



SECURITY POLICY BRIEF

How 2400 pages of tech industrial policy will change transatlantic relations

Tobias Gehrke

The currently 2400-page long ‘US Innovation and Competition Act’ making its way through Congress is about one thing only: China. But it also signals a much broader shift in American geoeconomic strategy towards tech industrial policy which matters just as much for Europe. To avoid major rifts, tech industrial diplomacy will need to become a staple of transatlantic affairs.

THE ENDLESS FRONTIER?

“When future generations of Americans cast their gaze toward new frontiers, will they see a red flag planted on those new frontiers that is not our own?”, [asked](#) Todd Young, Republican Senator and co-sponsor of the landmark bill passed by a bipartisan US Senate in June. “Today, we answer unequivocally, ‘No.’”

Few Europeans will still be aghast at such jingoism out of Washington, a city which today almost unequivocally embraces ideas of an undeterred and ideological Chinese challenge to US supremacy. The *US Innovation and Competition Act* ([USICA](#)), which still awaits House approval but is expected to pass, is hailed as Washington’s

most important piece of legislation to win this all-out competition. It folds six different bills into one, 2400-page long mega bill. Together with Biden’s \$2.3 trillion [American Jobs Plan](#) proposal, which includes items worth some \$325 billion in new R&D funding for emerging technologies, these bills represent a bold geoeconomic push to boost American innovation and tech leadership in face of Chinese advances. A praiseworthy aim. But while China is the target, Europe may equally stand to lose. Tech industrial diplomacy is now urgently needed to impede this scenario.

DON’T CALL ME BY MY NAME

previously ineffable term, USICA screams of it: *industrial policy* is back in fashion. China (and, to a lesser degree, climate change) have made the seemingly impossible possible. Even the [Republican right](#), long the nominal torch-bearer of free market capitalism, now cautions that the “perils of free-market fundamentalism” can be “at odds with the common good and the national interest” (to counter China, naturally). Across the aisle, China has become a bipartisan bridge over age-old economic policy divides. “We should be clear-eyed that the idea of an open, free-market global economy ignores the reality that China and

other countries are playing by a different set of rules,” Biden’s Director of the *National Economic Council* Brian Deese recently [cautioned](#). Texan Republican Senator John Cornyn meanwhile [conceded](#) that “frankly, I think China has left us no option but to make these investments.”

USICA, which started as a bipartisan proposal for an *Endless Frontier Act* – in homage to Vannevar Bush’s pivotal report [Science: The Endless Frontier](#) to President Roosevelt in 1945 which pleaded for a major expansion of government support for science, research and innovation – was bold. The bill called for a \$100 billion investment into a new Technology Directorate at the *National Science Foundation* which would fund research and science in cutting-edge emerging technologies. An autonomous and flexible Technology Directorate, so the idea, would serve as a central node between industry and academia with clear, mission-driven research goals and unlock a new technological revolution in the service of great power competition – just as Vannevar Bush’s *Office of Scientific Research and Development* had been when shepherding research into war-winning technologies (including the *Manhattan project*).

It has been an uphill battle since. As it stands, less than \$40 billion in new spending was agreed for USICA, with less than \$10 billion for actual R&D and only some [\\$4 billion](#) for the Technology Directorate’s core R&D efforts. Many critics warn of a dangerous politicisation of America’s science policy – the opposite of the initial idea. The size and political importance of the bill also made it amazingly vulnerable to lobby interests: banning the sale of [shark fins](#), for example, made it into the bill (to also win the culinary ethics competition with China, supposedly).

Still, despite being watered down significantly, USICA’s big-ticket item has so far weathered the

storm: a \$52 billion program to boost semiconductor manufacturing in the US, the critical technology at the centre of geoeconomic competition. Together with additional R&D funding sought by the [Biden administration](#) to spur climate-relevant technologies and leverage federal procurement to jumpstart clean energy manufacturing, tech industrial policy has become a primary deliverable of the new US administration. While some [initiatives](#) and [ideas](#) were seeded during the Trump years, it is the [Biden administration’s](#) recovery plans, boost of the [Pentagon’s R&D budget](#), and the USICA which fully anchor them at the heart of US geoeconomic strategy. Above all, they mark a fork in the road for the intimacy in the relationship between the state, technology, and national security.

TO KNOW YOUR ENEMY...

Such intimacy is well known among Beijing’s political elites to whom national technological capacity – and the absence of foreign dependence – has been the linchpin of China’s sovereign futures. Ever since Mao’s *Two Bombs, One Satellite* project (1958), Chinese leaders have been nurturing industrial and technological pet projects of epic proportions. “It isn’t a matter about which we can afford to be near-sighted,” Deng Xiaoping [explained](#) his grand technological ambitions in 1988. “China cannot afford to fall behind. China cannot afford not to be engaged, despite of the fact that we are poor.” Most prominently, for over four decades Beijing has been [pouring](#) billions of dollars into its semiconductor manufacturing capacity. With some \$300 billion worth of chip [imports](#) annually, China’s vulnerability is, unsurprisingly, of great concern to Beijing’s geoeconomically-minded leaders. But its tech industrial [plans](#) for domestic semiconductor capacity have had [mixed](#)

[results](#) at best – a fact which has not stopped Beijing from committing [ever more resources](#) to this strategic effort.

For the past three decades, America and Europe concentrated (more or less) on curbing the worst excesses of China’s industrial policies. Stricter and better enforceable rules through [multilateral](#) institutions (WTO) or bilateral deals were the default effort (and remain key). But these efforts have more recently been flanked by a number of unilateral tools: [screening](#) foreign acquisitions of advanced tech companies, [sanctioning](#) Chinese companies and individuals, [restricting](#) exports of sensitive technologies, [cracking down](#) on R&D espionage, and [purging](#) digital networks, infrastructures, and technologies from Chinese suppliers, to name a few.

Now, though, tech industrial policy is the craze in the West itself. To retain [manufacturing capabilities](#), [raw material](#) supplies, and [technology assets](#) considered crucial for economic and national security, governments are embracing schemes long considered to undermine, not support, economic and national security. “Strategic public investments to shelter and grow champion industries is a reality of the twenty-first-century economy. We cannot ignore or wish this away,” NEC Director [Brian Deese](#) explained the change of heart. Notwithstanding appeasements that America’s tech industrial policy is different to that of China’s, the irony is not lost on anyone: Washington policymakers may well heed Sun Tzu’s advice to his readers in *The Art of War*, often misquoted in English as: “To know your enemy is to become your enemy.”

BIRDS OF A FEATHER

The United States is of course far from alone in this shift. USICA pales next to South Korea’s [pledge](#) to funnel \$451 billion of (public and private) investments into its domestic semiconductor capacity. [Japan](#) wants to reclaim lost ground too, while [Singapore](#) hope to capture new ground and Taiwan will not stand idle in preserving its lion’s share of the cake. The EU, meanwhile, wants to double its share in global semiconductor production (to 20%) [by 2030](#). How the Commission wants to achieve its goal (what targets, which subsidies?) amid this serious geo-economic competition still remains unclear.

And it’s not only about semiconductors. Across the continent, new [regional](#) and [national](#) tech [industrial plans](#) outline ambitious targets, from digital connectivity, AI, green energy, cloud services, and quantum computing, driven not least by fears of missing the boat for a sovereign future. Paris and Berlin, for example, pledged in a 2019 [joint manifesto](#) that “we will only succeed if we are the ones creating, developing and producing new technologies,” before promising to “massively invest in innovation.”

The European Commission, for its part, has been busy with sketching the contours of an EU industrial strategy. In its most [recent update](#), the Commission wants industrial policy to target climate neutrality, Covid-19 recovery, resilience of critical supply chains, and reduction of foreign dependencies – a rather ambitious laundry list from an institution with comparatively few resources of its own (notwithstanding the *Recovery and Resilience Facility* (RFF)).

The *Berlaymont* is therefore particularly concerned with tying together national efforts in *Important Projects of Common European Interest* ([IPCEI](#)), a mechanism which grants private-public partnerships in multi-country projects more lax

rules on state aid (for subsidies). It also collects data about [emerging needs](#) and possible [bottlenecks](#) for technological breakthroughs. Beyond the RFF, its strongest instrument may be its research funds with a €95 billion budget for the next seven years. It includes, for example, a new €10 billion strong *European Innovation Council* ([EIC](#)) which aims to provide grants and take equity in European start-ups in the riskiest R&D fields. Too little say several [EU tech bosses](#) who rally for a €100 billion *Sovereign EU Tech Fund* as necessary to break Europe’s “quasi-absolute tech dependency.” Just as in the US, tech industrial policy is moving into full swing across the EU.

HORNIG’S GHOST

European fear of losing a tech race against both America and China made serious inroads. These fears are eerily reminiscent of the *technology gap* debate gripping the continent in the 1960s, when leading politicians from British PM Harold Wilson to German Minister of Finance Franz Josef Strauß and Belgian Foreign Minister Pierre Harmel were alarmed that a growing tech gap would put European sovereignty at risk. America’s Johnson administration was [convinced](#) that the actual problem was only partly technological but also “psychological, political, economic, and social.” Europe’s dilemma, as they saw it, was the desire to “benefit to the maximum extent from US technological advances while avoiding the possibility of American technological/industrial domination.”

Still, Johnson chose to engage European fears by appointing his science & tech advisor Donald F. Hornig in 1967 to create the *Interdepartmental Committee on the Technological Gap*. The “Hornig Committee” would [recommend](#) to Johnson that European concerns must be taken seriously: “The US should try to convert European resentment about the technological gap into a

constructive source of support for greater intra-European cooperation [...] and attempt to ensure an outward-looking Europe which will be a strong force in the world economy,” for example by promoting R&D cooperation and stressing the joint stakes in technological progress.

Today, a time when innovation and technological advances rely ever more heavily on international collaboration, Hornig’s advice is even more pressing. Enlisting like-minded countries for common tech industrial goals must become a priority of any strategy, not an afterthought to it.

TECH INDUSTRIAL DIPLOMACY

The groundwork has been laid. The newly minted EU-US *Trade and Technology Council* ([TTC](#)) offers a broad platform to coordinate tech industrial policies. Finding concrete projects is now of urgency. For example, Tyson Barker of the DGAP recently [proposed](#) a EU-US joint venture chip production consortium across the entire value chain with financial support to European participating firms coming from the RRF. Similar ventures could be conceived for hydrogen energy and batteries, where the EU is already developing IPCEIs and industrial alliances. Increasing the stakes of US companies in EU tech industrial projects (e.g., IPCEIs) should be mirrored by equal measures for EU companies in the US – to share benefits and to maximise the effects of collective standard setting.

Equally important is to identify emerging technology challenges where common R&D efforts could strengthen the transatlantic innovation economy. In the case of critical raw minerals, for example, the partners could pool R&D resources to advance sustainable mining and processing technologies as well as recycling and substitution processes, which could enhance supply security down the road. This could also

strengthen other critical mineral initiatives, such as the *Strategic Partnership on Raw Materials* inked with Canada [in June](#).

Both should also work to align standards on *research security*, an issue of growing concern in the US (in USICA) and [in the EU](#). Setting common R&D cooperation standards (e.g., openness, reciprocity, IP protections) and co-developing strong deterrence and enforcement tools against IP and cyber theft, for instance, could not only strengthen the capacity to deliver the benefits of tech industrial policies, but also allow (continued) R&D cooperation with China based on fair and enforceable standards.

In 1966, Italian Foreign Minister Amintore Fanfani called on his Washington colleagues to establish a “[technological Marshall Plan](#)” among NATO members in which they would cooperate on the high-tech areas of the time. Fifty-five years on, the *Trade and Technology Council* could become just that. But only if tech industrial policy moves into heart of diplomacy.

Tobias Gehrke is a Research Fellow in the Europe in the World Programme at the Egmont – the Royal Institute for International Relations. He is grateful to the many insightful comments received on earlier versions of this text from Sven Biscop, Tyson Barker, Yixiang Xu, and Tania Latici.