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Technology Policy in an Economic Security Era: Recommendations for a G7 FDI Screening Toolkit

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Abstract

Economic security has supplanted the neoliberal consensus on trade, retooling globalisation while moving national security to the forefront of the foreign policy agenda. G7 and close partner countries still need to develop enforceable rules to create guardrails for the economic security agenda, especially in relation to high-tech critical sectors. To address these concerns,



this policy brief proposes a common foreign direct investment (FDI) screening toolkit, encompassing two key components: a shared definition of critical high-tech sectors as a basis for risk assessments, and supranational golden shares, thus providing the G7 financial institutions with the ability to prevent potential harmful foreign takeovers of critical assets. By implementing this common FDI screening toolkit, the G7 can fortify its economic security, protect national interests, and create a virtuous cooperative cycle among its members.

The challenge

The global economy is at an inflection point. Economic security is becoming increasingly important in the governmental agenda-setting and decision-making of the Group of Seven, thus making the identification of geopolitical risks more relevant than ever. In an international scenario where the economic security agenda and the proliferation of advanced technologies are quickly evolving, protecting critical sectors has become a priority. This is especially true for the high-tech sectors which are most at risk from technology acquisitions, such as AI, quantum computing or biotech. The latter has been particularly relevant after the fall in value and the data breach of 23andMe, a genomics company providing genetic testing services, imperilling the personal biodata of millions of users.

As the global economy increasingly moves into clusters and away from a primarily multilateral framework for economic governance, it is critical that partners and friends join together to design and implement new policy instruments that increase investment in nationally critical high-tech value chains, while minimising risk and deepening long-term security. The G7 is particularly well-suited to house discussions to create new instruments and to advise countries on how best to implement them. As Italy prepares for the G7 ministerial summit in June 2024, it should lead discussions to set up a supra-national golden shares instrument that would facilitate partner investments in critical sectors while reinforcing extant objectives of an expanding foreign direct investment (FDI) screening paradigm.

The role of the G7

The G7 serves as a forum for major world powers to discuss and address global challenges; one of its primary functions is coordinating economic, technology, and trade policies among its members. Through collaboration and cooperation, the G7 aims to promote sustainable development, economic stability, and international security. By pooling resources and expertise, member countries can work together to find solutions to pressing issues. The G7 also plays a crucial role in shaping the global agenda and influencing international policies, making it a key player in the global arena.



While several bilateral accords have facilitated cooperation on economic and technological matters, multilateral cooperation between states is of paramount importance. The EU-US Trade and Technology Council successfully coordinated the actions of several actors to major global trade, economic, and technology concerns, as well as expanded transatlantic commerce. Similarly, the EU-Japan Science and the Technology Cooperation Agreement laid the groundwork for further cooperation between the parties. However, bilateral agreements fell short of addressing particular economic security concerns that were discussed during Japan's 2023 G7 presidency. In this context, providing a multilateral forum where states can interact with each other and discuss relevant economic and technology issues is fundamental. It allows for exchanging knowledge, sharing best practices, and aligning policies to address common challenges. By fostering collaboration and understanding between nations, multilateral cooperation can lead to more effective solutions and innovations that benefit all parties involved.

The G7 can also play a crucial role in identifying new challenges posed to Critical Infrastructures by innovations in sectors such as AI, quantum computing, biotechnologies, and semiconductors. It can suggest applying concrete responses that are shared not only by G7 members but also by guest countries and International Organizations participating in the Ministerial sessions. For example, The Digital and Tech Ministers' declaration at the last G7 summit reaffirmed the commitment towards the establishment of an Action Plan for Promoting Data Free Flowwith Trust (DFFT) launched during the 2022 German presidency (G7 2023a). This Plan aims to facilitate the free flow of data across borders while ensuring data protection and privacy. Similarly, the G7 could be at the forefront of shaping international norms and standards, especially on emerging technology issues. The adoption of the Hiroshima AI process Guiding Principles and Code of Conduct moved the G7 a step further in accounting for the possible economic and social risks that those new technologies may cause (G7 2023b; G7 2023c). As we navigate the increasingly complex landscape of technology, it is crucial for the G7 to focus on economic security and the responsible use of emerging technologies.

Finally, the G7 might also assist its members in harmonising national policies or sharing best practices. Technology policies should respect the core values of the G7 that aim at promoting freedom, democracy, and human rights, as well as principles such as transparency and accountability highlighted by the OECD. Harmonising regulations across member countries can also facilitate trade and innovation while ensuring a level playing field.

Harmonised and updated high tech sector list

The rise of unconventional threats to critical infrastructures exposes flaws in traditional risk management. Acknowledging the financial impracticality of minimising all risks, there's a growing emphasis on resilience to ensure service continuity after unforeseeable events. To address these challenges, the G7 proposes leading the establishment of a comprehensive FDI screening program, comprising a harmonised high-tech sector list, an intra-G7 feedback mechanism, and



the institution of supranational golden shares, which will be further explored in the following paragraph. Proactively assessing risks and controls, the list functions *ex-ante*, providing risk assessment for G7 countries, and *ex-post*, facilitating updates in case of third-country weaponisation of high-tech sector infrastructures. This initiative aims to fortify global security against emerging threats.

Following Decrees 179/2020 and 180/2020 of the Italian President of the Council of Ministers, high-tech sector infrastructures are identified as "energy, water, health, storage, process and control of personal and sensitive data, artificial intelligence, robotics, semiconductors, cyber security, nano and biotechnologies" (OECD 2022: 116). Enhancing the resilience of such high-tech sector infrastructure has thus become a priority for G7 countries.

Within a risk management framework, G7 nations define high-tech sectors and analyse associated risks in processes, technology, and trade networks. They evaluate existing controls and propose protective measures and feedback, including abstaining or eliminating specific activities and employing trade and investment controls to mitigate risks. Assessments extend beyond a third country's internal economic and financial risks to consider broader economic threats. Public authorities map critical economic functions, such as deposit-taking and trading, to identify vulnerabilities.

The framework, evolving from the Critical Infrastructure Warning Information Network (CIWIN), aims to create a secure platform for sharing best practices and supplementing existing networks (European Commission 2013). Its harmonized high-tech sector list fosters collaboration, emphasizing the sensitive nature of shared information and a commitment to robust security standards. It aims to fortify high-tech infrastructures against economic weaponization through secure information exchange and a dedicated platform for rapid alerts. The initiative reflects a commitment to stringent security measures, enhancing resilience and preparedness in managing critical infrastructures.

Crucially, the FDI screening toolkit facilitates the prompt dissemination of trustworthy and actionable trade and investment feedback to both internal and external stakeholders, encompassing entities and public authorities within and beyond the financial sector. This includes information on threats, vulnerabilities, incidents, and response strategies, aiming to fortify defences, minimise harm, heighten situational awareness, and facilitate continuous learning (OECD 2022). The exchange of technical details, such as threat indicators or insights into vulnerability exploitation methods, enables G7 countries to stay current in fortifying their defences and stay informed about evolving tactics employed by third countries. Sharing comprehensive insights among G7 countries, between entities and public authorities enhances collective comprehension of potential sector-wide vulnerabilities that could disrupt crucial economic functions and jeopardise financial stability. This collaborative approach ensures a proactive stance against economic and security threats, promotes resilience, and strengthens



the overall G7 posture within and beyond the financial sector.

Examining interdependencies, both geographical and sector-specific, holds crucial significance in enhancing the protection of critical infrastructure in the G7 countries. This continuous analysis contributes to evaluating vulnerabilities, threats, and risks associated with G7 critical infrastructures. Hence, the FDI screening toolkit proposed is intended to foster resilience in an interconnected world increasingly dominated by emerging technology.

Supranational golden shares

The supranational golden shares stand out among the recommendations proposed by the present policy brief to the G7 countries. Traditionally, golden shares represent tools which provide governments with special powers and veto rights in recently privatised companies. Their goal is to protect these firms from hostile takeovers on national security or on public policy grounds if deemed necessary. They have often been a key element of post-privatisation control instruments (OECD 2019b).

The measure we propose to the G7 leaders is the translation of this concept to a supranational level, where foreign firms, financial institutions, or national development banks from friendly, allied, or like-minded countries come to the rescue to prevent hostile takeovers from potentially dangerous firms. This mechanism would enable trusted firms from other G7 countries to acquire a non-voting shareholding in companies operating within critical infrastructure, allowing them to strategically prevent an acquisition by detrimental foreign investors. This would happen in cases where the acquisition may be detrimental to the competitive technological edge of a country and, more in general, of the group of seven, especially if the foreign acquirer is a state-owned enterprise (SOE). Indeed, technology acquisition is a factor to be considered since some SOE objectives may be perceived as posing threats to host countries' essential security interests (OECD 2019a). Chinese companies investing in the EU have a strong motivation to acquire EU technology, raising concerns related to the perceived link with the government-driven "Made in China 2025", which encourages Chinese firms to acquire foreign high-tech assets (Buysse and Essers 2019).

In this scenario, the concept of friend-shoring, as defined by the United States Secretary of the Treasury Janet Yellen in 2022, comes in handy in better defining the concept. This strategy refers to the rerouting of supply chains to countries perceived as politically and economically safe or low risk, to avoid disruption to the flow of business (Yellen 2022). In this regard, the US government has come to the forefront as it has stressed its intention to obtain components and raw materials from friendly countries to increase the security of domestic production (Ellerbeck 2023). US Treasury Secretary Janet Yellen set out Washington's new approach to trade last year: "rather than being highly reliant on countries where we have geopolitical tensions and can't count on ongoing, reliable supplies, we need to really diversify our group of suppliers", she said (Yellen 2022).



Merging supranational golden shares and friendshoring would eventually intensify the economic interdependence between the group's members in an international context characterised by ever-intensifying geoeconomic challenges. Indeed, supranational golden shares would represent a proactive investment protection measure. In fact, instead of simply blocking an acquisition, there would be potential for a boost in bilateral investment flows among G7 countries, thus giving impetus to a high-tech sector which is becoming more and more stagnant (O'Brien 2023). Encouraging signs in this domain were shown by the creation of the aforementioned U.S.-EU Trade and Technology Council in 2021, established with the aim of reassuring investors about the potential for a level playing field in the tech sector (Benson and Kapstein 2023). While Apple has already implemented some friendshoring moves by relocating some of its iPhone production to India from China (Reuters 2022), more companies need to follow suit. In fact, a policy instrument like supranational golden shares would be instrumental in providing relief to the economic dire straits and data breaches of 23andMe. Not only it would be possible to inject capital from friendly countries' companies but also to protect the biodata of its customers from potentially harmful acquisitions. The recent breach at 23andMe exposed personal details from 6.9 million profiles, utilizing outdated passwords. Initially impacting 0.1 per cent of user accounts, the breach extended to millions more involved in the DNA relatives feature, revealing sensitive data, and despite the absence of reported misuse, 23andMe is instituting mandatory password changes and two-step verification. This incident underscores the imperative for robust cybersecurity in critical high-tech sectors and it prompts a revaluation of data-sharing practices and a reconsideration of entrusting sensitive information to external entities (Carballo 2023). Therefore, concerns about the protection of such data in case of bankruptcy are on the rise, in an international scenario where the uncontrolled movement of biodata across borders may lead to health surveillance and monitoring in third countries (Kokas 2022).

In this particular case, a supranational golden share may have been provided by the Japanese biotech sector, one of the most developed biotechnology sectors in the world and strategically supported by the Japanese government. Not by chance, Japanese financial institutions and private companies have been recently investing in friendly countries' biotech sectors, thus gaining a high degree of expertise on the matter. For instance, Japan's sovereign development bank and the pharma group Kyowa Kirin, alongside US healthcare provider Children's Minnesota, have invested in UK life sciences for the first time in January 2024 with funding for 4Bio Capital, a UK venture fund that backs advanced treatments such as cell and gene therapies (Kuchler 2024). Representatives from the Development Bank of Japan underlined the importance of connecting Japanese biotech start-ups with others across the world and that "network and knowledge of the advanced therapies sector in the UK, Japan and globally makes them the perfect partner" (Kuchler 2024).

Countries should pursue a measured approach to leveraging the supra-national golden shares instrument. As upheld by numerous European Court of Justice judgements, EU countries have



tread cautiously about retaining golden shares to avoid violating European rules relating to the free movement of capital (Euractiv 2006). The Italian case is telling in this sense since the EU Commission initiated proceedings against Italy in 2009 for failing to meet the conditions for exercising the golden share "special powers" sufficiently clear and for ensuring discretionary power to state authorities, thereby infringing upon the freedom of establishment and the free movement of capital (Szabados 2015). Therefore, the same caution must be guaranteed when using these "private" golden shares, combined with the inner intricacies of friendshoring. Friendshoring as a global strategy holds promise but is difficult to operationalise. Important elements, such as how to identify trusted partners, what the benefits of friendshoring are for them, and whether friendshoring has implications beyond trade are still unclear (Manak and Miller 2023). The pursuit of a supra-national golden shares instrument would reinforce the benefits of friendshoring by institutionalising a strategic investment tool.

Final remarks

In a global situation characterised by higher risk exposure, economic security concerns, and weaponization of economic policies, it is inevitable to see countries introducing instruments aimed at addressing these threats and concerns. The use of such policies at a national level in an uncoordinated way can fuel tensions between countries and increase the growing fragmentation of world markets. Given that the G7 has already shown in the past a good coordination capacity when sharing the same goal, it is advisable that the use of policy tools screening FDIs is coordinated at least at the level of this group of countries. The introduction of a supra-national monitoring instrument can reinforce collaboration and reduce some potential distortions. Beyond the direct relevance of such an instrument, it would also be important in signalling the importance assigned by the G7 countries to supra-national governance and coordination at times of uncertainty.



References

Benson, Emily and Kapstein, Ethan B. 2023. The limits of "friend-shoring". *CSIS Reports* February. https://www.csis.org/node/103660

Buysse, K., and Essers, D. 2019. Cheating tiger, tech-savvy dragon: Are Western concerns about 'unfair trade' and 'Made in China 2025' justified? *NBB Economic Review* September: 47-69. https://www.nbb.be/de/node/220698

Carballo, Rebecca. 2023. Data breach at 23andMe affects 6.9 million profiles, company says. *The New York Times* 4 December. https://www.nytimes.com/2023/12/04/us/23andme-hack-data.html

Ellerbeck, Stefan. 2023. What's the difference between 'friendshoring' and other global trade buzzwords? *World Economic Forum* 17 February. https://www.weforum.org/agenda/2023/02/friendshoring-global-trade-buzzwords

Euractiv. 2006. ECJ rules against 'golden shares'. *Euractiv* 29 September. https://www.euractiv.com/?p=821974

European Commission. 2013. *Critical Infrastructure Warning Information Network (CIWIN)*. https://home-affairs.ec.europa.eu/node/78_en

G7. 2023a. *G7 Hiroshima AI process: G7 digital & tech ministers' statement.* http://www.g8.utoronto.ca/ict/2023-statement.html

G7 2023b. *Hiroshima process international code of conduct for organizations developing advanced AI systems.* http://www.g7.utoronto.ca/summit/2023hiroshima/231030-ai-code-of-conduct.html

G7. 2023c. *Hiroshima process international guiding principles for organizations developing advanced AI system.* http://www.g7.utoronto.ca/summit/2023hiroshima/231030-ai-principles. html

Kokas, Aynne. 2022. *Trafficking data: How China is winning the battle for digital sovereignty.* Oxford: Oxford University Press

Kuchler, Hannah. 2024. Japan's development bank makes first UK life sciences investment. *Financial Times* 4 January. https://www.ft.com/content/d9943221-c357-4f08-a698-fdc3a04240ec



Manak, Inu, and Miller, Manjari Chatteree. 2023. Friendshoring's devil is in the details. *Renewing America blog* 25 October. https://www.cfr.org/blog/friendshorings-devil-details

O'Brien, Connor. 2023. Like the broader economy, the high tech sector is becoming less dynamic. *EIG Analysis* 22 June. https://eig.org/high-tech-dynamism

OECD. 2019a. *OECD business and finance outlook 2019: Strengthening trust in business*. Paris: OECD. https://doi.org/10.1787/af784794-en

OECD. 2019b. *A policy maker's guide to privatisation*. Paris: OECD. https://doi.org/10.1787/ea4eff68-en

OECD. 2022. Framework for screening foreign direct investment into the EU: Assessing effectiveness and efficiency. https://www.oecd.org/investment/investment-policy/oecd-eu-fdi-screening-assessment.pdf

Reuters. 2022. Apple may move a quarter of iPhone production to India by 2025 - JPM. *Reuters* 21 September. https://www.reuters.com/technology/apple-may-move-quarter-iphone-production-india-by-2025-jpm-2022-09-21

Szabados, Tamás. 2015. Recent golden share cases in the jurisprudence of the Court of Justice of the European Union. *German Law Journal* 16(5): 1099-1130. https://doi.org/10.1017/S2071832200021052

Yellen, Janet. 2022. Transcript: US Treasury Secretary Janet Yellen on the next steps for Russia sanctions and 'friend-shoring' supply chains. 2022. *New Atlanticist* 13 April. https://www.atlanticcouncil.org/?p=512112

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