

## Multilateral R&D investment is vital to enhance national security

In this edition of his national security quarterly column, Berkeley Research Group's Harry Broadman discusses the steps the G7 should take to engage collaboratively in R&D to protect their collective economic fortunes



By Harry Broadman

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Front and center on the agenda of the G7 – the globe's most powerful democracies – is bolstering their national security as the technological prowess of China – a country whose autocratic leader embraces communist economic policies ever tighter – marches on. Attempts to unify on this front have been a long-standing challenge for the G7, which continues to be exacerbated by fissures among the members about the lure of cozying up to the world's second largest market.

Over more than three-quarters of the last century, the G7 countries – along with the other advanced democracies – have built a mature web of sovereign-to-sovereign agreements governing their cross-border investment and trade flows as a pathway toward boosting their collective economic fortunes. Paradoxically, by comparison there is sparse systematic collaboration among them on technological advancement through research and development (R&D), the third of the three-legs of nations' international competitiveness.

Indeed, the lion's share of advanced democracies' sovereign-to-sovereign science and technology (S&T) agreements is grounded in the pursuit of science diplomacy rather than in fostering the commercial application of R&D. Moreover, many of these agreements are structured on a bilateral, as opposed to a multilateral or plurilateral, basis, like many of their trade and investment accords.

With these characteristics, it is hard to imagine the existence of a robust ecosystem that can nurture the type of collective action by the G7 and like-minded countries they would like to take to counter China and enhance their national security.

## How we got here

There always has been heterogeneity among the G7 in terms of each nation-state's S&T policies and their R&D enterprise – the market and institutional structure of the way in which national labs, corporations, and universities interact; the mechanisms for commercialisation of innovations; and national business cultures and norms.

*See also: [CFIUS policy to be more cohesive under Biden](#)*

In recent years, however, some of these differences, have become not only more evident, but are also exposing these states to risks of being unable to compete effectively in the global economy and of eroding their national security.

This turn of events stems from the fact that, like much of the rest of the world, the economic fortunes of the G7 increasingly have become tethered to China. Indeed, the Chinese are exploiting the differences among the G7 in their R&D architecture.

The current substantial network of sovereign-to-sovereign S&T agreements between the G7 and other advanced democracies does engender collaboration among scientists, though largely, but not exclusively, from academia and government. This is because the role of corporates in R&D activities in the domestic sphere differs greatly across these countries. Whereas in Europe, businesses collaborate extensively with universities, in the US such relationships are rare.

This is why in the international arena, sovereign-to-sovereign S&T agreements are characterised as “science diplomacy.” Indeed, this is the term conventionally utilised by negotiators of such agreements. Its use encapsulates much of what is wrong with this enterprise: it accurately reflects the substance and objectives of the agreements negotiated. And, it certainly does not signal to would-be adversaries that the signatories are serious about mitigating the technological risks to their national security.

I know this first-hand. Earlier in my career, as US assistant trade representative, among my other responsibilities of leading US negotiations of international trade agreements and international Bilateral Investment Treaties (BITs) as well as serving as a member of the [Committee on Foreign Investment in the United States](#) (CFIUS), I also co-lead US negotiations of international S&T agreements with a cohort from the US department of state. Other than my agency, which sat (and still does sit) within the executive office of the president, other agencies, especially those with focused missions in the economic, science and technology and defense spheres, were not heavily involved.

Mind you, that was the era when Japan was seen by the US and other countries as the technological threat to national security. Flash forward to today, where it is China not Japan in the cross-hairs.

Much of the current debate swirling about the undue concentration of advanced countries' production located in, or supply chains emanating from, China is focused on the wisdom of, or even the ability for, instituting government-mandates to force foreign companies to decouple from the country, which is increasingly referred to as the world's factory.

Putting aside the dearth of understanding by proponents of decoupling about how foreign firms operating in China actually function, at its core, the pursued objective is one of *defense*, not *offense*. In addition, their focus is centered more on incumbent or legacy products, processes and technologies than on R&D investments that will not only drive the next generation but also enhance firms' ability to enhance the value capture of such investments.

It is the latter area on which fresh collective efforts for devising international sovereign-to-sovereign agreements to coordinate R&D investment activities among the advanced democracies must focus and do so in a proactive mode.

## What should be done

The process of negotiating and evaluating outcomes of international S&T agreements is significantly different from that of negotiating international trade agreements and investment treaties (especially so in the US). The former is not nearly as inclusive or systematic with respect to involving external stakeholders as the two latter regimes.

*See also: [Primer on the UK national security and investment bill](#)*

For trade and investment agreements there is an elaborate – and remarkably efficient – superstructure in which business, labour unions, and NGOs (environmental groups, research entities, think tanks, and universities) are routinely and extensively involved both in the front-end of negotiations as well as at the evaluation stage. In the case of international S&T agreements, these

elements of stakeholder participation rarely exist as standard practice.

To the uninitiated, bringing together stakeholders for such activities may seem to be unduly process-oriented. For international trade and investment agreements it is not: the focus is often extraordinarily keyed to defining not only which tangible goals and outcomes should be sought (think, lowering specific tariffs or opening up certain sectors for foreign investment), but also how should negotiators go about seeking them (think, where is there the most leverage and on what specific foreign products or service markets do domestic constituencies place the highest value). There should be no shortage of defining analogous elements in the case of S&T agreements. The current practice of international scientific data-sharing arrangements is an important example in this regard.

Moreover, in the case of international trade and investment agreements, the process is often cleverly used as a way to help achieve national consensus about salient policy parameters.

Epitomising this is the fashioning of model agreements, which serve as the starting point for international negotiations with other sovereigns. The most obvious example is the process of crafting a country's model BIT (which is done every several years). This, too, can be a lesson for modernising the regime governing international S&T agreements.

At the bedrock of international trade agreements and investment treaties are two long-standing principles: reciprocity and national treatment. Adherence to these strictures by participating sovereigns is the *sine qua non* of international trade and investment agreements. They are what makes such agreements so meaningful, so much so that violations lie at the core of cross-country trade and investment disputes.

Relatively few international S&T agreements embody such terms; and for those that do, the provisions are largely viewed as lip-service. Not surprisingly, little if any enforcement of S&T agreements is carried out; indeed, there do not exist meaningful disciplines embodied in such agreements with which to exact remedies when there are violations or disputes. Without such strictures, international cooperation in commercially oriented, precompetitive R&D activity among sovereigns will not be meaningful.

### **Concrete next steps**

There is a powerful message here: there is only a nominal focus (and sometimes none at all) on like-minded countries collectively advancing pre-competitive, commercially-oriented objectives that harness the application of the fruits of these international S&T agreements – objectives that if fulfilled can enhance economic growth, international competitiveness and national security of participating countries.

Rather, those types of goals are, for the most part, still pursued by the G7 and other advanced democracies individually. The result? Missing the ability to capitalise on important S&T opportunities that could significantly enlarge economic advances *for* all, over and above what can be accomplished at the individual country level.

***See also:*** [New national security and investment bill will usher in new regime for UK](#)

At present such objectives are only sought by countries where there are strong pre-existing institutions structured at the multi-country level focused on advancing economic growth, most notably common approaches to boosting cross-country trade and investment flows.

This speaks to the importance for advanced democracies interested in boosting S&T cooperation to do so in ways that dovetail with fulfilling their collective economic objectives with respect to trade and investment – especially in enhancing and re-orientating the location of value capture. In fact, while the three regimes of international agreements interact with one another in shaping the stance and composition of countries' industrial and national security policies, such linkages are rarely made explicit.

Moving forward, this is why a key item on the G7's agenda should be the development of mechanisms to better drive such interactions and mitigate risks to their national security, such as the [establishment of a standing G7 working group—the R&D7](#) – similar to other G7 working groups focused on other important issues.

