

International Collaborative Academic Research: Potential Risks and Unintended Consequences

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The need for increased attention and action regarding potential risks in international collaborative academic research is essential, as is the acknowledgement of its benefits. Safeguarding three aspects is critical: the process of undertaking the research, the product or new knowledge created, and the application of the newly produced knowledge. Identifying and mitigating potential risks for each aspect is emphasized to ensure that international research collaboration is as open as possible and protected as necessary.

In today's interdependent and conflicted world, global issues and challenges exist which cannot be solved by one country alone. An open, cross-disciplinary, collaborative international research environment is essential. However, one must acknowledge that a culture of openness and cooperation can also mean increased exposure to different kinds of threats. The last decade has seen cases of the unauthorized transfer of sensitive information across jurisdictional borders; use of academics as proxies for other actors, such as in the government, military, or industry; foreign surveillance and espionage; unauthorized dual use of new knowledge and technology; and data leakage. As a result, national/regional governments and the higher education sector are developing policies and practices to safeguard universities and other research actors. Due diligence regarding potential risks is necessary.

Two questions are important to consider here: how to promote open international research collaboration while being mindful of potential risks, and what kinds of regulations need to be developed (and by whom) to help prevent and manage these potential security risks. This discussion considers some possible answers based on recent findings from a project investigating these issues in multiple countries, representing all regions of the world.

Policies and Practices to Safeguard International Research

Key actors in the international research landscape must be neither blind to nor complacent about potential threats and unintended impacts. At the same time, these individuals should strive to ensure that their international academic collaborations are as open as possible but protected where necessary.

Various actors, who have much at stake in international research networks and projects, adopt different approaches and terms in this regard. In the last three years, European, North American, and some Asia-Pacific countries have developed policies and

practices to safeguard international research. A review of these initiatives reveals a strong consensus around the need for a protective regulatory framework. It also points to some conceptual confusion, with the terms “research integrity,” “knowledge/research security,” and “safeguarding science” being used interchangeably. This indicates confusion surrounding the similarities, differences, and implications of these various terms. Another notable finding is that many countries have research integrity policies in place that concentrate on the ethics of undertaking research but do not necessarily address the security of the knowledge being produced and how it is being used.

Three Interrelated Aspects of International Research Collaboration

This last point highlights the need to distinguish between the three major and interconnected aspects—process, product, and application—of international collaborative academic research.

The first aspect is the *process* of undertaking research. “Research integrity” is the term most often used with respect to the research process; it comprises support for principles including academic freedom, institutional autonomy, freedom of expression, open science, trust and transparency, and reciprocity for shared outcomes. Potential risks include conflicts of interest; divergent expectations and commitment levels; misrepresented qualifications; the use of academics as proxies for other actors, such as the military, private enterprise, or government; and disrespect or abuse of ethical academic principles, depending on the governance and cultural contexts of cooperating countries and partners.

The second aspect focuses on new knowledge as the *product* or outcome of research. “Knowledge/research security” is the prevalent term here, along with the idea of “safeguarding science.” Diverse risks exist and can involve the unauthorized transfer of data and new knowledge; misrepresented research findings; dual use of results for ulterior motives, such as to

repress certain groups, violate human rights, or exploit outcomes for military and intelligence purposes; and data leakage due to outdated technology systems. The term “knowledge security” is intended to cover all sectors and disciplines. “Safeguarding science” can be mistakenly interpreted as focusing only on science and technology, which is a shortsighted but prevalent view. Many even consider the concept of “security” itself to be too strong or alarmist, hence the preference for terms such as “protection” and “safeguarding.”

The third aspect relates to the *application* or use of new knowledge. This facet entails protecting innovation. Traditionally, misusing or stealing intellectual property rights and patents has been deemed a far-reaching risk when applying new knowledge. Other potential threats include unintended or unauthorized commercialization, misrepresentation, and selective application.

Principles Guiding Risk Mitigation and Management

In seeking to balance the benefits and potential risks of international collaborative academic research, national governments, funding agencies, universities, and research institutions around the world have identified a few core risk mitigation/management principles.

The first and perhaps most pertinent is to keep international research collaboration as open as possible but protected where necessary. Promoting and ensuring self-regulation is equally crucial. This entails striking an appropriate balance between gauging a potential threat’s seriousness and engaging in

necessary risk mitigation. Debates are ongoing regarding the ways in which new security policies and regulations can discourage or limit international research collaboration, and there is broad concern that risk mitigation not be pushed too far.

Inherent in the notion of proportionality is the balancing of interests and benefits across national, regional, and international levels as well as among the sectors/disciplines involved. Acknowledging and respecting various types of institutions, cultures, and values in partner countries are paramount. The same applies to disciplines and sectors such as the social sciences, the humanities, science and technology, business, and the arts. Both top-down and bottom-up approaches are vital for enhancing compliance and avoiding unnecessary bureaucracy.

In conclusion, international collaborative academic research is more important than ever. Its benefits are numerous, but so are its potential risks. The task of developing safeguards and security measures for all three aspects of such research needs to include representatives from different constituent groups such as researchers, universities, funding agencies, non-governmental agencies, research foundations/centers, and government departments, among others, as it is essential to benefit from their different perspectives and to enhance coordination. Doing so will help ensure that the formulation and implementation of policies, regulations, risk mitigation measures, checklists, and training workshops on knowledge/research security are relevant and realistic without being solely top-down or heavily bureaucratic. Keeping international research collaboration as open as possible, and protected as necessary, is a critical challenge in today’s changing world.

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