



HAL
open science

Revisiting the EU Industrial Autonomy Trilemma

G rard Pogorel, Francesco Cappelletti

► **To cite this version:**

G rard Pogorel, Francesco Cappelletti. Revisiting the EU Industrial Autonomy Trilemma. European Liberal Forum. Sustainable? Competitive? The EU's Industrial Autonomy – Facts and Fantasies, pp.9-15, 2024, 2791-3899. 10.53121/ELFS7 . hal-04571370

HAL Id: hal-04571370

<https://hal.science/hal-04571370>

Submitted on 13 May 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destin e au d p t et   la diffusion de documents scientifiques de niveau recherche, publi s ou non,  manant des  tablissements d'enseignement et de recherche fran ais ou  trangers, des laboratoires publics ou priv s.

Public Domain

Revisiting the EU Industrial Autonomy Trilemma

G rard Pogorel and Francesco Cappelletti

<https://doi.org/10.53121/ELFS7> • ISSN (print) 2791-3880 • ISSN (online) 2791-3899

ABSTRACT

In addressing the EU's contemporary challenges, this analysis acknowledges a critical intersection between the imperatives of security, sustainability, and industrial autonomy. The EU undertakes substantial efforts in these domains. The rapidly shifting global context, its considerable volatility, and emerging trends render any immediate assessment of recent policy initiatives premature. However, this dynamic and uncertain landscape underscores the limitations of conventional forecasting and necessitates an ongoing reassessment of the EU's strategic priorities. Central to this discourse is the policy 'trilemma' confronting the Union: the need to simultaneously uphold security, foster sustainability, and maintain the focus on competitiveness. In this sense, industrial autonomy refers to the EU's strategic capacity to reinforce its industrial base and supply chains in key sectors, adapting swiftly to global economic and geopolitical shifts. This chapter explores these issues and proposes coherent changes in approach, all within the framework of an EU policy trilemma focusing on security, sustainability, and competitiveness.

ABOUT THE AUTHORS

G rard Pogorel is Professor of Economics Emeritus, Telecom Paris and Senior Fellow, ELF.

Francesco Cappelletti is Senior Policy and Research Officer, ELF and Researcher, Vrije Universiteit Brussels.

INTRODUCTION

The EU faces significant security and economic sustainability challenges as the 2024 European Parliament elections approach. Fundamental pillars of Union policies, such as competition policies, state aid provisions, and government restraint in industry interventions, and the strategic projection of the EU, are being questioned and reassessed. This critical re-evaluation presents an opportunity to realign these policies in a manner that addresses both the challenges of achieving industrial autonomy and the imperatives of sustainable development (Pogorel, 2022). The EU's current scenario highlights friction between sustainability and industrial autonomy imperatives, on the one hand, and grassroots industry innovation and competitiveness, on the other. Speaking plainly, the EU must balance environmental goals with maintaining a solid and innovative industry and open competition.

It should be emphasised that 'autonomy', in today's world, can only be partial, relative, and not absolute (Hackenbroich & Dullien, 2022). The availability of natural resources, path dependencies, deeply ingrained distinctive competencies, the benefits of international trade (which has been demonstrated to increase the purchasing power of citizens), and limited funding capacities all form a complex background against which industrial autonomy policies must be carefully selected and implemented. In other words, whether or not there are conditions of economic or political risk that generate uncertainty and competitiveness, flaws should be assessed. When we consider 'industrial autonomy', it is with this approach in mind.

Amid these challenges, the EU faces a changing global landscape. The two largest industrial powers, the United States and China, seem to have abandoned explicit reference to free trade. As the world changes rapidly, the EU must decide to what extent it will protect its industries, trade openly, and

respond to international pressures. We have already discussed the rise of digital strategic autonomy (Pogorel, Nestoras, & Cappelletti, 2022), its implications for the EU's industrial policy, and new forms of international cooperation that could redefine traditional trade and industrial relations (EPRS, 2022).

Major international partners are adopting protectionist measures, forcing the Union to make complex choices between maintaining friendships and its open trade stance on the one hand, and engaging in reciprocal tactics on the other. This evolving scenario necessitates extensive analysis and stakeholder consultations to navigate the high-level, conceptual policy issues that are intertwined with the continuously changing technological, industrial, and international environment while preserving the vital role of industry initiatives, implementing public rules and incentives when needed, and avoiding government overreach. This means creating supportive regulations and financial incentives for industries while ensuring the government does not excessively control or limit them.

The EU has made noteworthy progress with its 'green' initiatives, particularly the 'Fit for 55' legislative package, which includes substantial funding for the sustainable transition and regulatory reforms. These initiatives have sparked debates within the EU. Negotiations with global partners and allies in the 'friendship circle' – the United States, United Kingdom, Japan, Australia, South Korea, and Taiwan (EEAS, 2021) – are also needed to coordinate and mitigate potential trade and industry disruptions.

The challenge of green sustainability, particularly in the context of the EU's strategic autonomy, involves addressing energy production and consumption, securing access to mineral resources, and transitioning towards a more resilient EU industry structure and trade (Grohol & Veeh, 2023). This path to sustainable development will require an in-depth economic, industrial, social, and behavioural transformation that is more extensive than that of the internal market, the euro, or the fight against the COVID-19 pandemic.

This complex dynamic sets the stage for extensive discussions on policy and industrial aspects from the perspective of 2024 and beyond.

The volatility of the international context and the daily emergence of new considerations make future-proof forecasting a daunting task. Whatever the difficulties of the 'new normal', mixing market considerations and strategic moves in a somewhat game theory-like context, the competitiveness imperative should be constantly considered on an equal footing with the two other elements of the 'trilemma'. Losing sight of the aim of efficiently

and cost-effectively maintaining or building the EU industry's distinctive competitiveness would have a drastic negative effect on the EU economy.

The study explores various issues facing the EU in the light of these evolving situations. It examines common misconceptions, suggests realistic orientations, and proposes changes in approach, all within the framework of an EU policy trilemma and emphasising the indivisible imperatives: security, sustainability, and competitiveness. A baseline for the year 2024 is proposed here for the European Liberal Forum's (ELF) contribution, backed by insights from prominent experts.

TRILEMMA

The EU's challenges regarding industrial autonomy, security, sustainability, and competitiveness are significant and complex (see Figure 1). These issues, including the imperative of strategic sovereignty, will play an essential role in the 2024 European Parliament elections and the 2024–2029 legislature, reflecting the EU's security and economic sustainability considerations. Against this backdrop, Union competition policies, state aid provisions, and budgetary rules are being intensely questioned. Addressing these challenges will require a collective effort. In this context, industrial autonomy entails the Union's ability to independently regulate, produce, and innovate within its industrial sectors while responding to international economic pressures and opportunities.

The EU has taken significant steps towards combining trilemma imperatives. However, much work remains to be done to align sustainability policies, rules and incentives, and industrial strategies to ensure the soundness of funded projects and preserve the advantages of an open international economy, exposing the Union to drastic choices between its open trade orientations and tit-for-tat tactics. This highly complex area requires large-scale analysis and stakeholder consultations to inform decisions and put in place the necessary regulatory framework and incentives where needed while avoiding wasting resources.

Major background factors to be considered by the EU are the extent of China's tech ambitions and realities on the one side, subject to EU 'wisdom' assessment, and the United States' 'America first' policies on the other, against which the risks and the costs of European industrial autonomy are to be measured while ensuring that competitive, green, and sustainable policies are designed, as much as possible, within an international cooperation framework. The delicate balance between preserving an open global economy and responding to the China rivalry

Industrial autonomy trilemma:

The 'industrial autonomy trilemma' refers to the complex challenge of simultaneously achieving three interrelated and often competing objectives within the EU's industrial policy framework: security, sustainability, and competitiveness.

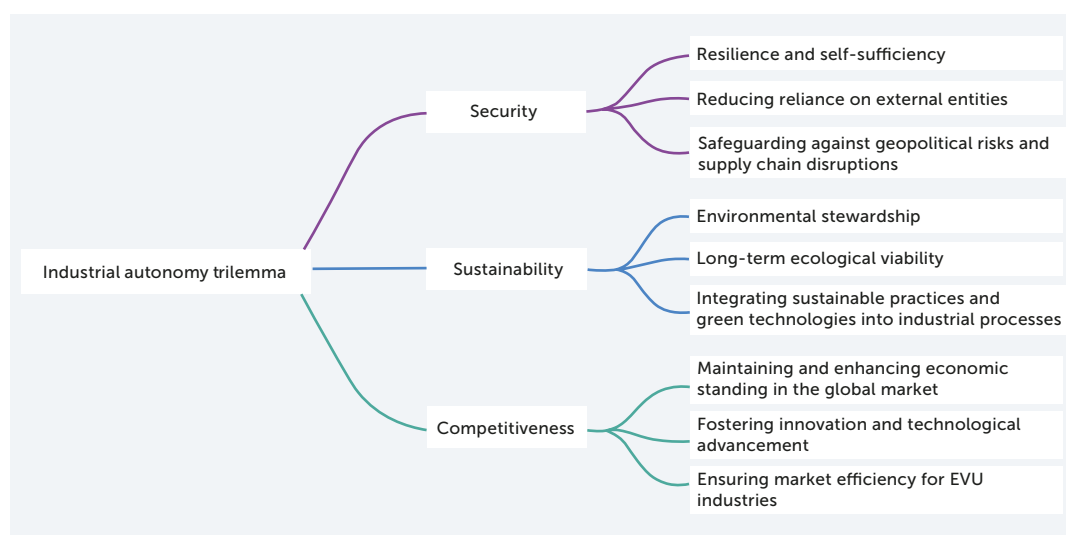
Security: This aspect emphasises the need for the EU to ensure resilience and self-sufficiency in its industrial sectors, reducing reliance on external entities and safeguarding against geopolitical risks and supply chain disruptions.

Sustainability: This dimension focuses on the commitment to environmental stewardship and long-term ecological viability. It involves integrating sustainable practices and green technologies into industrial processes, aligning with the EU's broader goals of reducing carbon emissions and promoting a green economy.

Competitiveness: This element underscores the importance of maintaining and enhancing the EU's economic standing in the global market. It involves fostering innovation, technological advancement, and market efficiency to ensure that EU industries remain dynamic and competitive on a global scale.

The industrial autonomy trilemma thus represents a strategic balancing act for the EU as it navigates the challenges of securing industrial autonomy without compromising environmental sustainability or global economic competitiveness.

FIGURE 1: The industrial autonomy trilemma for 2024 and beyond



Source: Authors' elaboration.

problem while promoting shared views among allies illustrates the intricacies of this task (Di Carlo, 2023). The EU's strategic approach, especially in terms of technology and trade, must be implemented carefully, with the onus on sticking to existing or realistically achievable distinctive competencies.

Policies should state the imperatives, provide fundamental incentives, refer to and rely on sound business practices, use standard exploratory and decision-making methodologies, and take

advantage of the resources of the European social model. This includes recognising the need for real-time monitoring of supported projects, maintaining strategic flexibility in the face of changing economic conditions, and avoiding the creation of extra layers of controlling bureaucracy with questionable legitimacy. Despite the heightened complexity and uncertainties of the international environment, due to recent geopolitical shifts and their effects on the energy sector, businesses,

consumers, and the market, Europe's policymakers have shown an ability to cope successfully and swiftly with difficulties.

Digital technologies and artificial intelligence (AI) can help define a sustainable development path, but their carbon footprint must be addressed (see the chapter by Heather Johnson and Gabriel Solomon in this study). The rapid increase in the carbon footprint of digital technologies, growing by 6.7 per cent per year, highlights the urgency of aligning sustainability policies with industrial strategies, especially in sectors such as transport, industry, housing, and energy production (Shen, Yang, & Zhang, 2023).

THE INDUSTRIAL AUTONOMY TRILEMMA TRANSITION PROCESSES

In response to these evolving dynamics, the EU faces critical challenges that require strategic foresight and innovative policy solutions.

1. Given the hard choices and inevitable tensions involved, enhancing the EU's institutional capacity and institutional resilience is crucial for transitioning towards a market-based sustainable economy.
2. The Union must adeptly navigate and manage the dichotomy of radical and conservative forces, ensuring sustainable policy development that balances diverse stakeholder interests and makes possible long-term strategies.
3. Leveraging financial resources to promote green investments and industries is pivotal, including focusing on green financing investment strategies and fostering combined public and industry synergies for sustainable development.
4. Implementing ex ante monitoring will ensure that industrial policy initiatives remain relevant and flexible and contribute significantly to sustainable goals. This necessitates developing sustainability indicators and best practices in project evaluation and adaptive management.
5. The digital transformation, supported by low-carbon technologies and eco-innovation, must be strengthened, especially in counterbalancing carbon-intensive sectors and bolstering sustainable development.
6. Addressing workforce transitions through reskilling and upskilling initiatives is vital to ensure sustainable development within the European social model. This requires real-time analysis and decision-making, underpinned by robust public-private partnerships and multi-stakeholder collaboration.
7. The EU needs to focus on preserving the benefits of an open international economy while decoupling from unsustainable practices. This involves sustainable trade policies and international cooperation

to promote the circular economy and enhance resource efficiency and competitiveness within global value chains.

It is essential to implement systems to monitor and guide industrial and sustainable projects from the beginning to ensure their relevance and adaptability to changing conditions while contributing to environmental goals. This requires proactive ex ante monitoring mechanisms to keep industrial initiatives flexible, relevant, and aligned with sustainability objectives. This mechanism implies thinking of a new role for the European Parliament (EP) in both crafting smart policies and monitoring legislation, with the aim of taking into account the feasibility and implementation of the trilemma challenges. This will ensure that investments and policies continuously drive towards the desired outcomes, even as conditions and needs evolve.

Additionally, adopting adaptive industry ecosystems powered by AI and data analytics is now essential to facilitate this process (Vinueza et al., 2020). These ecosystems use the latest technology and data insights to create a responsive and flexible industrial environment. They can anticipate changes, optimise resource allocation, and facilitate rapid adaptation to new challenges and opportunities. By embracing these adaptive ecosystems, the EU can foster a more resilient and dynamic industrial sector that will maintain competitiveness and sustainability in the face of global shifts and technological advancements. This will require personnel in policy circles to be adequately trained to understand traditional politics and data analytics. Overall, policymakers' job is becoming increasingly difficult.

These approaches represent a shift towards more dynamic and responsive policymaking and industrial strategy. They will ensure that the EU addresses current challenges and is well positioned to capitalise on future opportunities and mitigate emerging risks.

IMPLEMENTING THE STRATEGIC POLICY TRILEMMA

As the EU strives towards these goals while facing an increasingly complex environment, the ELF is staying abreast of current and future developments and contributing actively to policy debates.

The EU has earmarked considerable funds and is undertaking 360° initiatives for the trilemma-inspired transition. An intricate machinery of international relations and negotiations with its major international partners – the United States, United Kingdom, Japan, Australia, New Zealand, South Korea, and Taiwan – is in motion, shaping the EU's

path towards sustainable development and industrial autonomy, and coordinating efforts to avoid significant trade disruptions and harmonise green industry strategies.

In conclusion, the EU's pursuit of security, sustainability, and competitiveness is a trilemma, combining these imperatives in a dynamic and interconnected world. The forthcoming European elections and 2024–2029 legislature will shape the future of these critical policies, reflecting the collective will and effort of all Member States.

CONCLUSIONS: THE ROLE OF THE EUROPEAN PARLIAMENT

As we approach the concluding remarks, it is essential to reflect on the interconnectedness of the themes discussed here, gathering insights and formulating recommendations that resonate with the overarching goal of strategic, sustainable, and competitive EU autonomy. Reflecting on industrial autonomy as defined above, the EU must continuously adapt its strategic approach to ensure a resilient, sustainable, and competitive industrial base (see Figure 2).

Sovereignty and autonomy are complex concepts that cannot be defined in absolute terms. Industrial autonomy involving a complete decoupling from China would be incredibly costly and significantly impact purchasing power in Western countries. However, progress can be made through a 'wisdom-based' assessment to achieve a balance that de-risks and diversifies specific industries. Reasoned bets will need to be placed on China as a rational actor aware of its interdependencies. Standard exploratory and decision-making methodologies are not a magic bullet, but they should not be discarded and can provide insights and help achieve comprehensive and consistent views. Policies must be filtered through the industrial autonomy trilemma of security, sustainability, and competitiveness.

Achieving more industrial self-sufficiency where it is vitally needed while prioritising sustainability in the EU is a complex challenge that requires balancing security, sustainability, and competitiveness. These three elements are critical factors that must be considered when evaluating and shaping the EU's policies and initiatives. Moreover, the elements of the trilemma are not just strategic choices but essential considerations that need to be balanced for the EU's overall growth and stability.

Security ensures that European industries remain resilient and independent, sustainability commits to long-term ecological and economic health, while competitiveness guarantees the EU's dynamic

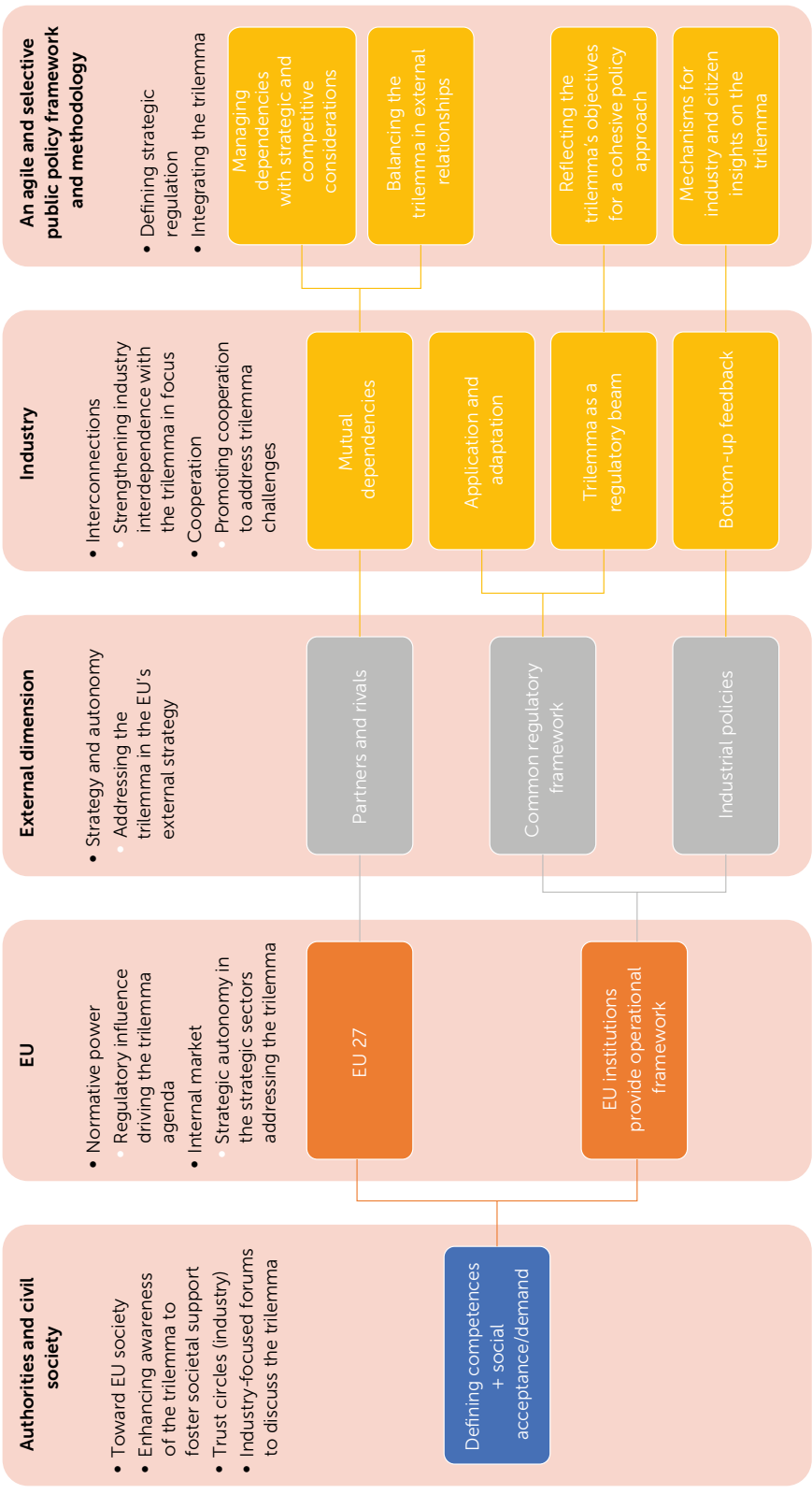
presence in the global economy. These factors are not just strategic choices but necessities for the overall development of the EU. As the Union moves forward, it is essential to integrate these aspects into a comprehensive policy framework.

The EP's role in defining and overseeing regulations that lead to strategic autonomy is integral to achieving smart and sustainable policies in the EU. The EP's engagement is crucial in assessing interactions among authorities, civil society, and industry, exploring innovative regulatory sandboxes, addressing regulatory taxonomy, and investigating stakeholder roles in agile policymaking. As it navigates the trilemma, the EP must ensure that policies are robust, dynamic, and inclusive, contributing to a competitive and resilient European market. By fostering dialogue and collaboration among Member States and stakeholders, the EP upholds its commitment to strategic sovereignty, driving the Union towards a sustainable, competitive, and secure future.

RECOMMENDATIONS

- 1. Integrated policy framework:** Implement an integrated policy approach that harmonises security, sustainability, and competitiveness, ensuring coherent and effective industrial strategy over time within the EU.
- 2. Sustainable technological advancement:** Prioritise and incentivise investments in sustainable and digital technologies, fostering innovation that aligns with green economy goals while enhancing global competitiveness.
- 3. Strategic international alliances:** Strengthen international alliances for synchronised sustainable development efforts and effective management of global trade dynamics.
- 4. Synchronisation and synergy of public policies and industry strategies:** Mobilise resources for research in sustainable industrial practices, emphasising green investments and innovation.
- 5. Adaptive monitoring mechanisms:** Implement dynamic monitoring systems for industrial projects using AI and data analytics, ensuring adaptability to economic shifts and alignment with sustainability objectives.
- 6. Future-oriented workforce development:** Invest significantly in workforce transition strategies focused on skills for emerging green and digital sectors, essential for future labour market demands.
- 7. Sustainable trade policy design:** Craft trade policies that balance industrial autonomy with sustainable practices, reducing reliance on unsustainable resources and practices.
- 8. Inclusive stakeholder dialogue:** Foster inclusive policy development through comprehensive stake-

FIGURE 2: The EU dimensions of strategic autonomy (updated with trilemma).



Source: Pogorel et al., 2022.

holder engagement, ensuring diverse perspectives across the EU.

9. Data-driven policymaking: Emphasise the role of real-time data analytics in informing and adapting policy decisions to the evolving global economic and environmental contexts.

10. Renewed role for the EP: The EP of 2024 is in a delicate and important position. A renewed role will enhance its means of monitoring policies (and budgets) with a bottom-up approach that includes industry perspectives. This is imperative given the importance of future regulations for the EU's industry.

REFERENCES

- Di Carlo, I. (ed.) (2023). 'EU–China Relations at a Crossroads, Vol. 2: Decoding Complexity, Mitigating Risk'. European Policy Centre. https://www.epc.eu/content/PDF/2023/EU-China_TT_Compedium_2023_Final.pdf.
- EEAS (European External Action Service). (2021). 'The European Union and Taiwan: An Overview of the Bilateral Relations between the EU and Taiwan'. Press and Information Team of the Delegation to Taiwan, 26 July. https://www.eeas.europa.eu/delegations/taiwan/european-union-and-taiwan_en?s=242#2849.
- EPRS (European Parliament Research Service). (2022). 'Belt and Road Initiative (BRI) and EU–China Relations'. European Parliament Think Tank. [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2022\)733589](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2022)733589).
- Grohol, M., & Veeh, C. (2023). 'Study on the Critical Raw Materials for the EU 2023 – Final Report'. Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (European Commission). European Union Publications Office. <https://doi.org/10.2873/725585>.
- Hackenbroich, J., & Dullien, S. (2022). 'European Industrial Policy: A Crucial Element of Strategic Autonomy'. Foundation for European Progressive Studies, 19 May. <https://feeps-europe.eu/publication/european-industrial-policy-a-crucial-element-of-strategic-autonomy/>.
- Pogorel, G. (2022). 'EU Strategic Autonomy: Industry Implications in the Changing World Trade Order'. *Future Europe Journal*, 21 February. <https://feu-journal.eu/issues/issue-1/eu-strategic-autonomy-industry-implications-in-the-changing-world-trade-order/>.
- Pogorel, G., Nestoras, A., & Cappelletti, F. (eds.) (2022). 'Strategic Digital Autonomy'. ELF Techno-Politics Series, Brussels. <https://liberalforum.eu/publications/technopolitics/>.
- Shen, Y., Yang, Z., & Zhang, X. (2023). 'Impact of Digital Technology on Carbon Emissions: Evidence from Chinese Cities'. *Frontiers in Ecology and Evolution*, 11, 1166376. <https://doi.org/10.3389/fevo.2023.1166376>.
- Vinuesa, R., Azizpour, H., Leite, I. et al. (2020). 'The Role of Artificial Intelligence in Achieving the Sustainable Development Goals'. *Nature Communications*, 11, 233. <https://doi.org/10.1038/s41467-019-14108-y>.