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Smart technological sovereignty: How it could support EU competitiveness

KEY MESSAGES



- 1** Smart technological sovereignty intends to tackle the economic and technological challenges ahead by creating a positive vision for a technologically sovereign Europe. It requires the right investment and policy framework to facilitate the strengthening and development of Europe's industrial and technological capacities, while remaining open for trade and investment.
- 2** It is time for Europe to start acting more strategically and to proactively position itself in the changing international sphere. By understanding the concept of 'smart technological sovereignty' as an instrument to develop and strengthen the European business base, it serves as an opportunity for enhancing European competitiveness and leadership position on a geopolitical level.
- 3** Technological sovereignty has been interpreted in a restrictive and protectionist manner by some of Europe's major trading partners. If the EU follows suit with a reactive approach to trade policy and misuses the concept of technological sovereignty, it runs the risk of serving protectionist interests and will ultimately undermine the benefits of global trade and investment.



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SMART TECHNOLOGICAL SOVEREIGNTY: HOW IT COULD SUPPORT EU COMPETITIVENESS

1. CONTEXT

Fast-paced digitalisation, the global race for technology, rising protectionism worldwide and the recent COVID-19 outbreak indicate the economic and technological challenges that lie ahead for Europe. In order to remain ahead of the curve and retain its competitive edge, the EU must adjust its policies to new economic and technological realities, while expanding its competitiveness and geopolitical position.

The recent COVID-19 outbreak demonstrated the interconnectedness of global value chains and led to growing concerns over supply chain disruption. Already pre-COVID-19, it became gradually apparent that in Europe many strategic sectors (such as information and communication technology, energy, mobility, health, space) are increasingly reliant on third countries' components, platforms and raw materials. Some critical national infrastructures (hardware and software) in Europe are built outside of the EU. There is an increasing race to secure access to critical components and raw materials around the world that are key ingredients of many products used in high-tech applications and low-carbon technologies (electronics, renewable energy production, automotive, etc.). This gives not only rise to growing concerns over supply chain disruption but also to the integrity of critical infrastructures and technologies.

Recent developments suggest that the United States and China might strive to become technologically self-sufficient over time in order to ensure their technological supremacy. This has lately led to the ban of some Chinese technology companies from access to US suppliers. Although not necessarily referring to this as technological sovereignty, major trading partners are introducing restrictive measures to strengthen their economies. China is pursuing a form of technological sovereignty through its "Made in China 2025" strategy: by defining ten strategic industries (AI, quantum computing, semiconductors, battery technology) and by promoting "indigenous" innovation at the expense of foreign companies, China is "ring-fencing" its manufacturing base. At the same time, the United States are intensifying their export controls on dual-use items related to key technologies¹, while tightening the conditions for the screening of foreign direct investment and interpreting the scope of national security more broadly. The United States are also actively debating the merits of a technological 'decoupling' from China. European companies are increasingly coming under pressure to take sides in this conflict.

¹ For example, in the areas of materials processing, electronics, telecommunications, information security, sensors and lasers, and propulsion. Source: Bureau of Industry and Security 15 CFR Parts 732, 734, 738, 742, 744, 758, and 774. <https://www.govinfo.gov/content/pkg/FR-2020-04-28/pdf/2020-07241.pdf>



Undoubtedly, the EU must become more strategic to respond to practices by our main trading partners, such as distorted competition, unfair trading behaviour and unsubstantial claims of threats to national security. Of equal importance is the need for a more strategic approach in the case of unforeseen crises, like pandemics or climate catastrophes. In order to develop growth strategies and visions based on our standards and on our ability to grasp new scenarios all over the world, a successful intervention must be understood as a collective project on EU level.

Increasingly, European governments are investigating this topic by stressing the countries' increasing exposed to new vulnerabilities and threats. With politics and technology becoming more deeply intertwined, the concept of technological sovereignty has emerged in debates across the EU. The new European Commission's self-designation as a geopolitical Commission, led to the concept of technological sovereignty being put on the European policy-making agenda. Other concepts such as "Open strategic autonomy" and "European economic resilience" share the same underlying thinking. Especially in light of the economic recovery after COVID-19, the concept's importance and viability is gaining ground.

2. DEFINITION OF 'SMART TECHNOLOGICAL SOVEREIGNTY'

The concept is expected to have a significant impact on national and EU policy-making in the years to come. A shared understanding of what technological sovereignty means is therefore an important prerequisite. Currently, this does not seem to be the case throughout Europe. As the concept is often used broadly and is not very well-defined, it bears the risk of having a different meaning to various people and stakeholders. Many policy documents tend to not define it, but rather vaguely refer to economic capabilities and stress the need to protect European sovereignty. Importantly, smart technological sovereignty must not be understood as an end in itself, but as one of many instruments to strengthen European competitiveness and geopolitical position.

Europe can decide whether to be reactive or proactive in the debate about technological sovereignty. With the introduction of "Smart technological sovereignty" the European business community intends to tackle the challenges ahead in a "European way" through the creation of a positive vision for Europe: first and foremost, smart technological sovereignty is about the creation of the necessary framework conditions to facilitate the strengthening and development of Europe's industrial and technological capacities especially, but not limited to, in all key strategic fields of technology. It is about the creation of a level playing field and an attractive business environment, where all companies can thrive and compete globally. At the same time Europe maintains an ambitious agenda that seeks new trade opportunities in fast growing markets and refrains from drastic regulatory measures that harm European competitiveness and openness in the long run.

Only if well-designed and properly used like mentioned above, the concept of smart technological sovereignty can be beneficial to the economy and make Europe more proactive, strategic and visionary in response to aggressive industrial policies coming from some of our main competitors. If we apply the concept in the policy making process, without a common understanding of its meaning and possible implications, we run the risk of jeopardising the EU's economic prosperity. An approach that is just reactive (e.g. establishment of trade barriers or forced establishment of uncompetitive national providers) will not pay off in the long term, but instead yield serious ramifications and can have huge consequences on the EU economy, already hit by COVID-19.



3. THE MAIN GUIDING PRINCIPLES OF ‘SMART TECHNOLOGICAL SOVEREIGNTY’

Europe must remain a defender of the multilateral world order. Becoming inward-looking would be extremely harmful to the European economy since its prosperity critically depends on global economic exchanges. Any decoupling or re-nationalisation of supply chains related to a protectionist interpretation of technological sovereignty could reinforce the trend towards economic nationalism and deprive European companies of their international business base. As many of our trading partners, Europe is highly dependent on free trade. European businesses are highly incorporated in global value chains, with many companies positioned all along the value chains. Therefore, Europe should refrain from protectionist and unilateral measures making a sound and balanced use of instruments like FDI screening or export controls, when necessary.

Europe must seize this opportunity and expand its technological capacity. A strong and innovative technological base is the precondition for businesses to compete globally. Therefore, it is essential that the conditions and incentives for long-term investment in technology are put in place. By strengthening European technology capabilities, the digital and green transformation gets further accelerated. Europe can extend its position in key strategic sectors, when playing to its strengths in areas where engineering meets information technology (e.g. robotics, the industrial internet of things, smart appliance, development of mobile communication standards such as 5G, quantum computing and edge computing). Equally important is the promotion of environmentally friendly technologies (e.g. renewable energies, energy efficiency, biotechnology), which lay the foundation for a new era of European industrial leadership.

Europe needs more flexibility to be able to choose when it benefits from becoming self-sufficient in certain technological areas. Overall, it is simply unrealistic to design and produce all components of a product or use only European technology. Nevertheless, the EU must create the necessary conditions to give companies the option of designing and producing some or all components of a product or technology in Europe. This process must be driven by market forces and not be predetermined by governments. At the same time open global exchange is necessary for Europe to attain technological leadership in any field. The focus should lie on security, reliability and compliance, meaning that European companies must have a secure access to reliable products and services from all over the world. By crowding out certain international players, we run the risk of losing out on the full benefits new technologies derive when international suppliers adhere to European rules.

The selection of strategic sectors should not be understood as static and has to be conducted carefully and with a more dynamic approach. The role of governments in the selection of key technologies needs to be handled with great care and full transparency. Pursuing a “pick the winners” approach at an early stage is highly sensitive as the risk of undermining the long-term competitiveness of an economy is high. The concepts of Strategic Value Chains, Industrial Alliances or Industrial Ecosystems could be a positive and efficient approach to build up leverage in decisive sectors (such as low-carbon industries, hydrogen, industrial Internet of Things, cyber security, quantum computing and autonomous vehicles). Promoting cross border industrial cooperation and pulling private and public resources are innovative tools to build a critical mass. The corresponding governance structure must ensure political accountability and should be guided by the principles of openness and inclusiveness while maintaining the strong involvement of industry.



4. RECOMMENDATIONS – HOW EUROPE CAN STRIVE FOR ‘SMART TECHNOLOGICAL SOVEREIGNTY’

Companies in Europe play a core role in achieving a smart technologically sovereign Europe. Competitive and profitable companies will bring solutions, sustain jobs and generate wealth that addresses the societal, environmental and health challenges of today and tomorrow. When equipped with the right framework conditions, companies are encouraged to grow into major players and are able to compete on global scale. Therefore, the European business community calls on the European Commission to develop a holistic approach of smart technological sovereignty, by ensuring its integration in industrial policy, designing the EU budget in its full support and guaranteeing consistency between various policies.

In order to achieve smart technological sovereignty in Europe, BusinessEurope has identified the following key recommendations:

Strengthening EU competitiveness

- ➔ **Foster respect for intellectual property rights and effectively combat cyber enabled industrial espionage:** In an increasingly global and knowledge-based economy, a solid framework for intellectual property rights (IPR) is vital to incentivise R&D investment in key technologies, create high skill jobs within the Single Market, and strengthen the overall competitiveness of the European economy. Ensuring that third countries maintain a high level of IPR protection, consistent with their international commitments, will help foster a global level playing field in which all innovators have a fair chance to compete, regardless of their nationality. At the same time, challenges European-based businesses are facing to protect them against cyber espionage must be addressed by member states and the Commission. In the context of continued increased digitisation of businesses coupled with the necessity to maintain expertise over key technologies, it is essential to develop a concerted policy response against criminal and state actors with the aim to decrease the returns/increase the costs of these illicit activities. The combination with existing EU level cyber-policies aiming to protect the technological base and know-how in Europe will increase the attractiveness of Europe for high-tech investments.

Securing EU supply chains and imports/exports of technologies

- ➔ **Diversify critical raw materials suppliers’ base:** The European economy depends heavily on critical raw materials sourced from third countries many of them with unstable political environments. Since a shortage in supply would have devastating effects and should therefore be avoided, we need to find new ways to minimise this dependency, while securing Europe’s access to critical raw materials. Therefore, the EU needs to ensure that efforts towards building strategic value chains take these potential threats of dependency into account. Europe could decrease its raw material input by enhancing resource efficiency, increasing recycling and upcycling rates and advance research and development on potential substitutes for imported raw materials or by creating alternative supply chains through cooperation and partnerships with like-minded countries. Policymakers must therefore create reliable framework conditions to enable fair competition in open markets and thus ensure non-discriminatory access to raw



materials from abroad. The EU must pursue an ambitious trade agenda and continue to promote the conclusion of international trade agreements.

- ➔ **Ensure effective and targeted foreign direct investment screening based on increased cooperation between the EU members:** In recent years, the number of acquisitions by third country companies of European companies operating in strategic sectors has grown, raising a number of security-related concerns. The EU regulation “Establishing a framework for the screening of foreign direct investment into the European Union” is addressing this challenge by enabling rules and encouraging a common approach within the EU for foreign direct investment (FDI) in sectors where security and public order are at stake. This latter point is particularly important, because the regulation needs to maintain a EU market that is open to investments but is at the same time able to protect its security interests.
- ➔ **Limit expansion of export controls of dual-use technology:** Dual-use items (technologies that may be used for civilian or military purposes) cover a wide range of products and technologies. The primary objective of controlling exports of these items is non-proliferation of weapons of mass destruction (WMD). However, over the past years, with the emergence of new technologies that can be used either for civilian or military purposes a vivid debate is taking place on the need to expand the scope of export controls, to include so-called “emerging” and “foundational” technologies. There is no agreed definition of these terms. This increases the risk that the linkages between export controls and technological sovereignty lead the EU and its trading partners to unilaterally extend the scope of export controls therefore leading to disruption in global supply chains.² Advanced materials and technologies will have serious ramifications on the innovative strength of EU companies. Therefore, the EU must be clear that the main purpose of export controls is non-proliferation. Identification and control of emerging and foundational technologies should be agreed upon in and enacted through the multilateral forum of the Wassenaar Agreement. We also encourage the EU to ensure that our main trading partners continue to implement policies based on the decisions taken by the international non-proliferation regimes.

Achieving European digital leadership

- ➔ **Ensure a vibrant and competitive data economy:** Leading in the global data economy and benefitting from the data it generates will be essential for European competition. This includes maximising the potential to voluntarily share data between companies to offer greater innovation opportunities. Interoperability through greater standardisation and legal clarity as to how other areas of law (e.g. privacy, IP and competition) impacting data sharing can aid this. Avoiding vendor lock-in and ensuring portability are also prerequisites for a vibrant and competitive digital economy. However, it is not all technical. While voluntary data sharing should be the norm it is often not promoted enough. Yet data sharing can aid deep learning in support of critically competitive technologies, such as AI. Setting up common European data spaces with an overarching governance framework should incentivise a more vibrant data economy. If this initiative does

² Currently, the EU is in the process of modernising its export controls regime, in 2018 the U.S. has adopted new legislation and China is working on the adoption of its own export controls law.



not achieve these goals on the basis of demonstrable market failures, further action could be required to grant data access rights in areas where demonstrable market failures or barriers of entry exist. Any potential action to alleviate these concerns should continue to protect IP, privacy and cyber security.