ABSTRACT: This Special Focus aims at reflecting on the concepts of European technological sovereignty (ETS) and European strategic autonomy (ESA). Taking a legal perspective, it gathers the Insights of a group of scholars on highly debated issues such as the EU’s strategic autonomy, technical and digital sovereignty.


I. EU STRATEGIC AUTONOMY AND TECHNOLOGICAL SOVEREIGNTY: AN OVERVIEW

This Special Focus aims at reflecting on the concepts of European technological sovereignty (ETS) and European strategic autonomy (ESA). Often confused, and widely used in recent EU policy documents, they catalyse the programmatic efforts of the European Union and its Member States to ensure Europe’s technological leadership and its capacity to decrease its dependence from others.

The concept of ETS partly overlap with that European digital sovereignty (EDS). In both cases the EU faces similar challenges. Indeed, ensuring European computing power and secure connectivity implies a common technological capacity to support the activities of the Union and its Members in terms of intelligence and defense, for example. Beyond these technological issues in the strict sense, the protection of data, including strategic data, is also an imperative.

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The notion of ETS is akin to that of ESA, which was coined in the 2016 Global Strategy, against the objective to strengthen EU military capabilities, and which has expanded, beyond defense issues, into the notion of European open strategic autonomy (EOSA) that was mainly developed in the context of the Common Commercial Policy.

Building EOSA is challenging for the EU and its Member States, which rank among the world’s major economic powers. It is even more so since both actors must ensure a balance between, on the one hand, the objective of promoting an open international economy, and, on the other hand, the need to protect EU strategic industries, so as to limit EU vulnerability to (international) crises. As the Commission acknowledges, “The openness of Europe’s economy is at the source of its prosperity and competitiveness. Although, EU industry is highly integrated in global value chains and operates globally, the EU should not be naïve to threats to fair competition and trade”.

This Special Focus also draws inspiration from a speech delivered on 22 February 2019 by the President of the European Central Bank, Mario Draghi to the University of Bologna, where he distinguished between the concepts of sovereignty and independence. For the purpose of this research, we draw on this assertion to argue that in order to be truly sovereign in areas where the availability of key enabling technology is crucial to compete with third countries in the global arena, Member States should make strategic decisions and adopt protective measures through the European Union. Only if decisions with respect to technology are taken at EU level, Member States are able to act independently of third countries and even assume a leadership role in advancing technological progress.

The crucial political objectives and the very important challenges that the ETS and ESA aim to address cannot be achieved in practice without an appropriate legal framework. The project of this Special Focus thus aims to contribute, through a legal approach, to the contemporary effort to build a resilient and strategically autonomous Europe.

II. Mapping the sectors of EU strategic autonomy and technological sovereignty

Our introduction of this Special Focus is intended to contribute mapping strategic areas/sectors in which the EU is competitive but could strengthen or safeguard its technological sovereignty and/or reduce its dependence from third countries.

4 Speech by Mario Draghi, President of the ECB, on the award of Laurea honoris causa in law from Università degli Studi di Bologna, Sovereignty in a globalised world (22 February 2019) www.ecb.europa.eu.
The EU has lost technological sovereignty in the area of semiconductors, which is a crucial sector for modern economies, and initiatives were taken to enable EU operators to compete with operators of the dominant third countries in this area (in particular China). Telecommunications and space are also sectors in which the EU should invest in order to achieve ETS and ESA. These sectors are key enablers in the provision of a number of services in a modern economy.

In addition to space, European defence is essential for Europe’s future. “However, the fragmentation of the defence industry puts into question Europe’s ability to build the next generation of critical defence capabilities. This would reduce the EU’s strategic sovereignty and its ability to act as a security provider”.5

Regulating digital technology and industries and building a European digital market that ensures the production in the EU of the cutting-edge technologies is also necessary to guarantee the Union’s digital sovereignty.6 Furthermore, the issues of data protection including the relocation to Europe of the physical infrastructure that enables data storage and strategic defence instruments against cyber attacks remain issues of central importance.

III. IDENTIFYING CROSS-CUTTING INSTRUMENTS TO GUARANTEE EU’S STRATEGIC AUTONOMY

This Introduction to the Special Focus on ESA and ETS is also intended to explore several cross-cutting legal tools that could be used to guarantee EU’s strategic autonomy, in synergy with the above-presented sectoral approaches.

There is no doubt that international competition for hegemony in the space, energy, digital sectors involves not only substantial industrial efforts, but also a sophisticated economic strategy in the current context of economic liberalism governed by the law of the World Trade Organisation and the international financial institutions. Ensuring the strategic independence of the European Union in these key sectors for ETS and ESA therefore implies, in our view, mobilising the relevant legal instruments for economic defence.

The aim of the special issue is therefore to examine the legal instruments through which the EU and its Member States could protect EU’s autonomy. Against this objective, a specific focus can be put on legal protective mechanisms that the EU may deploy to screen the EU from foreign economic operators seeking to control strategic industries.

These protection mechanisms can be discussed according to the context in which they are intended to operate, distinguishing between mechanisms that are intended to apply generally and emergency response mechanisms. Among the general mechanisms for the protection of the EU’s strategic autonomy, it is possible to point out that a foreign direct investment screening tool has recently been introduced into EU law, the scope of

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which must be analysed.\footnote{Regulation (EU) 2019/452 of the European Parliament and of the Council of 19 March 2019 establishing a framework for the screening of foreign direct investments into the Union.} This filtering mechanism could be a key instrument, as it could prevent foreign operators from taking control of certain sectors that are key to Europe's strategic autonomy. In the same vein, but from the point of view of international trade and competition, a conditional access approach to the internal market or to certain trade sectors could be useful to ensure the imposition of the Union's strategic objectives and democratic values. This level playing field approach, specific to competition law, could be mobilised here in an original way.

IV. Structure and Contents of the Special Focus

Against the general overview that we have sketched in Sections II and III above, this Special Focus proposes a collection of eight papers focusing on selected specific issues that are relevant to the legal studies of ESA and ETS. They are the outcome of a workshop which was organised at the University of Pisa on 28 June 2022 with the support of the Cassini Fund of the French Institute in Italy, the University of Pisa, Italy, and the University of Lille, France.

A first set of three contributions analyses diverse facets of our key research concepts in EU law.

In her contribution entitled “Strategic Autonomy: A New Identity for the EU as a Global Actor”, Charlotte Beaucillon examines the evolution of the concept of strategic autonomy in EU discourse and practice, explores its consequences on the emergence of the notion of “European sovereignty”, and analyses how strategic autonomy is used to streamline both hard-power and soft-power contemporary EU external relations. She argues that the central role of strategic autonomy – in turn an ambition, an objective, a process or even a method – sheds new light on core issues surrounding EU external action law, such as power, sovereignty and the articulation of the EU-Member State relationship.

In “Reinforcing Europe’s technological sovereignty through trade measures: the EU and Member States’ shared sovereignty”, Sara Poli presents the EU and Member States’ initiatives to reinforce ETS as far as semiconductors are concerned. It explores whether it is necessary to change the current allocation of powers between the EU and Member States to achieve the mentioned objective. After providing an overview of a number of internal and external measures to address EU technological dependence or to protect EU technological assets in various areas of the EU’s competence, she critically assesses the Dutch decision of March 2023 to establish an export control of chip technology. This measure was enacted at the request of the United States and is based on the need to avoid dependence, on the preservation of technological leadership and on security grounds. The Dutch decision illustrates that the EU institutions and Member States can
each exercise their competences and successfully protect Europe's technological sovereignty (technological leadership) on the basis of a “shared sovereignty”. There is no need to change the Treaty rules to strengthen Europe's sovereignty. However, it is necessary that Member States inform the Commission and coordinate their actions at EU level.

Giving perspective to ESA and ETS in the context of EU legal studies, Cécile Rapoport endeavors to link these two concepts to the core notion of the autonomy of the EU legal order. In “Setting Norms and Promoting a Rules-based International Legal Order: Enhancing Strategic Autonomy Through the Autonomy of the EU Order”, she analyses whether and to what extent the legal implication of the EU operating as an autonomous legal order can contribute to also ensuring its strategic autonomy. Arguably, the way the European Court of Justice has interpreted the autonomy principle preserves the EU's freedom to act and enhances the strategic autonomy of the EU. However, she argues that while its being an autonomous legal order can help the EU to promote a rules-based international order, its ambition as a norm-setting power remains largely dependent on the attitude of its Member States.

A second set of five contributions sheds light on specific and selected sectors of EU law whose analysis is particularly relevant to the study of strategic autonomy and technological sovereignty. These contributions cover defense, space, data and foreign direct investment (FDI).

In “Fostering ‘European Technological Sovereignty’ Through the CSDP: Conceptual and Legal Challenges. First Reflections Around the 2022 Strategic Compass”, Lorenza Mola further explores the notion of ETS from the defense sector perspective under the Common Security and Defence Policy (CSDP). She first examines how “fostering ETS” shapes EU policy on a matter which is an expression of sovereign prerogatives but on which the EU is far removed from enjoying powers like a sovereign State. Second, she argues that considering the notion of “ETS” from this perspective may contribute to the debate on the nature and function of this category now in use. For the purposes of her paper, the focus of the analysis is put on the 2022 Strategic Compass.

Still in the defense field, Gabriella Perotto analyses “The Legal Framework of the EU Defence Industry and the Pursuit of Strategic Autonomy”, starting from the fact that national autonomy in the defence industry sector is often considered key by Member States to guarantee their national security interest. However, recent developments such as the Russian military aggression against Ukraine have brought the need for further integration in this domain into the spotlight. The aim of her contribution is therefore to analyse the EU legal framework of the defence industry through the prism of strategic autonomy, considering whether such deeply fragmented regulatory system is suitable for achieving this objective.

Moving away from the defense sector, one key sector of both ESA and ETS is space. In “EU space policy and strategic autonomy: tackling legal complexities in the enhancement of the ‘security and defense dimension of the Union in space’”, Chiara Cellerino
argues that EU space policy is an important field in the pursuit of EU strategic autonomy, both as regards the need to protect EU space infrastructures (and industry) from external threats and as regards the need to strengthen EU capacity to act in the space domain for security and defense purposes. However, some complexities exist in the governance of EU space policy, which may affect its ability to deliver in the above mentioned terms. Her paper gives account of recent practice and singles out the main developments which allowed the EU legal system to cope with the identified difficulties, in order to realize a shift from a purely scientific/commercial approach to space policy to a more strategic one, where security and defense interests of the EU and of the Member States are taken into account and possibly addressed.

In “Does the EU’s Digital Sovereignty promote localisation in its Model Digital Trade Clauses?”, Elaine Fahey brings us to the other key sector of data and digital sovereignty. She starts from the fact that the EU increasingly advocates a message of tech or digital sovereignty as its future, which appears to align closely with the concept of strategic autonomy. Arguably digital sovereignty has a highly differentiated understanding in the EU as opposed to the US or China. Increasingly, many suggest EU digital sovereignty in the era of the GDPR is a high protectionist idea. Yet, the EU has determined that external relations should not be at the cost of sacrificing EU data protection standards. Against this background, her piece therefore focuses on the concepts of localisation as a development of digital sovereignty in the EU’s international economic law trajectory.

Finally, Sabrina Robert Cuendet addresses the key sector of foreign investments. In “Foreign Investment Procedures as a Tool for Reinforcing EU Strategic Autonomy”, she focuses specifically on the EU Regulation 2019/452 establishing a framework for the screening of foreign direct investment into the Union has been met with many reservations. She argues that while it appeared that it was becoming crucial for the EU to adopt a screening instrument in order to protect essential European interests, the mechanism that came into force in the autumn of 2020 seems too modest, giving the Commission no decisive power. However, thanks to a succession of unprecedented global crises (economic crisis, COVID-19 crisis, Russian aggression against Ukraine) and the emergence of offensive strategies on the part of certain foreign investors, in particular Chinese investors, she shows how the European Commission has gradually strengthened the European FDI control mechanism. To her, the next step could be a reform of the system, which would formalize these transformations and would make the Commission the lead authority in the area of FDI control.

These eight contributions address, but do not exhaust, the research questions that are mentioned in the above Introduction: both editors of this Special Focus on ESA and ETS hope it shall pave the way for future research on the legal dimension of EU strategic autonomy and technological sovereignty.