

New China *Worries*

BY ADAM SEGAL

*The Chinese military
is snapping up the
latest in cutting-edge
Western technology.
Is that good?*

In June of this year, the U.S. Commerce Department published new controls on the export of “dual-use” technology to China. As Assistant Secretary of Commerce Christopher A. Padilla told Congress, the goal is “to expand and promote legitimate civilian trade, while prudently hedging against the uncertainties of a significant military expansion program in China.” While the new rules deserve praise for their explicit focus on the types of technologies that are most likely to make a contribution to Chinese military capabilities, their impact is limited by the uncomfortable truth that the United States can no longer control transfer of most of these technologies in an integrated world economy.

From the U.S. perspective, China is the poster child for the double-edged nature of the globalization of technology. More countries, not just China, now have access to the technologies that underpin a modern military. China, however, is engaged in a concerted effort to modernize its military, and defense spending has increased at a double digit rate for the last fifteen years. Most visibly, destroyers, fighter jets, and submarines have been bought, primarily from Russia. According to the Pentagon, though, China is also an active buyer of information technology, microelectronics, aerospace, and other commercial technologies that can be adopted for military purposes. Few of these technologies are unique to the United States, and the People’s Liberation Army, often through

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Poster Child for Trouble?

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Globalization has also raised the efficiency of Chinese defense industries. Traditionally, the Chinese defense sector was afflicted with the worst pathologies of the state-owned, centrally planned

economy: low productivity, overcapacity, a lack of understanding of final markets, a dearth of management skills, and technological backwardness.

Since the late 1990s, the government has invested a great deal of money in these industries. But the most notable progress, according to a recent RAND study, has occurred in sectors such as shipbuilding and information technology where Chinese firms now compete and cooperate with foreign companies.

Thus, the security risks from technology trade with China are high, but so are the potential economic benefits. Last year, U.S. high-tech exports to China grew by 44 percent to \$17.7 billion. China is or will soon be the largest market in a number of critical technology sectors. Nearly all the growth in the worldwide semiconductor market, for example, is the result of demand from China. Moreover, American companies are turning to China as a source of science and engineering talent.

There are also potential security payoffs for the United States from expanded technological trade with China, but they are inextricably bound up with the risks. Unlike in the past, federally funded research and development now plays a smaller role in maintaining U.S. national security capabilities. The Pentagon, according to the Defense Science Board, relies “increasingly on the U.S. commercial advanced technology sector to push the technological envelope and enable the Department to ‘run faster’ than its competitors.” This productive approach nonetheless creates a paradoxical outcome for the Pentagon: U.S.

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national security is tied to the same global process of innovation through global competition and integration that indirectly contributes to the improvement of Chinese military capabilities.

The challenge of imposing export controls on technological trade with China, then, is to try to prevent the diffusion of critical technologies to the PLA without harming the competitiveness of American technology companies (which serves both U.S. security and economic goals). Good export control policy thus would focus on the how the Chinese military wants to adopt technologies, as well as whether the use of a given technology could change the outcome of a possible military conflict. Also necessary is a recognition that some dual-use technologies are already being sold to China by other countries, so there is little point in having the U.S. producers unilaterally restricted. This points toward a narrower set of controls more tightly integrated with assessment of the PLA's aspirations than were undertaken in the past.

The newly released rules do this, with the Commerce Department explicitly identifying the military systems the United States government is most concerned about. Early drafts of the regulations called for controls on approximately forty-seven categories of technology that could be adapted to missiles, precision-guided munitions, command and control, space, and night-vision. After the U.S. business community demonstrated that many of these dual-use technologies were already widely available to mainland purchasers, from Japanese, Korean, Taiwanese, or European suppliers or from Chinese companies themselves, the list was cut back to thirty-one categories. Not surprisingly, the business community has criticized the complexity and cost of the rules, especially

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provisions requiring U.S. companies to prevent their customers in third countries from re-exporting to China. Still, it looks as if businesses will learn to live with the new regulations.

In addition to the stick of controlling exports, the new regulations created a carrot for Chinese importers, the validated end-user program. Under the plan, foreign firms can become "trusted customers" and import without a license as long as they have a history of using U.S. goods only for civilian use and agree to repeated on-site inspection from Commerce officials. The success of the validated end-user program depends on cooperation from the Chinese side. Since Beijing is likely to see the inspections as an infringement on its sovereignty, and has denounced the regulations as inappropriate, unreasonable, and an obstacle to normal trade, the program's prospects remain cloudy at best.

The main problem with the new regulations, however, is that they are unilateral. Japanese and European officials have informed their counterparts that they have no intention of restricting their companies' sale and export of the technologies on the U.S. list to China. In the past, when the United States prevented exports to semiconductor manufacturers in China, European and Japanese companies happily made the sale. The end result is that the United States might be able to prevent the PLA from adapting American technology to its weapons systems, but it will be unable to achieve its primary goal, preventing the PLA from improving the lethality of its weapons systems.

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There are numerous reforms that could be made of the current export control system around the edges. Transparency should be improved, the application and review process streamlined, and the question of whether State or Commerce has jurisdiction over certain dual-use technologies settled. But these changes at the margin will not address the fundamental issue that the United States' ability to hold back China's acquisition of military capability-enhancing technologies has largely eroded.

Since Chinese weapons development is unlikely to be slowed by export controls, the most effective means of ensuring U.S. security are through promoting the competitiveness of American technology companies. This summer President Bush signed the "America Competes Act," which seeks to bolster the U.S. competitive edge by increasing federal research budgets and expanding the pipeline of talent in math, engineering, and the sciences. The bill, however, does not appropriate any actual dollars

towards achieving its goals and so technological promotion will have to wait while the bill winds its way through an increasingly contentious and partisan budget appropriation process.

Competitiveness can no longer be built solely at home, as the Chinese experience of importing technologies and improving processes through global competition demonstrates. The United States must embrace innovation as a global process on the security front just as it does on the commercial. Only by being deeply embedded in China's emerging technology market can American companies influence its development. Washington must continue to push hard against Beijing's efforts to develop competing, closed technology standards and its failure to protect intellectual property rights. These measures are increasingly important not only to preserving the United States' comparative advantage in higher-technology sectors, but also to safeguarding American security. ◆