Proposed legislative and institutional remedies to mitigate unwanted foreign transfers of U.S. technology

Amid their work on technology policy and risk mitigation, CSET analysts are often asked about technology transfer—the licit, illicit and grey-zone provisioning of intellectual capital from one nation to another. The matter intersects with "normal" technology development on multiple levels since nations, often as a matter of state policy, rely on the ingenuity of one another to fashion their futures. While we believe collaboration should be encouraged, the transfer of national security relevant technology—to peer competitors especially—is a well-documented problem and must be balanced with the benefits of free exchange. The following propositions covering six facets of the transfer issue reflect CSET's current recommendations on the matter.

Laws and guidelines

Define what transactions and types of transactions are problematic from a national security standpoint. Publicly identify platforms, proxies, venues and techniques judged to be inimical to U.S. technological and economic security and the relative risks they pose.

Create consistent, transparent laws and guidelines governing the transfer of U.S. research and technology to "at risk" countries with a view toward eliminating ambiguity, while balancing the benefits the United States accrues from foreign scientific exchange.

Establish disclosure rules for U.S. government (USG) grant recipients researching technical areas. Disallow USG funding to projects linked directly or through performer affiliations to the military establishments and "United Front" organizations of designated threat countries.

Data collection and monitoring

Create a National Science and Technology Analysis Center to establish a contextual framework for answering key emerging technology-related questions, including those concerning technology transfer, using publicly available information from all scientific technical domains.

Mandate the U.S. intelligence community to monitor key indicators and provide warnings of potential illegal and extralegal transfers through mission-specific classified venues, redirecting resources as needed to respond to this traditionally undervalued threat.

Establish online databases of all overseas funding received by U.S. public universities and their employees, and of foreign entities with a history of improper transfers or intellectual property theft, especially those linked to China's military and that of other designated countries.

Institutional remedies and reform

Establish within the White House a high, preferably Cabinet-level position to recommend and oversee national technology policy aimed at securing American leadership in critical "new and emerging" fields using expanded information and monitoring resources as identified above.

Create as an adjunct to the above office dedicated policymaking infrastructure to protect the United States from disadvantageous transfers of technologies created on U.S. soil, and by multinational companies (MNCs) headquartered on U.S. soil, to agents of "at risk" countries.

Ensure law enforcement agencies are resourced and able to investigate and prosecute cases of IP theft, fraud, economic espionage, and other forms of legally-defined illicit tech transfer, and that funding agencies have mechanisms to monitor compliance with grant agreements.

Repairing our national S&T base

Build up America's S&T base to avoid a zero-sum struggle. Develop national strategies to promote commercialization of research and to build talent. Appreciate that mitigation is no substitute for positive efforts to create and operationalize wholly new indigenous technologies.

Encourage foreign students and researchers to remain in the United States, become citizens, and help their new country prosper, especially in areas where we face critical shortages. Facilitate the transition by offering a clear path from temporary status to permanent residence and citizenship.

Encourage MNC's to consider the interests of their home country in their technology sharing and stewardship. Corporate advantage should also be interpreted in a national security context, while hedging against the negative impact of overly restrictive measures on free exchange.

Outreach and cooperation

Institute a USG-sponsored outreach program to alert businesses, universities, research labs, foreign governments, foreign students entering the United States, and foreign advocacy groups in the United States to the risks and penalties of illicit transfers.

Acquaint universities and other research institutions with the talent recruitment programs of designated threat countries and pertinent USG policies. Develop recommendations for these institutions to mitigate talent recruitment activity. Fund measures for compliance.

Establish with allied country cooperation a consortium of common cause democratic states chartered to combat hostile appropriation of sensitive and proprietary research, and empowered to share and act on information of general concern.

Foreign talent programs and support guilds

Prohibit all persons, regardless of position or nationality, who are receiving USG research grants from being members of foreign talent recruitment programs and technology support groups identified with designated threat countries.

Broaden the Foreign Agents Registration Act to cover talent program co-optees and technology transfer intermediaries serving foreign states, including technology support groups identified by charter with designated threat countries.

Encourage research organizations to familiarize staff with policies pertaining to designated threat countries' recruitment programs and to update their policies on IP, research integrity, conflicts of interest, and external appointments as necessary.

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