

## GE, Ford, Thermo Fisher Confront New U.S. Curbs on Exports to Chinese Police

Two words and two commas inserted into a \$858 billion defense bill approved late last year could spell trouble for U.S. corporations—from General Electric (GE) and Ford Motor (F) to Thermo Fisher Scientific (TMO)—that supply goods, services or technology that aid Chinese police and intelligence agencies, national security experts said.

The amendment revises just one sentence of national export law, but it empowers the Bureau of Industry and Security (BIS) at the Commerce Department to constrain activities of U.S. persons who support “foreign military, security, or intelligence services,” regardless of whether those activities involve goods covered by export bans.

The words “security” and “or” are new and they reflect a desire to clamp down on American companies and individuals who help Chinese police obtain DNA testing equipment, software, surveillance cameras and anti-riot trucks—even if that help is limited to shipping, financing and maintenance, experts said.

The revision could force changes to GE’s 50/50 partnership with Aviation Industry Corporation of China (AVIC), which supplies [helicopters](#) to Chinese police. It also could impinge on Ford, which has sold thousands of Transit vans and [Mondeo](#) sedans to Chinese law-enforcement departments. The change could also choke the flow of American DNA sequencers and test kits to police in Xinjiang, where the Chinese state has engaged in repression and surveillance of Muslim minority groups.

DNA equipment made by Thermo Fisher and privately held Promega is [reported](#) to have reached police in China’s western region even after the U.S. banned the sale of American goods to most law-enforcement agencies in Xinjiang amid concerns that they were enabling human-rights abuses. The new amendment to the U.S. Export Control Reform Act of 2018 may stop that, said Yves Moreau, a professor the Catholic University of Leuven in Belgium who specializes in the use of artificial intelligence to analyze DNA.

“I believe that the amendment signals a looming exit for Thermo Fisher and Promega out of the Chinese human-identification market,” said Moreau, who has spent years raising concerns about how Thermo Fisher and Promega equipment has been used to collect DNA from ethnic minorities in China.

**Expanding export controls.** Congressional sponsors have called the amendment “the largest expansion of presidential export control authority in several years.” National security lawyers don’t dispute that assessment.

“The practical effect of this amendment is to provide BIS with the authority to impose controls on the activities of U.S. persons, wherever located, in support of military, security or intelligence services,” said Gregory Jaeger, special counsel at Stroock & Stroock & Lavan, a law firm known for its national security expertise.

Jaeger declined to discuss specific companies that might be affected by the amendment, to avoid conflicts of interest. But he said the new controls could be imposed on activities such as surveillance and financing.

Other experts told *The Capitol Forum* that the revision could pose a significant risk to U.S. companies that provide equipment, technology and services—to both Chinese and Russian security and intelligence agencies. “The new regulation is very broad, and it remains to be seen how Commerce defines and implements it,” said one national security expert who has more than 20 years of experience in industrial security and export controls.

But it’s clear that any U.S. business that directly or indirectly provides goods and services to foreign military, intelligence and security services is subject to the new amendment, said the expert, who requested anonymity because of the sensitive nature of the subject.

The new regulation also can apply to a foreign company’s product if more than 25% of it consists of U.S. components or parts.

That could mean, for instance, that the sale and maintenance of Mercedes-Benz Unimog U5000, an anti-riot vehicle [deployed](#) by the Hong Kong police in 2019-20, could be prohibited.

BIS didn’t respond to a request for comment on this article. GE, Ford, Mercedes, Thermo Fisher and Promega didn’t respond to requests for comment.

**‘Unexplained change.’** The Export Control Reform Act of 2018 (ECRA) gave the U.S. president the authority to control “the activities” of U.S. persons relating to “foreign military intelligence services.”

How and why the modifier “military” was placed in front of “intelligence services” remains unclear, according to a [paper](#) published this month by Akin Gump Strauss Hauer & Feld. But “this unexplained change is the basis for the recent amendment to ECRA,” the law firm said.

In implementing ECRA in 2021 and ’22, BIS [prohibited](#) U.S. persons, wherever located, from “supporting,” without a license, “military-intelligence end use [or] end users” in Belarus, Myanmar,

Cambodia, China, Russia, Venezuela, Iran, Cuba, North Korea or Syria. U.S. companies doing business in countries of concern would be required to apply for an export license from BIS.

The need for the amendment soon became clear, experts said, as China, Russia and other authoritarian states began ramping up their use of surveillance cameras and facial recognition to track and repress protesters, activists and minorities. The narrow definition applied only to military services such as Russia's Main Directorate of the General Staff of the Armed Forces of the Russian Federation and China's People's Liberation Army's Second [Intelligence] Department. The wording didn't apply to civil intelligence or law-enforcement agencies, the experts said.

Sponsors of the amendment aimed to fix that. The goal was "to prevent Americans from working with or aiding foreign police and intelligence agencies that spy on dissidents, on journalists and on American citizens," Representative Tom Malinowski (D-NJ) said in a press release.

"American technology shouldn't be used to help authoritarians spy on their citizens or hack their political rivals," added Senator Ron Wyden (D-OR).

**U.S. role in Chinese Security.** U.S. technology, though, already is playing a role in boosting the Chinese security state, according to news reports and industry documents. The Hainan Province Public Security Satellite Communications System has used a Ford vehicle called Communications on the Move (COTM), which helps authorities remain in contact with each other while responding to fast-changing threats, according to a [report](#) by Recorded Future, a U.S. cybersecurity and intelligence [company](#).

Hong Kong police have been using Mercedes-Benz Sprinter vans to transport anti-riot units as well as detainees. Ford and Mercedes vehicles also help Chinese authorities conduct traffic enforcement and transport prisoners.

Some Chinese agencies have developed a taste for other U.S. technology. In 2020 and 2021, the Jinhua City Public Security Bureau in Zhejiang Province sought to purchase nighttime combat devices, including one that aids in shooting sniper rifles, from L3Harris Technologies and other U.S. companies, according to the Recorded Future report.

Beijing Ryan Wende Science, a subsidiary of [U.S.-based Ryan Technologies](#), has [said](#) it sold L3 products to China. The company also partners with Thermo Fisher and Virginia-based contractor [Leidos](#), which in 2020 purchased the former L3 Communications Security & Detection Systems, a leading provider of security systems.

U.S. software maker Oracle (ORCL) reportedly has [sold](#) its products to the Liaoning police force, allowing it to better identify “suspects,” which often is another word used in China to describe political dissidents. Some news [reports](#) have suggested that the Xinjiang police force has employed Oracle’s data security service systems.

Through the years, Oracle has actively sought to boost its business with Chinese defense agencies. [One](#) 2014 company presentation, titled “Oracle and the National Defense Industry,” targeted the People’s Liberation Army, China National Nuclear Corporation and the China Aerospace Science and Technology Corporation.

Oracle, L3Harris and Ryan Technologies didn’t respond to requests for comment.

**Thermo Fisher and DNA equipment.** U.S. technology also has helped China in its drive to collect DNA samples from millions of men and boys throughout the country. Their DNA profiles can create genetic links to the country’s entire male population of roughly 700 million people, according to a [report](#) compiled by the Australian Strategic Policy Institute (ASPI).

Chinese police have said the data will help them hunt down criminals, who are mostly male. But the report also offered evidence that the state’s well-known biosurveillance in Xinjiang was being “rolled out across China, further deepening the Chinese Government’s control over society.” And the database was being built with the help of multinational companies such as Thermo Fisher, the report said, echoing other [reports](#) stretching back to 2017.

Facing criticism from human-rights advocates and U.S. lawmakers, Waltham, Massachusetts-based Thermo Fisher announced in 2019 that it would stop selling or servicing genetic sequencers in Xinjiang.

But Chinese government procurement documents and contracts cited in a *New York Times* [report](#) two years later showed that goods made by Thermo Fisher and another American DNA-equipment maker, Promega of Madison, Wisconsin, continued to reach the region, where the Chinese government is committing [genocide](#), according to the U.S. State Department. The sales involved Chinese firms that purchased the products and resold them to the police, and the documents didn’t show that either U.S. company made direct sales to the Chinese firms, the report said.

Recorded Future found at least 60 Chinese public security procurement documents dated between August 2013 and December 2021 that referred to a subsidiary of Thermo Fisher, Invitrogen (Shanghai) Trading. Many of the contracts covered maintenance services for Thermo Fisher equipment, Recorded Future [said](#).

Thermo Fisher profiling kits and other supplies also showed up last year on Chinese procurement [documents](#) that Leuven professor Moreau found on search engine Baidu. Those purchases related to DNA kits and replacement parts for sequencers for police in Tibet, another site of long-standing government repression and human-rights [abuses](#).

The reports drew attention on Capitol Hill, where four lawmakers sent a bipartisan [letter](#) to Thermo Fisher CEO Marc Casper voicing concerns that the company's products may have helped the Chinese government perpetrate human-rights abuses against Tibetans. Thermo Fisher is a "repeat offender," [said](#) Senator Marco Rubio (R-FL), who signed the letter along with Senators Jeff Merkley (D-OR) and Representatives Jim McGovern (D-MA) and Chris Smith (R-NJ).

For the nine months ending on October 1, 2022, Thermo Fisher's China operations [posted](#) revenues exceeding \$2.8 billion. How much of this came from security services is unclear.

**Gaps in export regime.** Concerns about American companies supplying technology, equipment and know-how to Chinese state entities are hardly new. The U.S. government has tried to address the issue through its export-control regime, but gaps have remained.

To illustrate the difficulty, some lawmakers and national security experts point to GE's joint venture with the AVIC, a conglomerate that the U.S. government has sanctioned for its ties to the Chinese military.

GE and AVIC [established](#) the 50/50 partnership in 2012 to develop commercial aerospace products to be sold globally, with a focus on avionics for China's C919 narrow-body jetliner.

In December 2020, BIS added AVIC to its Military End User list, which identifies foreign parties banned from receiving certain items without an export license. In June 2021, the Treasury's Office of Foreign Asset Control (OFAC) added AVIC to its list of Non-Specially Designated National Chinese Military Industrial Complex Companies.

On December 14, 2022, Commerce added 36 entities to its Entity List of companies that act contrary to U.S. national security and foreign policy. AVIC Research Institute for Special Structures of Aeronautical Composite was one of the additions, meaning U.S. companies can no longer export, reexport or transfer technologies to that AVIC subsidiary.

AVIC also supplies equipment to Chinese police. In May 2016, China's Ministry of Public Security ordered 10 helicopters from AVIC for the police departments in Nanjing, Kunming, Hefei and Luoyang, according to industry information site HeliHub. At the time, AVIC said that 50 helicopters were already being used by 28 police aviation units on the Chinese mainland.

GE didn't respond to requests for comment on this article, but it has previously [said](#) that the partnership is limited to commercial aviation. The venture involves “no military applications” and includes safeguards to prevent “any unauthorized transfer of intellectual property,” GE has said.

The new amendment to U.S. export-control rules could prompt the company to reassess its relationship AVIC, which continues its work with the Chinese military, intelligence and security agencies, experts said.

**Natera and BGI.** Another U.S.-Chinese partnership that could find itself in the firing line is a joint venture between American diagnostics company Natera (NTRA) and BGI Genomics (SZ: 300676), a Chinese DNA-testing company, experts said.

Natera and BGI [announced](#) a partnership in 2019 to commercialize Natera tests in China, seeking to promote “precision medicine and cancer prevention with cutting-edge technologies.” The press release didn't mention BGI's ties to the Chinese military.

BGI began working with Chinese military hospitals in 2010 to study the genomes of fetuses, according to a Reuters [report](#) in 2021. In collaboration with the People's Liberation Army, BGI worked to develop a prenatal test taken by millions of pregnant women worldwide. The test became a source of genetic data at BGI, which has worked with the PLA to improve “population quality” and to develop ways to fight hearing loss and altitude sickness in soldiers, Reuters said in a separate [report](#).

In October, the U.S. Defense Department added BGI to a [blacklist](#) of “Chinese military companies,” subjecting them to an investment ban for Americans. By then, Commerce had already placed two BGI subsidiaries—Xinjiang Silk Road BGI and Beijing Liuhe BGI—on its [Entity List](#). The prohibition blocks U.S. persons from transferring, exporting or re-exporting of technology to the companies.

Natera and BGI didn't respond to requests for comment.

Natera and other American companies with Chinese partners can expect to come under yet more pressure, some experts said, pointing to this month's decision by the House of Representatives to create a [select committee](#) on how the U.S. can restore competitiveness with China. Headed by Representative Mike Gallagher (R-WI), the committee's priorities include scrutinizing American business dealing in China.

“If a U.S. company can’t understand the risk associated with doing business with companies like BGI, maybe government intervention is warranted,” said one former BIS official who requested anonymity because of involvement in cases related to intellectual property theft by foreign adversaries.