
The G7 needs an 'R&D7' to beat China

The time has come for the G7 to move beyond 'science diplomacy' and upgrade science and technology agreements



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The G7 countries, the globe's most advanced democracies, engage in commerce with each other based on long-evolved, elaborate and remarkably efficient superstructures – international trade agreements and investment treaties – that lubricate their cross-border relationships. These institutions have served the populations of the G7 relatively well, allowing their consumers to buy goods and services that are less expensive or not readily accessible at home, and their businesses to attract capital from foreign markets and into which their products and services can be exported.

But when it comes to mechanisms to collaborate on research and development (R&D) in order to advance knowledge and stimulate innovation, the G7's cross-border rules of the road are relatively primitive: the sovereign-to-sovereign science and technology (S&T) agreements governing these

relationships are inadequately systemised, incorporate weak incentive structures, and are rarely harmonised to vigorously promote collective action that produces outcomes in the commercial realm from which all can readily benefit. That these agreements are commonly referred to as mechanisms to further ‘science diplomacy’, says a lot about their focus and objectives.

There always has been heterogeneity among the G7 in terms of policies, market structures, cultures and norms. In recent years, however, some of these differences, especially the character and functioning of the ‘nation-state R&D enterprise’ – companies, universities, and government laboratories – as well as the mechanisms for commercialisation of innovations, 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, the most populous nation and one that is neither democratic nor operating according to market principles and the globe’s rules-based institutions. Indeed, the Chinese are exploiting the differences among the G7 in their R&D architecture. Much is at stake for the G7 to take steps to mitigate these risks.

This year’s G7 Summit in June, chaired by the UK and taking place in Cornwall, presents the opportunity to do just that. A key item on the summit’s agenda should be the establishment of a standing G7 working group – the ‘R&D7’ – similar to other G7 working groups focused on other important issues.

The charge of the R&D7 should be to reform the structure underlying the negotiation and execution of international S&T agreements among the G7 and to form a standalone body whose charge is to ensure these agreements intensify and recalibrate intra-G7 R&D collaboration. There is no reason why these elements cannot be operational before the end of 2021, with an inaugural progress report delivered to the full G7 within that timeframe.

As is true on other fronts when dealing with huge complex trans-boundary challenges such as that posed by the spillovers of the ‘value capture’ from R&D investment being exploited by potentially antagonistic parties, the most meaningful and durable solutions require collective action. In this case, the focus should be on concrete ways in which the G7 can collaborate and bridge aspects of the heterogeneity in their national R&D enterprise systems to harness what are the best elements of them.

The overarching goal should be to develop a robust mechanism through which the G7 can formulate a new superstructure of international S&T agreements that systematically coordinates cross-border

R&D to capitalise on new opportunities both to enhance the countries' collective international competitiveness and to better capture the value of the investments they undertake.

The time has certainly come for the G7 to move beyond 'science diplomacy'. But this does not mean international S&T agreements should be shoehorned into the existing regimes of international trade agreements or investment treaties.

Rather, international S&T agreements need to be modernised to generate more dexterity in establishing and managing international R&D relationships to serve both the economic and national security interests of the signatories. Indeed, the G7 countries need to redesign their approach to R&D collaboration so that it is integrated into their international trade and investment strategies. Put another way, international S&T agreements should now be viewed as the 'third leg' of each nation's international trade and investment stool. That stool will be unstable so long as S&T agreements are relatively weak and misdirected.

This fix is long overdue. G7 countries have entered into a sizeable number S&T agreements with each other. Most, it should be said, are structured only on a bilateral rather than a plurilateral basis. Despite some admirable goals stated in the texts, they often lack clear, measurable objectives, enforceable terms or anticipated economic and other impacts they have the potential to deliver.

Their contrast with international trade agreements and investment treaties is stark. I know this first-hand in the case of the US because, earlier in my career, as US Assistant Trade Representative, within the Executive Office of the President, I oversaw US negotiations of international trade agreements and investment treaties at the same time that I co-led US negotiations for international S&T agreements with a cohort from the State Department.

Then, as is still mostly true today, while negotiating and overseeing the implementation of US international trade agreements and investment treaties typically draw on contributions from a range of federal departments and offices, my agency and the State Department were largely the only entities involved in carrying out those functions for international S&T agreements.

In most G7 countries, the agencies that lead the negotiation and oversight of international S&T agreements are frequently the ministries for foreign affairs. The governmental entities with economic and S&T policy expertise play a less consequential role.

At the same time, there tends to be a well-defined process for government officials to interact with important domestic stakeholders who will be affected by international trade agreements and investment treaties as they are negotiated and monitored. In the case of international investment treaties, in particular, there is a public airing of a 'model' text that serves as the basis for the

negotiations with foreign parties. Overall, the process governing these arrangements is inclusive, in contrast with that for international S&T agreements.

Perhaps most importantly, S&T agreements do not typically contain bedrock principles that give the international trade agreements and investment treaties their real power: 'reciprocity', the same benefits or penalties are applied to all parties to an agreement; and 'national treatment', treating foreigners the same as domestic parties.

Even when S&T agreements do contain these provisions, they are routinely viewed as lip service and go unenforced. In fact, few if any S&T agreements contain any meaningful tools to exact remedies when there are violations or disputes. The result is foreign firms engaging in commercially oriented, pre-competitive R&D in another country have no protection against less favourable treatment than domestic counterparts. Even worse, few international S&T agreements specify who owns the intellectual property generated by joint R&D activities, how confidential business information is to be treated, and the parameters governing joint R&D commercialisation. These amount to disincentives to cross-border R&D collaboration.

The role of China speaks directly to the urgency of strengthening international S&T agreements. In the area of wireless technology, for example, Chinese companies are moving quickly to establish primacy that would essentially force other countries to rely on them and their standards. That could hobble efforts to maintain personal privacy and a level commercial playing field. Democratic, market-oriented countries therefore have a strong incentive and responsibility to establish rules that protect democratic norms and prohibit one country from gaining outsized strategic leverage over the rest.

In this context, much of the current debate about the undue concentration of G7 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 China.

Putting aside the dearth of understanding by proponents of decoupling how foreign firms actually function in China, the objective they are pursuing is, at its core, one of defence, not offence. Moreover, their focus is centred more on incumbent products than on R&D investments that will not only drive the next generation of them but also enhance such firms' abilities to capture the value from such investments.

It is the latter area on which fresh collective efforts for devising the next generation of international S&T agreements among the G7 must focus. Establishing the R&D7 in Cornwall this summer would be an important step in that direction.

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