security risks to the U.S. market. Yet a review of the testimony they submitted suggests that many of these so-called risks are little more than recycled accusations and speculative claims with no concrete evidence.

Among the concerns raised were assertions that using Chinese data to train large U.S. AI models could lead to "data poisoning," and that Chinese-made robots might be remotely controlled.

More noteworthy is that these "prominent figures" from the U.S. technology sector were not merely discussing potential risks, they were also offering policy suggestions to U.S. Congress on how to restrict and suppress related Chinese industries.

A closer look suggests that the warnings by these U.S. "industry leaders" may be driven less by genuine security concerns than by corporate or sectoral interests. Their proposals largely focus on reducing the use of Chinese data, technologies, and products in the U.S.



A robot demonstrates moving boxes at the 2026 Beijing International Science Fiction and Future Industry Expo, March 27. (PHOTO: XINHUA)

market, reflecting a deeper unease among certain American companies — and even parts of the broader AI and robotics sector — about competing with their Chinese counterparts.

For example, Michael Robbins, president and CEO at the Association for Uncrewed Vehicle Systems International, urged Congress to pass legislation banning federal procurement of unmanned ground vehicles and robots manufactured in China.

He also called for restrictions on the use of Chinese robots, sensors and related equipment in critical infrastructure, as well as limits on Chinese technologies such as LiDAR within the U.S. robotics industry.

Max Fenkell, an executive at the AI company Scale AI, suggested that Congress should investigate Chinese robotics data as a potential national security

threat. Matthew Marzano, vice president of software at the robotics company Boston Dynamics, proposed that Congress direct security agencies to conduct national security assessments of Chinese robots currently used in U.S. industrial and government settings.

The unease expressed by these U.S. "industry leaders" appears to stem largely from anxiety over China's rapid technological progress and the scale advantages of its manufacturing sector. Scale AI is a major player in the U.S. data-labeling industry.

In his testimony, Fenkell acknowledged that China currently accounts for roughly 90 percent of the global commercial robotics AI data industry and that Chinese production costs are about 60 percent lower than those of U.S. companies — an advantage that cannot be easily eliminated simply

through increased investment.

Data from the international market research firm Omdia further highlights the scale of China's presence in emerging robotics sectors. According to the firm, Chinese companies accounted for about 90 percent of global humanoid robot shipments in 2025.

Marzano also noted in his testimony that at the 2026 Consumer Electronics Show in Las Vegas, the number of Chinese companies exhibiting humanoid robots appeared to be about five times that of U.S. companies.

LiDAR technology provides another striking example. In 2025, Chinese company Hesai Technology shipped more than 1.6 million LiDAR units — 64 times the shipment volume of Ouster, a leading U.S. company in the same field.

Ultimately, competition in the technology sector should be determined by innovation and technological capability. Continuous innovation in an open and fair competitive environment remains the most sustainable path for industry development. Resorting to political maneuvering or protectionist measures to exclude competitors may temporarily shield certain companies, but it risks making markets more closed and weakening the fundamental incentives for technological progress.

As leaders of high-tech companies and industry associations, these U.S. "industry leaders" would do better to focus on strengthening their own technological capabilities and improving the cost-effectiveness of their products. Smearing competitors and lobbying politicians may offer short-term tactical advantages, but such "clever maneuvers" cannot resolve the deeper structural challenges facing the development of U.S. industries.

Voice of the World

China Opens Lab Doors to Shared Global R&D

By QI Liming

China's total R&D investment exceeded 3.92 trillion RMB (about 569 billion USD) in 2025, reaching 2.8 percent of GDP, according to the Ministry of Science and Technology, at a time when the country unveiled plans to accelerate its momentum in innovation through 2030. China has increased its ongoing investment in science and technology, which has not only played a significant role in promoting global sci-tech development, but also contributed to the well-being of mankind.

Public funding of science

U.S. think tank the Stimson Center recently summed up the indicators of Chinese scientific dominance, reaching from patent applications and renewable energy space to university rankings. In November 2025, Alessandra Zimmermann, who analyzes R&D spending for the American Association for the Advancement of Science, suggested that China may have already overtaken the U.S. in R&D spending.

According to a forecast by U.S. academics, China is on the cusp of becoming the world's biggest public funder of research.

The analysis was produced exclusively for Nature Index, by researchers from Frontiers in Science and Innovation Policy (FSIP), a program at the University of California, San Diego, that studies the U.S. R&D system and examines the extent to which public and private funding drives technological development.

According to the FSIP's forecast, China's public spending on research is likely to overtake that of the U.S. in the next two to three years. "I think the earliest likely [date] is 2028, plus or minus one year," said Robert Conn, a specialist in research policy and science philanthropy, who co-leads the FSIP.

As China pulls ahead, it will create a shift in the center of gravity for global research, attracting talent, according to physicist and science-policy researcher

Neal Lane at Rice University in Houston, Texas.

"Young people who wish to pursue careers in science will move from the U.S. and other countries to China, learn the language, [and] figure out how to function there," he said.

Win-win scientific cooperation

China has always adopted an open attitude towards education and research, warmly welcoming experts and scholars from across the world to its shores for exchanges and cooperation. It is also willing to collaborate with other countries to engage in scientific research to benefit all humankind.

According to new analysis by Denis Simon, a senior research fellow in the Quincy Institute's East Asia program, Chinese students filled structural gaps in STEM graduate programs in the U.S., enabling departments to maintain scale and productivity even as domestic interest fluctuated.

These students have been central to U.S. research capacity since the 1980s, sustaining graduate programs, powering laboratories, and making major contributions to patents, startups and federally funded R&D.

According to the Chemical & Engineering News, a weekly news magazine published by the American Chemical Society, as China's research labs are increasingly becoming the benchmark for their international peers, scientists say that continued breakthroughs depend not just on China's own spending and capacity to develop domestic talent, but on international cooperation, its ability to attract both researchers from other countries and Chinese-born researchers working abroad, and further integration with the international scientific community.

Lane said scientists hope that there could be cooperation with China in fundamental research. This might include collaboration in "important areas like health, let's say, perhaps energy and environment, transportation, telecommunications."

Fusing China's Smart Economy into Daily Life

Opinion

By Staff Reporters

China's 2026 government work report has for the first time proposed the goal of "creating new forms of smart economy," signaling a shift in the country's approach to artificial intelligence. Rather than focusing solely on technology or products, China now regards AI as a strategic priority that encompasses industrial chains, industrial ecosystems and even the wider economy.

During this year's Two Sessions, smart economy was a hot topic. A key question emerged: how to transform the "green apples" of laboratory research into the "golden apples" of real-world market success.

In fact, across China this trend is already taking shape.

In Chongqing's Nan'an district, 5,000 drones have taken to the night sky on multiple evenings, entertaining crowds with precisely coordinated aerial formations that transform into galloping horses. Meanwhile, in Hangzhou's Wushan Square in Zhejiang province, smart mattresses capable of monitoring heart rate and breathing in real time, along with robots that perform lion dances and write auspicious Chinese

characters, have become festival favorites.

These scenes, filled with a sense of technological possibility, illustrate how smart economy is gradually moving from concept to reality.

Yet challenges remain. Transitioning from eye-catching demonstrations to practical, widely adopted products remains a challenge. For many emerging technologies, the key obstacle lies in the "last mile" of commercialization — turning promising innovations into everyday consumer applications.

"China's ultra-large market is a unique advantage for technological innovation," said Wang Chengbin, a member of the National Committee of the Chinese People's Political Consultative Conference. According to Wang, the crucial task is to transform that market scale into development momentum by gradually opening more real-world application scenarios, where new technologies can be tested, refined and improved.

Wang suggested expanding application scenarios in fields closely tied to daily life and production, including urban governance, transportation, community services, household life and cultural tourism. Local governments could also lead the way in procuring and adopting locally developed innovative products in conjunction with major projects such as urban renewal, new infrastructure devel-

opment and smart city pilot programs.

Such an approach would create a virtuous cycle in which market demand stimulates technological supply, while innovation generates new demand, Wang said.

Industry representatives also emphasized the importance of building demonstration scenarios. Zhou Yunjie, chairman of Haier Group, said that AI is evolving from "perception and cognition" to "embodied intelligence." He suggested that policy support should encourage leading companies to create benchmark application scenarios that can accelerate the adoption of AI technologies.

Meanwhile, Tu Hongyan, chairwoman of Wensli Group, called for a framework combining "standards, subsidies and scenarios" to support the application of AI agents in traditional industries such as textiles. Such measures could help address the current challenge of "isolated breakthroughs but broken industrial links," she said.

Despite rapid technological progress, experts acknowledge that structural obstacles remain.

One major challenge is the persistence of "data islands." These fragmented and incompatible data systems limit the ability of AI to operate across various platforms and scenarios. High computing costs also pose barriers, particu-

larly for small and medium-sized enterprises.

In addition, a gap often exists between advanced technologies and consumer markets. Many cutting-edge innovations developed for enterprise use lack the secondary development needed to transform them into accessible consumer products, leaving potential users uncertain about their value or how to use them.

To bridge these gaps, policymakers and industry leaders have proposed a range of solutions.

Wang suggested establishing a "public service platform for the consumerization of frontier technologies." He envisions this platform helping to identify promising technologies developed for enterprise applications that could be adapted for civilian use and provide professional services, such as industrial design, product engineering and user-experience testing. The goal, he said, is to help hard technologies better align with consumer demand.

Lu Qingguo, chairman of Chengguang Biotech Group, proposed increasing investment in pilot-scale testing facilities and building regional shared platforms that allow industrial demand to participate earlier in the research and development process. This would help prevent technologies from being developed in isolation from market needs.

'Soil Echometer' Sensing Signals When Crops Are Thirsty

Hi-Tech

By QI Liming & LU Chengkuan

For the first time, a "soil echometer" using distributed optical fiber sensing technology, able to conduct real-time monitoring of farmland water flows every single minute, has been developed by researchers from the Institute of Geology and Geophysics, Chinese Academy of Sciences along with other institutions.

As soil moisture levels are so crucial for agricultural production, directly affecting crop growth and final yield of crops, this breakthrough provides a brand-new perspective for understanding the impact of different farming methods on soil health.

Without causing soil disturbance, the research team laid optical fibers on the surface of farmland soil. By captur-

ing the changes in the propagation speed of seismic waves generated by the background noise of the ground on the soil, they were able to deduce the dynamic structure of soil pores.

This technology can also "diagnose" the changes in the soil caused by different farming methods. In traditional intensive plowing areas, the fiber optic data shows that brief rainfall causes water to accumulate in the surface layer and be difficult to penetrate before evaporating rapidly in sunlight.

Meanwhile, the heavy weight of farm tools has accelerated water loss. In soil that is minimally disturbed by farming or human intervention, water can quickly seep downward and be stored, acting like a sponge to provide a stable water supply for the crop roots.

This research ingeniously applied seismological observation methods to agricultural scientific research, providing a new perspective for understanding the interaction between plants and soil.

China-Vietnam Sci-tech Unity Potential

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An example is the Youyiguan Port, or Friendship Pass, one of the largest and most accessible land ports connecting the two countries, the first cross-border smart port project between China and Vietnam. Digital and intelligent upgrading has allowed the port to offer 24/7 customs clearance. Information-based management systems such as the intelli-

gent inspection assistance system and smart logistics control platform provide full-process visual supervision of imported agricultural products and automated operations, including inspection queuing and call-ins. These measures are estimated to have cut cargo waiting time by 20 percent and improved the turnover efficiency of inspection bays by 35 percent.

Vietnam is seeking more international cooperation in green energy. China's exports of photovoltaic modules, inverters and energy storage batteries to Vietnam have grown rapidly. The two countries have also jointly built more photovoltaic power stations, not only meeting Vietnam's growing domestic demand for electricity, but also promoting the green and sustainable development of its local economy.

For example, the Trung Son Solar Power Plant in Vietnam, built by Chinese

company Trina Solar, is a model project of typhoon resistance and high efficiency. During construction, new roads were built and old ones repaired, which were donated to the local government. This improved road network has enabled villagers to transport their crops more easily and boost their income.

China-Vietnam sci-tech cooperation will not only deliver tangible benefits to the people on both sides, but also contribute to regional economic integration.



The water conditions of untilled soil and soil with excessive deep plowing. (PHOTO: Institute of Geology and Geophysics, Chinese Academy of Sciences)