

## GEOPOLITICS OF KNOWLEDGE SECURITY

# Securitizing Science: A Careful Consideration of Tradeoffs is Needed

*Tommy Shih*

Amid growing geopolitical tensions and the shift toward a multipolar world, research security has emerged as a critical concern for academic institutions and national governments. While efforts to protect science from foreign interference and intellectual property theft are increasing, many current measures lack empirical grounding, clear objectives, or proven effectiveness. This paper discusses the complex tradeoffs between national security and scientific openness, highlighting challenges such as governance conflicts, ethical risks, and politicization of research oversight.

In recent years, the international landscape has undergone profound transformations, marked by escalating tensions among advanced economies and a discernible shift toward a multipolar global order. As global complexity intensifies, academic institutions are increasingly compelled to address a new array of national and organizational security concerns. These include foreign interference, transnational repression, the illicit transfer of technology and intellectual property, and broader threats to the integrity of national research ecosystems. Within this context, the concept of *research security* has emerged as a critical notion for understanding and managing these challenges.

Although the practice of safeguarding research is not new, the current environment represents a marked departure from previous eras. Earlier concerns about research security were largely situated within a framework of Western hegemony. Today, however, the securitization of research has become more pronounced and widespread.

In a multipolar world characterized by strategic uncertainty and intensifying competition, virtually all advanced economies are erecting new barriers to protect their scientific and technological assets. This evolution is propelled not only by the (re)emergence of China as a geopolitical and technological powerhouse but also by significant political shifts, most notably during the second Trump presidency, which have further strained international cooperation and exchange. These combined political dynamics and the emergence of new global competitive conditions have intensified the focus on national interests, particularly in the realm of security. While heightened security measures are warranted in response to genuine threats, there is also a pressing need for a more nuanced and detailed analysis of both their necessity and impact. To support such an analysis, this paper outlines several key challenges that merit deeper evaluation.

### Embedding Security in a Highly Networked Environment

Although geopolitical dynamics and relative power relations are changing, interdependencies persist. In contrast to the Cold War years, the contemporary geopolitical dynamic plays out in a context of these significant global interdependencies. Decades of governments and institutions promoting scientific and innovation collaboration have fostered extensive global networks. With the contemporary geopolitical turn, these global networks give rise to conflicts in governance, as they simultaneously constitute important resources for researchers and nation-states and introduce key vulnerabilities. Attempts at disentanglement will come with significant costs at individual, organizational, and national levels.

### Insufficient Analysis of Impact

Many contemporary research security initiatives are driven by political imperatives and institutional mandates, yet their actual efficacy remains largely unexamined. While policy makers frequently cite various risks, empirical data to substantiate the scope and severity of these threats is notably absent. This lack of evidence does not necessarily invalidate the concerns but does hinder the development of proportionate and effective policy responses.

### Unclear Effect of Security Measures

A critical issue is the limited evaluation of the effectiveness of existing security protocols. Many measures have been implemented in an ad hoc manner, often lacking clearly defined objectives or reliable metrics for success. Consequently, their impact remains speculative, raising questions about whether they genuinely enhance national security or merely create

administrative burdens and uncertainty within academic institutions.

## Conflicting Policy Objectives

Research security intersects with multiple policy domains, including economic competitiveness, scientific excellence, cybersecurity, intellectual property protection, and national defense. These domains often entail conflicting priorities. For example, while economic security may necessitate protective measures, scientific advancement thrives on openness and international collaboration. Striking a balance between these competing imperatives remains a persistent and unresolved challenge.

## Underestimating the Risks That Come with Securitization

Excessively stringent security measures can produce unintended and detrimental consequences for science. These may include the erosion of freedom of research, deterrence of international talent mobility, and reluctance to seek new international partners. Increasingly, universities are adopting surveillance-oriented practices to assess risks in international partnerships. While such tools may enhance institutional security, they also raise profound ethical and legal concerns. In particular, universities risk fostering discriminatory practices, especially against researchers from countries labeled as adversarial, thereby undermining the trust and openness that are foundational to academic inquiry.

## Politicization of Research Security

The growing involvement of government actors in research oversight raises concerns about the politicization of security protocols. In the absence of comprehensive data on foreign interference and the effectiveness of current measures, securitization efforts may be driven by political agendas rather than by objective risk assessments. For instance, recent actions by United States lawmakers show how dual-use concerns can be politicized. Of particular note, three prominent Republican members of Congress recently sent a letter to Harvard University demanding “[transparency and accountability](#)

[regarding the university’s partnerships with foreign adversaries and entities implicated in human rights abuses.”](#)

## Conclusion: Toward a Balanced and Evidence-Based Approach

Navigating the complexities of research security in a rapidly changing world requires a nuanced, evidence-based approach. As advanced economies respond to both real and perceived threats, research security measures have become increasingly prevalent. While these measures aim to safeguard national research systems, they also pose significant challenges that risk undermining the competitiveness of institutions and advancement of science.

A central tradeoff lies in reconciling the imperatives of national security with the principles of scientific openness and innovation. Research institutions must contend with a myriad of risks and evolving regulations, assess dual-use risks, and operate within legal frameworks that are often ambiguous. Many scenarios fall into regulatory gray areas, complicating compliance and decision-making processes. Overly rigid enforcement of security measures can stifle creativity, deter global talent, and raise serious ethical concerns. Researchers may resort to self-censorship, and heightened surveillance can erode the trust essential to academic collaboration. Moreover, the potential for political misuse of security protocols adds another layer of complexity. While some security concerns are undoubtedly valid, it is imperative to critically assess whether current practices genuinely enhance safety or serve other, less transparent objectives.

To preserve a vibrant and open research environment, security policies must be transparent, proportionate, and grounded in demonstrable risks. Once implemented, such measures are difficult to reverse, underscoring the importance of ensuring that they are justified by clear, evidence-based threats. Policy makers and institutional leaders must prioritize targeted, well-calibrated interventions that address genuine risks while safeguarding the openness and integrity that underpin scientific progress. In an increasingly fragile global context, maintaining the delicate balance between security and openness is more crucial than ever.

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*Tommy Shih is associate professor of business administration at Lund University, Sweden, and lecturer at the School of Architecture and the Built Environment, KTH Royal Institute of Technology, Stockholm, Sweden. E-mail: [Tommy.shih@fek.lu.se](mailto:Tommy.shih@fek.lu.se).*