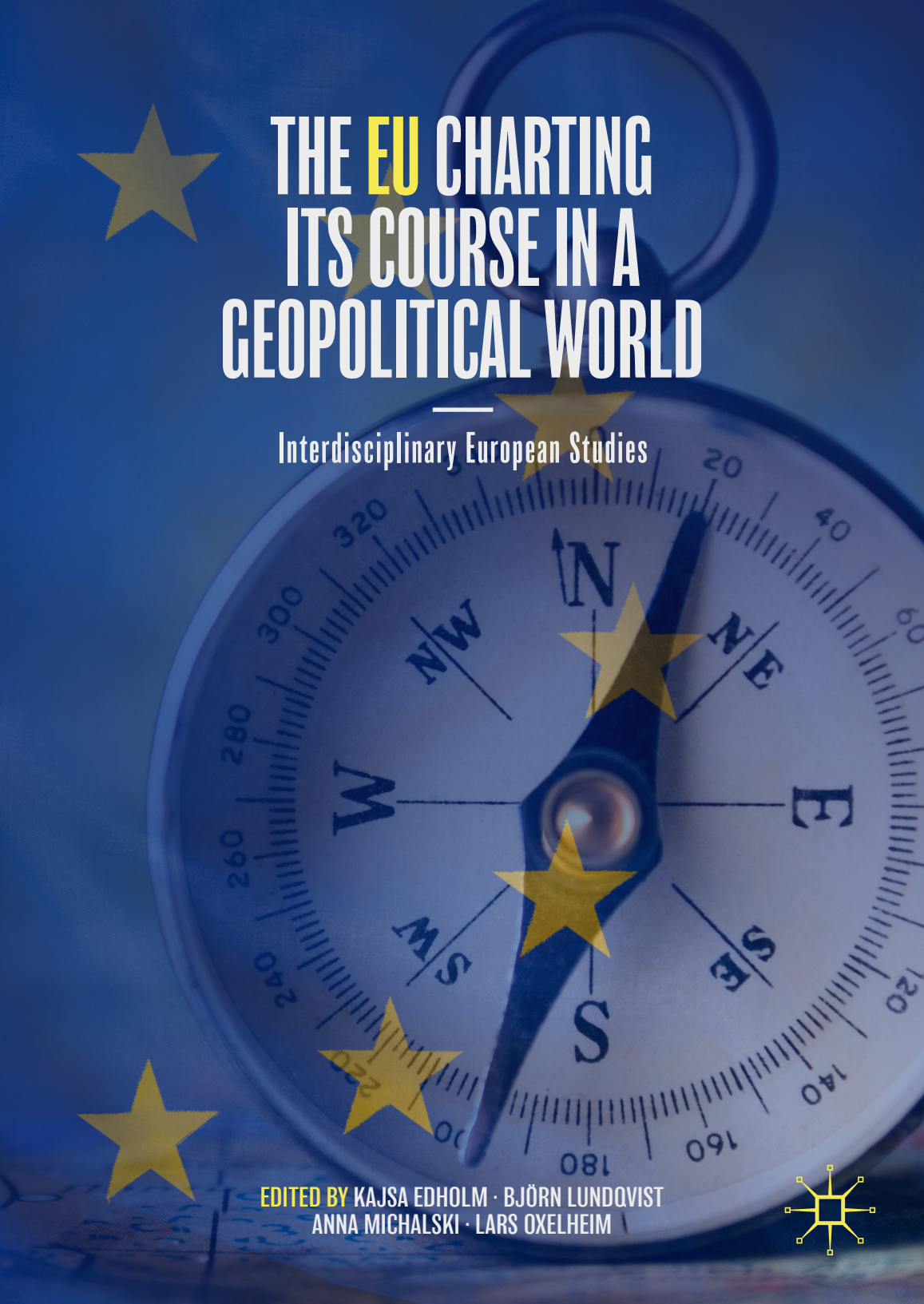




THE **EU** CHARTING ITS COURSE IN A GEOPOLITICAL WORLD

Interdisciplinary European Studies

EDITED BY KAJSA EDHOLM · BJÖRN LUNDQVIST
ANNA MICHALSKI · LARS OXELHEIM



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Kajsa Edholm • Björn Lundqvist
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CONTENTS

1	The Geopolitical Shift and the Challenge to European Integration	1
	Kajsa Edholm, Björn Lundqvist, Anna Michalski, and Lars Oxelheim	
2	The Significance of the EU's Market Power in a Geopolitical World	25
	Johannes Jarlebring	
3	Carrots and Sticks: Can the EU Balance Trade and Security in a Geoeconomic Order?	49
	Hannes Lenk	
4	Can There Be Effective Industrial Policy on the EU Internal Market? The Role of Law in a Time of Geopolitical Competition	77
	Love Rönnelid	
5	Is Green Industrial Policy the Right Choice for the EU?	101
	Christian Sandström and Mikael Stenkula	
6	The European Union's Evolving Defence-Industrial Policy: Drivers and Future Challenges	131
	Calle Håkansson	

7	European Strategic Autonomy in the Field of Defence: Reconfiguration of Military Supply Chains Following Russia's Full-Scale Invasion of Ukraine in 2022	151
	Martin Lundmark	
8	Health and Security: New Perspectives on the EU's Internal and External Action	179
	Louise Bengtsson	
9	Navigating the EU Climate and Biodiversity Policy Agenda in a Geopolitical Unstable World	203
	Susanne Arvidsson	
10	The EU's Renewed Interest in Resource Use: Geopolitical Aspects of Security and the Environment	233
	Åsa Romson	
11	Avoiding Pitfalls and Solving Dilemmas: The EU Chartering Its Course in a Geopolitical World	259
	Kajsa Edholm, Björn Lundqvist, Anna Michalski, and Lars Oxelheim	
	Index	279

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CHAPTER 1

The Geopolitical Shift and the Challenge to European Integration

*Kajsa Edholm, Björn Lundqvist, Anna Michalski,
and Lars Oxelheim*

INTRODUCTION

The international system is being recast, and the consequences of this transformation are now felt throughout the world (Ikenberry, 2011, 2024; IO, 2021; Mearsheimer, 2018; Mérand, 2020). For the European Union (EU), an increasingly geopolitically oriented world presents major challenges that have repercussions for its security, competitiveness, green transition, and international status (Costa et al., 2025; Fägersten, 2020; Jørgensen et al., 2025). These challenges emanate from state actors in the

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EU's neighbourhood and from much further afield, and include both traditional allies and hostile powers. The emerging geopolitical framework is rooted in an adversarial *modus operandi*, according to which states prioritise the preservation of their own regime's dominance and national interests—even when such pursuits undermine the long-term stability of the international system itself. As a consequence, policies and action are geared towards leveraging vulnerabilities and dependencies of others in a zero-sum game that leads to insecurity, transactionalism, and, ultimately, a loss of competitiveness (Farrell & Newman, 2019).

By the mid-2020s, the geopolitical world order had reshaped patterns of globalisation—initially disrupted during the 2019–2021 pandemic and subsequently driven by intensifying disputes over the principles of global governance. These shifts have undermined the international community's capacity to address persistent challenges such as unsustainable and uneven socio-economic global development, as well as the escalating threat of climate change (Aiyar et al., 2023; Goldberg & Reed, 2023). Another hallmark of geopolitics is the return of mercantilism, albeit in a new guise, as a central principle of the international political economy (Ghauri et al., 2024). Rooted in the concept of relative gains—where one state's advantage is perceived as another's loss—geoeconomics has changed the rationale of international cooperation, rendering the pursuit of absolute gains elusive and fostering growing mistrust among nations. In this context, contemporary international politics is increasingly characterised by the growing rivalry between great powers, chiefly the US and China, driven by their competition over the control of raw materials, technology, and global market shares. Great-power struggle and the quest for perceived legitimate control over territory shape the contours of international security—manifesting in heightened instability, shifting alliances, and overt military confrontations across the globe. Although never perfectly implemented, the principles underpinning the international rule of law are now being routinely violated—not only by its critics but also by those who claim to uphold it. Subsequently, geopolitics has resulted in the loss of authority of many international organisations and eroded their capacity to uphold global rules and universal norms—a trend that intensified and evolved while taking new forms ever since the US took concrete steps to withdraw from, or defund, a number of international organisations. The consequences of changing global economic patterns can be discerned in *friend-shoring*, alluding to a trend of trading with states close to oneself rather than those far away, as well as with those which share the same principles

and values. In Europe, friendshoring can be seen in the EU's attempts to strengthen its ties to countries around the world by concluding agreements pursued under the banner of open plurilateralism. As a strategy, it relates to various agreements on trade and investment being negotiated and concluded between the EU and countries in its neighbourhood as well as with like-minded partners in other parts of the world. Efforts to finalise regional and bilateral trade agreements have accelerated following President Trump's 'Liberation Day' declaration in April 2025, which plunged international trade into disarray by imposing steep and uneven tariffs on allies, neighbouring states, rivals, and adversaries alike (Hurlburt, 2025).

In order to meet this dizzying array of challenges, the EU has launched a series of strategies and initiatives in the area of trade and economic affairs, while at the same time demonstrating a degree of indecisiveness as to when and how to deploy them (Eliasson & Garica-Duran, 2025; Starcevic, 2025). Many of these instruments and initiatives were launched with the explicit aim of strengthening European economic competitiveness by defending the European internal market. In the area of security, the EU and its Member States have in a similar manner taken a number of measures to bolster European defence capabilities and resources by, for instance, better coordinating Member States' purchases of military equipment and promoting the joint development of weapons systems. Many of these measures have resulted in an increase of power for the European Commission, but at the same time, their implementation has largely remained a national concern (Höra & Weiss, 2024). The EU's strategies thus exhibit somewhat conflicting patterns and political unity cannot be taken for granted either in the case of trade disputes and economic coercion or in the war in Ukraine and its efforts to ensure a continued American involvement in Europe's security. The patchy policy development begs the question whether the EU is equipped to defend its interests and promote a development of the international system in line with its values and ambitions in a world of power politics and great-power competition. It further raises the critical question whether the EU Member States possess both the capacity and the political will to forge sufficient unity and effectively mobilise the resources at their disposal. In the ninth volume of *Interdisciplinary European Studies*, we explore some of the most important choices facing the EU when staking out its course in response to the geopolitical challenges of the 2020s along with the steps that have been taken to alleviate their consequences. More precisely, we examine the

implications of the strategic and economic decisions taken thus far, as well as critically assess the EU's ability to maintain an ambitious environmental policy and implement the transition to a green economy. Before presenting the content in the individual chapters in this book, the present chapter will set the stage for the ongoing transformation of the global order by looking back at the origins of geopolitics. It goes on to highlight the growing vulnerabilities of the EU and the responses that it has mustered so far to address the adverse effects of a geopolitically driven international system.

FROM GEOPOLITICS TO LIBERAL MULTILATERALISM, AND THE RETURN TO GREAT-POWER POLITICS

Since the mid-2010s, the international system has undergone a profound shift away from the liberal world order towards an alternative order based on great-power politics, territorial expansion, and the use of chokepoints, for instance natural resources, to wield political power. This notion of a geopolitical world order originated as a strand in philosophy around the early 1900s, when political science and geography were merged into theories of the state's need for territory (for a review, see Kristof, 1960). However, classical geopolitics was discredited during World War II due to its association with the then Nazi regime's adoption of the notion of *Lebensraum*, resulting in Germany's warfare and revanchist policies. In the aftermath of the war, democracy and market economy were strengthened in Western Europe based on liberal ideas, and West European countries were brought into the liberal world order, with the US as its forerunner and leader. Even though the liberal world order during the Cold War involved some intense power politics and biases, seen for instance in the stand-off between NATO and the Warsaw Pact and a distinct Western-centred worldview, it was also characterised by economic liberalism, which led to increased free trade and favoured the establishment of international financial institutions, the so-called Bretton Woods institutions (Ikenberry, 2018; Nye, 2019). When talking about the return of geopolitics in the mid-2020s, it is primarily in contrast with the liberal world order that emerged after the fall of the Berlin Wall in 1989, built on globalisation, the diffusion of liberal norms, and multilateral cooperation within the framework of a rules-based international system. There is a fundamental difference between liberal institutionalism and geopolitics pertaining to

their contending views on the consequences of interdependence between states (Mérand & Pouliot, 2020; Ikenberry, 2025). From a liberal perspective, interdependence among states fosters cooperation for mutual benefit, primarily through expanded economic exchanges grounded in credible commitments and institutionalised mechanisms for resolving conflicts. This creates a virtuous circle, which in turn leads to enhanced cooperation and increased trust. According to the geopolitical view, however, interdependence is not permanent and results in vulnerabilities that can be exploited by competitors and hostile actors. A vicious circle arises that leads to distrust and the emergence of competing spheres of influence and alliances. Traditionally, geopolitics was seen as being primarily about military resources which could be deployed to achieve strategic goals. However, in the evolving post-liberal world order, geoeconomic instruments of power have increasingly come to the fore as tools for influence and control (Luttwak, 1990; Blackwill & Harris, 2017; Mattlin & Wigell, 2016).

The return of geopolitics presents two opposing trends. One is the weakening of the rules-based international system, particularly a lack of respect for international law, the repudiation of universal norms and values, in particular human rights and international rule of law, and the weakening of international organisations driven by states' non-compliance with international norms and rules and failure to honour the commitments taken upon becoming a member of an organisation. The second trend is the return of power politics, great-power rivalry, and ambitious strategies concerning spheres of legitimate territorial possession, which in Europe have resulted in the first outright war of invasion since World War II when Russia invaded Ukraine in 2022 with the explicit aim of restoring the boundaries of the former Soviet Union. For the EU, which sees itself as both a creation and a protector of the liberal world order, the trend towards a geopolitical world order is difficult to come to grips with because it runs counter to many of the principles underlying the European integration process, such as rule of law, rules-based governance, and liberal values and freedoms (Gehrke, 2022; Haroche, 2024). Spearheaded by the European Commission, the EU's institutions have thus far responded to the challenges of geopolitics primarily with economic measures and instruments (Wigell & Vihma, 2016; Jerzyniak & Herranz-Surrallés, 2024; Herranz-Surrallés et al., 2024). Yet, as security challenges have intensified and security threats have increased—military as well as non-military in the form of cyber-attacks, the sabotage of critical infrastructure, the

destabilisation of societal functions, and disinformation—the EU’s role within the area of security and defence has been strengthened and its competences enlarged.

THE EU’S HEIGHTENED VULNERABILITY

Since the 2010s, geopolitical threats and challenges have been piling up on Europe’s doorstep (Anghel, 2025). During the COVID-19 pandemic, the EU’s vulnerabilities in terms of supply of raw materials and dependence on reliable value chains and transport systems for its industries became apparent. In particular, China’s action to disrupt the supply of medical equipment and essential substances for the production of drugs highlighted the vulnerability of chains of production (Ross Smith & Fallon, 2020). Moreover, the diplomacy of gifting in exchange for loyalty and political support was apparent in China’s relations to certain European countries with close links to China, primarily Hungary and Italy, when in the early stages of the pandemic Chinese-produced personal protection equipment and field hospitals were offered as part of China’s soft power diplomacy (Boni, 2023). The extent of some EU Member States’ dependence on Russian fossil fuels for their energy needs was dramatically exposed in the wake of the unlawful war of aggression against Ukraine as Russia severely curtailed the delivery of gas and oil to Europe in retaliation for giving aid to Ukraine. These actions, taken in the context of heightened security threats in Europe, exposed the risks of asymmetric dependence on Russian raw materials and amounted to a brutal awakening for those who had downplayed such risks prior to the invasion of Ukraine (van der Graaf, 2023). China’s increasingly self-assured conduct and disregard for international norms and rules have put the risks of asymmetric dependencies in the spotlight, not least as China controls the supply and production of many strategic raw materials, including rare earth metals, as well as certain technologies where China has become a world leader (Kalantzakos, 2020; Seaman et al., 2022). China’s recurring refusal to supply rare earth metals and strategic goods needed in the manufacturing of a variety of products ranging from batteries to magnets and chips used in electric cars and the production of arms highlights the risks of chokepoints that can be weaponised for leverage in trade wars and other conflicts (Hu & Tang, 2025). This type of geoeconomic threat and the challenges posed by authoritarian states are well known and often highlighted in the debate, although their repercussions were long played down for economic and

political reasons. In the mid-2020s, however, it has become an oversimplification to paint the world in terms of a battle between democracies and autocracies. This is so not least given the presence of authoritarian-leaning political leaders in states in Europe and America, whose political systems are, at least nominally, democratic and who do not refrain from adopting power-based politics.

Since Donald Trump's re-election as president of the US in November 2024, the upheaval of the international system has intensified, and from a European perspective taken a more sinister turn. The return of Trump as US President meant that Europe was no longer able to count on US support to halt the weakening of the international rules-based system and the disruption to international trade. Perhaps even more destabilising for Europe are the wavering commitment of the US to contribute to peace in Europe within the context of NATO and close personal contacts with the Russian president. Yet, European leaders were not wholly unprepared, as during Donald Trump's first term of office (2017–2021), the EU often came under fire for its trade surplus with the US, and in 2018 punitive tariffs were imposed on European imports of steel and aluminium (Stelzenmüller, 2019). Trump also sharply criticised the European NATO countries for failing to meet their financial obligations in the defence of Europe (Knutsen, 2022). Therefore, based on the experiences of the first Trump administration, the EU institutions and a majority of Member States anticipated the second administration with a degree of trepidation. Since coming to power, Donald Trump has shown little regard for traditional allies in Europe by excluding them from talks with the Russian leadership despite their shouldering of the lion's share of the financial support to Ukraine. The Trump administration also forced the EU to conclude an unbalanced economic agreement in July 2025 based on unilateral tariffs of 15 percent on European goods and a promise to buy American military equipment with little in return from the American side. Jarringly, the trade agreement came on the heels of a NATO summit in June 2025 when the European members had to pledge an increase in national defence spending of 5 percent of GDP after thinly veiled threats of American disengagement in Europe should they not agree to shoulder the main burden of the defence of Europe in NATO (Swanson et al., 2025; Cienski, 2025).

AN EVOLVING EUROPEAN RESPONSE TO A GEOPOLITICAL WORLD

In a speech to the European Parliament in November 2019, the newly appointed President of the European Commission, Ursula von der Leyen, introduced the notion of a geopolitical Commission, prepared to defend Europe's interests in a world increasingly characterised by power politics (von der Leyen, 2019). Efforts to strengthen the EU's capacity to respond to geopolitical threats have accelerated since then, with a number of new policy instruments and initiatives adopted to defend the competitiveness of European companies in the single market. In 2023, the European Commission brought these initiatives together under the umbrella of the European Economic Security Strategy (European Commission & EEAS, 2023), which aims to enhance the EU's economic security while maintaining openness in trade and welcoming investment and innovation to support Europe's economy (European Commission & EEAS, 2023). Other aspects of the European Economic Security Strategy include a concerted effort to break Europe's vulnerabilities in areas connected to strategic raw materials and seek the support of like-minded states to bolster the rules-based international system through regional association and free trade agreements. In a speech in May 2023, von der Leyen signalled that the EU did not wish to break economic ties with China through *decoupling*—breaking-off trade relations across the board, as was advocated by the US at the time—but instead introduced a strategy of *de-risking*, taking action to avoid dependencies in critically important raw materials and goods (von der Leyen, 2023a). In the State of the Union address in September the same year, von der Leyen reconfirmed her view that Europe should step up on economic security 'by de-risking and not decoupling' (von der Leyen, 2023b).

Nevertheless, since 2022, the European economy's competitiveness has steadily deteriorated compared with that of the US. In terms of GDP, the real growth rate in the EU was 3.5 percent in 2022, 0.4 percent in 2023, and 1.1 percent in 2024, while in the US, GDP grew in real terms by 2.5 percent in 2022, 2.9 percent in 2023, and 2.8 percent in 2024 (OECD, 2025). In addition, labour productivity per hour worked in the EU has stagnated. It declined by 0.6 percent in 2023, followed by an increase of 0.4 percent in 2024 (Eurostat, 2025a). In the same period, labour productivity in the US (non-farm sector) experienced an increase of 1.8 percent in 2023 and 2.8 percent in 2024 (U.S. Bureau of Labor Statistics,

2025). There are multiple reasons for the deteriorating outlook for economic development in Europe, but many point to a partial explanation being the huge industrial subsidy package in the US—the *Inflation Reduction Act*—introduced in 2022 under Joe Biden’s term in office, but which has been largely discontinued under Donald Trump. Other possible explanations are the advance that the US has over Europe in the area of AI technology and the exceptional growth in market value of US software and digital platform companies such as Alphabet (Google), Apple, Meta (Facebook), Amazon, and Microsoft (for an overview, see EIB, 2024). Meanwhile, Chinese industrial production has continued unabated, partly driven by robotisation and automatisisation encouraged by the Chinese state through a favourable regulatory environment and state subsidies. Chinese subsidies on national and regional levels to domestic production have led to overproduction within a multitude of sectors ranging from labour-intensive consumer goods, such as textiles, home appliances, to construction materials, such as steel and aluminium, and food, medicine, cement, glass, machinery, and transportation equipment, including electric vehicles (Gunter et al., 2025). Overproduction has led to certain export goods being dumped on foreign markets as weak domestic demand means that these products cannot be sold in the Chinese market (García-Herrero & Xu, 2025). Since the COVID-19 pandemic, electric vehicles, steel, and other technology products manufactured in China have been sold at discounted prices on the European market, contributing to the EU’s large trade deficit with China, just below EUR 400 billion in 2022, falling slightly to EUR 291 billion in 2023 and remaining at a similar level in 2024 (Eurostat, 2025b).

Another consequence of the rising geopolitical tensions is that it has become increasingly difficult to distinguish between security threats and economic risks, and thus to prioritise among seemingly opposing objectives, such as open free trade, the protection of domestic industries, and the need to maintain security. In the mid-2020s, the push and pulls of various concerns are very evident in the EU’s response to China’s political and economic support to Russia. Despite the fact that the increase in bilateral trade between Russia and China reduces the effectiveness of Western sanctions, Europe has been careful not to further deteriorate trade relations with China, although the trade in dual-use goods and technology has put pressure on Western state actors to prevent exports to China from falling into Russian hands. Without a doubt, Chinese support for Russia, and China’s refusal to condemn Russia’s acts of war, poses a strategic

dilemma for the EU, which has thus far responded with only limited sanctions on Chinese economic entities that can scarcely be expected to induce China to change its behaviour (European Commission, [2024](#)).

WHAT CHOICES DOES THE EU HAVE IN A GEOPOLITICISED WORLD?

At the time of Russia's invasion of Ukraine, the EU's leaders were concerned about the growing rivalry between the US and China. The war in Ukraine has for sure exacerbated the security situation for European countries, and military as well as non-military threats have worsened. Undeniably, the geopolitical threat of a revanchist Russia in the EU's neighbourhood and Russia's 'no-limits friendship' with China have redrawn Europe's strategic map. In response, the European arm of NATO was expanded in 2023 and 2024 to include Finland and Sweden as members. European countries' military and financial support to the Ukrainian war effort has also led to cooperation within the defence industry area growing ever stronger in the EU in order to provide Ukraine with weapons and ammunition, but also to rearm the EU Member States' own defences and to enhance their defence capabilities.

Despite the resolve of EU Member States and institutions to step up their response to a wide variety of diplomatic, economic, and military threats, the scale and nature of these challenges engender a variety of dilemmas grounded in a complex web of dependencies threatening European societies and economies. How can the EU, given its dependence on the supply of raw materials, technological development, and imports of goods from China in green technologies, such as solar energy production and battery manufacture, prevent its green transition from being hampered, while making Europe less vulnerable to potential supply shocks? Europe's competitiveness is at stake, but even so, entrenched patterns of trade and production are hard to dislodge. To protect domestic production by imposing tariffs on Chinese goods, for example, risks proving costly for European consumers and undermining the green transition (Glencross, [2024](#)). Moreover, some industries in Europe, such as the German automotive industry, which have been dependent on the Chinese market for some time despite China still not providing a level playing field for foreign actors in its domestic market, have been reluctant to let go of the Chinese market. Because of the significance of the Chinese market for

German car manufacturers and other export-dependent industries in Europe, there has been opposition to the EU using trade defence instruments in view of the dumping of Chinese goods. In addition, it has been hard to formulate an effective response to long-standing anti-competitive measures in force on the Chinese markets, which instead of abating have grown more stringent, for example, forced technology and data transfer requirements on foreign actors, and strict internal security provisions (Drinhausen & Lagarda, 2022; ECCC, 2024). Likewise, an increasingly nationalistic American economic policy—America first—disadvantages European trade directly, not least through tariffs, and impacts negatively on European competitiveness.

This ninth edition of *Interdisciplinary European Studies* assesses whether the EU's policy choices and expanded powers are sufficient to respond to a changed geopolitical landscape. What do joint investments in critical cutting-edge technology mean for the EU's resilience and competitiveness? Is the EU's Foreign Direct Investment (FDI) policy, and its more robust instruments for screening FDIs, sufficient and how have they been implemented by the Member States? How is the EU's pursuit of strategic autonomy helping to reduce vulnerabilities and improve supply capacity in a large number of areas, including European public health? Can the EU work towards setting a common price for environmentally hazardous emissions and waste to accelerate the green transition globally? What should be done to support the industrial sector in adapting to new rules and instruments in the European Green Deal? To what extent are EU carbon border tariffs necessary for the green transition, and how will they affect the EU's trade relations? Will the EU's initiative in defence industry policy deliver enhanced military capabilities at a lower cost? Could improving resource management be a way out of Europe's geopolitical dilemma? These and other questions are discussed by researchers in economics, law, and political science in the chapters of this book.

In Chap. 2, *Johannes Jarlebring* discusses how best to understand the EU's market power in a geopolitical environment. The chapter questions the widely held belief that the EU has made a complete geopolitical pivot in the past few years and is now on the verge of becoming a global power player. Jarlebring warns that this belief could lead to an erroneous interpretation of the EU's role in the world and ultimately to ill-considered policy choices. The chapter's interpretation is that the EU is in fact utilising its market and regulatory apparatus to push back against the geopolitisation of the world, without itself becoming a geopolitical power player.

The chapter gives a general account of the theoretical and empirical underpinnings of this interpretation. In particular, Jarlebring points out that the instruments usually advanced as evidence of the EU's geopolitical pivot, such as the new Anti-Coercion Instrument, are relatively weak and underdeveloped. At the same time, the new instruments with which the EU is externalising its internal regulatory regime, such as the EU's new AI law, are much more developed. Thus, Jarlebring argues, there is significant continuity in the EU's use of its market power, with the most important trend being that the Union has begun to defend the rules-based international order more vigorously and independently than it has done in the past.

Finally, Jarlebring highlights that there are policy choices to be made regarding the EU's utilisation of its market power. While some EU actors are pushing for the EU to become a geopolitical power player, others prioritise objectives to strengthen the EU as a growth engine, or to utilise the EU's market power to defend Europe's model of civilisation. The chapter ends with the recommendation that the EU's decision-makers should refrain from daring attempts to make the EU a geopolitical player. Instead, the EU should be content with coordinating the geoeconomic actions of its Member States, and better calibrating its regulation-oriented use of power in support of a rules-based international order.

In Chap. 3, *Hannes Lenk* analyses the geoeconomic turn in the EU's trade and investment policy, where trade policy is increasingly being used to address security challenges and to bolster the EU's strategic interests. Using a theoretical framework that categorises the EU's geoeconomic instruments, Lenk shows how the Commission's toolbox has been expanded to integrate trade with security policy objectives.

Lenk highlights in particular how geopolitical challenges give the European Commission opportunities to increase its influence over new policy areas. The Commission stands to gain from the ambiguity that follows from an expansion of the term 'security', and from introducing novel, undefined concepts such as open strategic autonomy, risk mitigation, and economic security. This chapter also describes how China's economic and technological growth is being used to mobilise support for the new policy initiatives and to push through a shift in the orientation of the EU's common trade policy.

In light of this, the chapter claims that the new EU policy instruments aim not only to promote market access and economic growth but above all to ensure resilience and technological independence in a global order

that is increasingly conflictual. Thus, the European Commission has succeeded in introducing a large number of unilateral trade policy instruments that feature trade and investment constraints. By using trade policy, an area of exclusive competence, the Commission can act faster and more dynamically. However, Lenk notes that the growing link between trade and security challenges the EU's commitments for multilateralism and could potentially lead to a more protectionist stance.

In Chap. 4, *Love Rönnelid* analyses the differences between the internal market and the most successful historical examples of effective industrial policy. These successful economic strategies—mainly East Asian—were based on a mix of public sector support and market discipline, a high degree of public sector coordination, and a low degree of judicial control over the economy. Unlike the systems in these countries, the EU's single market has largely been created through judicial innovation, which depoliticised complex policy decisions. This was predicted to lead to difficulties for Member States in planning their economies, a rationale also linked to political messianism, where the economic structure of the Union is also imagined to contribute to peace and democratisation.

In the chapter, Rönnelid points out the various risks involved if the Union takes inspiration from the East Asian success stories. These risks are mainly a weak capacity to steer resources and discipline companies in the single market, difficulties in centralising decision-making within the Union, conflict with the idea of non-discrimination underpinning EU law, and a weak capacity to return private sector profits from industrial policy back into the public domain. Leading thinkers on industrial policy point to the risks of handing over large support packages where the public sector is not capable of controlling the economy. Introducing this type of public capacity would require a substantial change in the legal rules that create the single market. A change in these rules would probably unearth political differences that could otherwise be kept under wraps by the judicially based depoliticisation. In conclusion, Rönnelid argues that in its choices the EU should try to steer the discussion on industrial policy away from a number of obfuscating dichotomies, and be cautious about granting large subsidies unless it has been possible to develop other essential capabilities for industrial policy within the Union.

In Chap. 5, *Christian Sandström* and *Mikael Stenkula* analyse the appropriateness of pursuing an active green industrial policy at the EU level. The changed geopolitical conditions, combined with the climate-related challenges facing the world, have led to calls for the EU to be more

ambitious and implement overarching, expansive, and targeted industrial initiatives to speed up the climate transition, and to make the EU less dependent on the rest of the world. However, the authors argue that this strategy is fraught with many problems and they pose the question whether the information, incentives, and competences at the EU level are designed to successfully pursue this form of ‘political capitalism’. Based on their own and others’ research, they conclude that targeted support systems impose unacceptably high demands on the political sector’s capacity to identify the industries, products, and technical solutions of the future. The authors further argue that cheap loans and grants tend to sideline risk-taking and attract various forms of ‘subsidy entrepreneurs’, while paving the way for extensive lobbying in favour of specific solutions, companies, industries, or countries.

Instead of allowing bureaucracy and administration to grow and dictate developments at the EU level, the authors argue that there are other pathways to choose. They would prefer to see ambitious, comprehensive, and global pricing for environmentally hazardous emissions and waste, as this would give industry the right incentives to accelerate the green transition without the policy becoming overly attached to specific solutions or companies. They also advocate a traditional form of environmental policy with actual bans and phasing out of environmental toxins, as this has previously been proven to work well. Where additional incentives are needed to accelerate development, the authors argue that general deductions should as far as possible be used instead of targeted grants. They also propose offering a competitive and technology-neutral system, so that politicians are not required in advance to select future technological solutions in industries which are claimed to be industries of the future.

In Chap. 6, *Calle Håkansson* describes the development of the EU’s defence industry since the late 1990s until after Russia’s war of aggression against Ukraine began. The chapter gives an account of the expanded role that the EU, and in particular the European Commission, has acquired in the area of defence since the mid-2010s. Håkansson argues that this development has occurred due to political and long-term policy entrepreneurship on the part of the Commission, and the various crises that have accelerated novel European integration in the defence and security policy area.

Since the outbreak of Russia’s full-scale war against Ukraine in 2022, a number of new initiatives have been launched at the EU level in the defence industry area. These include initiatives for investment in the joint procurement of military equipment and to expand the production of

ammunition in Europe within the framework of a new defence industry strategy. However, according to Håkansson, questions remain about how these initiatives will play out in the future, as the EU Member States have traditionally been cautious about supranational elements in defence policy. Furthermore, the ambitions in the new initiatives are dependent on the negotiations on the EU's long-term budget after 2027.

In the chapter, Håkansson argues that the EU needs to do more in defence policy in Europe, even though the Union has already strengthened its role in this area. Among other things, he sees a need for bigger and more common financing models for defence in the future. He argues that the EU can learn from how the COVID-19 pandemic was handled and that the Union should jointly raise loans to invest in the development and procurement of military equipment. In conclusion, Håkansson also advocates closer cooperation between the EU and NATO.

In Chap. 7, *Martin Lundmark* analyses the big challenges to the EU's capacity to support Ukraine with donations of military equipment posed by Russia's full-scale invasion of Ukraine in 2022. Demand for military equipment, in particular ammunition and shells, rose sharply with the war in Ukraine and followed a long period of rationalisation of materiel at national level to achieve a 'peace-optimised' structure in the defence industry and cuts in the strategic coordination of defence companies. In the mid-2020s, it is clear that the EU Member States and their defence industry companies cannot deliver anywhere near the quantities required to meet Ukraine's needs for ammunition and shells. The total production capacity of these companies is insufficient and the companies have been unable to rapidly upscale their production.

In the chapter, Lundmark also shows how the war in Ukraine has led to a strong motivation within the Commission to increase the EU's capacity for strategic autonomy in the defence area and its defence industry. In spring 2024, the Commission presented ambitious proposals to increase supranational governance and coordination within the area of defence procurement and the EU's defence industry—what is known as the EU's strategic autonomy in defence. The proposals entail clear challenges to individual Member States' national priorities concerning procurement and autonomy in defence. Many Member States prefer their own domestic suppliers or buy mainly from the US, while others largely follow NATO's general preferences and standards. Until the mid-2020s, the motivation to prioritise the EU's strategic autonomy over national objectives has not been particularly salient.

Lundmark thus highlights how national- and EU-level objectives for strategic autonomy conflict with each other, and Member States' inability to respond to the rapidly arising defence needs as a result of Russia's war in Ukraine. In order for the EU's strategic autonomy in defence to be strengthened, Lundmark argues that the Member States must become more willing to permit supranational governance from the Commission. There is a need for more strategic coordination and consensus based on common business models and more detailed, trust-based planning of the production of military equipment. A clear departure from a peace-optimised defence industry towards a robust joint defence capability is also required.

In Chap. 8, *Louise Bengtsson* analyses how the EU, in light of the changing geopolitical context and dynamics following the COVID-19 pandemic, has taken on an increasingly active role in the health field, both internally within the EU and through its role as a global actor. Based on integration theory and discursive frameworks that link health issues to security perspectives in various ways, the chapter highlights what can be described as a security-oriented shift in the EU's role as a regional and global actor in the health area. The chapter describes the driving forces and nature of this development.

In the chapter, Bengtsson shows that trade and industry policy has become more interest-based in the mid-2020s, with supply capacity, competitiveness, and the ambition to reduce vulnerabilities in the pharmaceuticals and vaccines area being key aspects that connect this policy to strategic autonomy. In addition, there remains a strong focus on health security, in the sense that the EU's strengthened cooperation in this area largely focuses on preparedness for future pandemics and other health threats such as bioterrorism. Finally, the EU's external ambitions indicate a new agenda where the Union, through its Global Gateway Strategy and strategic partnerships with developing countries, hopes to advance its global positions in an increasingly tense geopolitical situation. Bengtsson argues that, in its choices, the EU needs to ensure a reasonable balance between the Union's interests and values and genuine consideration for the development needs and priorities of its partner countries. This, she argues, is of great importance, especially in light of the dissatisfaction that arose from the Union's handling of vaccine procurements, in which European interests were allowed to take precedence over global prevention.

In Chap. 9 *Susanne Arvidsson* highlights the EU's choices and challenges in relation to sustainable investment and biodiversity. The main

question asked in the chapter is how the EU can tackle these twin crises—climate change and biodiversity loss—to achieve its ambitious sustainability targets. Arvidsson recounts the history of the development of the EU's climate policy, focusing on the European Green Deal, which aims to achieve climate neutrality by 2050. Arvidsson also analyses EU policy initiatives related to biodiversity, including the Biodiversity Strategy for 2030 and the new Nature Restoration Regulation, and how these can help to mitigate biodiversity losses. However, she points to significant obstacles, such as the lack of international coordination and knowledge gaps in companies and politics, which risk undermining the EU's ambitions.

Her analysis highlights the need to strengthen the industrial sector's capacity to adapt to new rules and instruments such as the Taxonomy Regulation (EU taxonomy), the Corporate Sustainability Reporting Directive (CSRD), and the European Sustainability Reporting Standards (ESRS). The chapter presents research that shows that companies are poorly prepared for the EU's stricter sustainability requirements. Arvidsson also discusses the difficulties in measuring and reporting biodiversity compared with climate impact, which makes it difficult to redirect financial flows towards nature-positive investments. The chapter also highlights the political and normative challenges facing the EU in terms of biodiversity losses and the climate crisis, including the need for improved methods for measuring and reporting sustainability performance.

Finally, Arvidsson discusses how the EU should strengthen its sustainability policy. She suggests that the EU should supplement its instruments with sector-specific guidelines, invest in the development of uniform methodologies for measuring sustainability aspects, and promote capacity-building in the industrial sector. According to Arvidsson, in order for the European Green Deal to be a success story for the climate and biodiversity, it is crucial that the policy choice made provides industry with better support and guidance on how sustainability performance is to be measured and reported.

In Chap. 10, *Åsa Romson* investigates geopolitical considerations as the motivations for the EU's increased interest in regulation to reduce resource use. The chapter poses two questions. The first concerns how well developed the EU's regulations governing resources management actually are. The second concerns the extent to which these regulations are motivated by the EU's geopolitical vulnerabilities. In the chapter, Romson presents two different scholarly lenses on analysing resources management in the current geopolitical context. On the one hand, Romson applies a

traditional trade economics lens where global value chains for resources and products are challenged when protectionism creates barriers to trade; and on the other hand, she applies an environmental and earth sciences lens where the global use of resources entails such enormous environmental risks that it poses a security threat in itself to a prosperous Earth and thus European societies.

The chapter then discusses, mainly through the lens of environmental law, the question of how the EU's Circular Economy Action Plan reflects these geopolitical considerations. Romson also investigates the implementation of the Action Plan in relevant reforms in the EU's products and residual products legislation, in the regulation of plastics, and in EU legislation on strategic and critical raw materials. Romson thus sheds light on the EU's regulatory frameworks, which in various ways aim to improve resources management and discuss the challenges that arise. The final section of the chapter reconnects with the question of whether resources management might be a way out of Europe's geopolitical dilemma, and presents choices for the EU that could very well bring these two areas together. In this context, an important choice is developing the life cycle perspective further into an environmental principle of EU law, while also using it as a yardstick when developing new and reformed EU legislation.

In the final chapter (Chap. 11) of the book the editors review the choices made by the EU setting it on course for the next decade, barring any major upheavals and unforeseen crises. The advent of the geopolitical world order has posed a number of challenges to the EU for a number of reasons, not least as it was created to be a force for peace and stability in the post-World War II era. That world is now gone and the shift towards power politics, mercantilism, and political transactionalism has forced the EU to adopt a number of policy choices that would have been unthinkable just a few years earlier. The choices made in the areas of trade, military armament, and industrialisation as well as concerning the environment and climate policy set the EU apart from the world's great powers. This has an impact on the domestic level, affecting European citizens' living standards, the competitiveness of the European economy, and democracy. The question is whether the EU can stay its course or whether it will fragment in view of internal disunity and external pressures.

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The Significance of the EU's Market Power in a Geopolitical World

Johannes Jarlebring

INTRODUCTION

‘If Europe cannot become more productive, we will be forced to choose. We will not be able to become, at once, a leader in new technologies, a beacon of climate responsibility and an independent player on the world stage’ (Draghi, 2024, p. 5).

The European Union’s (EU) internal market has once again risen to the top of the Union’s political agenda. An increasingly widespread view holds that Europe must mobilise the power of the internal market to strengthen its position in an increasingly competitive geopolitical environment. A strong internal market is often presented as a panacea that will help Europe achieve its key goals at once: securing leadership in key technologies, advancing the global decarbonisation agenda, and acting as an autonomous geopolitical player on the international stage.

Illustrating this new agenda, French President Emmanuel Macron, in a landmark speech in April 2024, outlined a vision of a future Europe that derives international strength and leadership from large-scale industrial

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policy, in competition primarily with the US and China (Macron, 2024). Similar themes appeared in Ursula von der Leyen's agenda for her second mandate as European Commission president (2024–2029). In her address to the European Parliament in July 2024, she announced a new 'economic foreign policy' incorporating elements of what she termed economic statecraft (Von der Leyen, 2024). Finally, two influential reports by former Italian prime ministers further shaped the emerging agenda: Mario Draghi's report 'The Future of European Competitiveness' (2024) and Enrico Letta's report 'Much More than a Market' (2024). Both advocate massive investment in the internal market to make Europe more competitive, productive, and resilient.

It is not surprising that the EU's internal market is seen as a source of power. It is well known that those states that control a large market are less dependent on the outside world and, in addition, can exploit the dependencies of others in various ways to influence external actors and structures. In political science, this is known as exercising *market power*. Indeed, EU integration can largely be seen as a process of gradually strengthening Europe's market power. Alongside successive enlargements that expanded the internal market, the Union has progressively built capacity to govern, not least by linking national authorities through a variety of more or less formalised regulatory bodies and networks (Bach & Newman, 2007). In this way, the EU has built up a market power rooted both in its 450 million consumers and in a regulatory capacity that in many sectors exceeds that of the US and China. Only in the realm of market power does the EU possess resources comparable to those of these superpowers.

The question, however, is what the new agenda of active mobilisation of market power means for the EU's international role. Many scholars and EU analysts argue that the Union is making a geopolitical pivot, transforming into a geopolitical actor (Haroche, 2024; Bauerle Danzman & Meunier, 2024; McNamara, 2024). Such a pivot would suggest a departure from the EU's traditional approach of pursuing mutually beneficial solutions based on free trade, normative principles, and multilateral rules. A geopolitical EU would instead concentrate its use of power on creating control and dominance over international value chains, ultimately to strengthen its position in relation to superpowers such as the US and China. Yet the extent to which the Union is truly making such a pivot remains an open question. If taken at face value, the 'pivot thesis' risks clouding our understanding of the EU's external power and role in the world—potentially leading to misguided policy choices.

Nevertheless, it is undeniable that the Union has become more geopolitical than before. This is evident in the political discourse of EU leaders and in certain instruments linked to the EU's new industrial policy, not least the Anti-Coercion Instrument, which allows the EU to respond to external economic coercion through a variety of market access restrictions. However, closer scrutiny reveals that this discourse is ambiguous, and that several of the recently developed instruments represent not a break with tradition but an intensification of the EU's established modes of power. Prominent examples include the EU's Carbon Border Adjustment Mechanism (CBAM), the Artificial Intelligence Act (AI Act), and the Deforestation Regulation. These instruments do not seek to dominate international value chains. Rather, they aim to establish new regulatory frameworks within global markets, reinforcing a rules-based international order.

This chapter advances the alternative and somewhat polemic argument that the most significant shift in the EU's use of market power since 2020 is its more active and autonomous support for the rules-based international order, based on instruments such as CBAM. This somewhat paradoxical response to geopoliticisation is not primarily driven by overarching norms, as some scholars would suggest (Biresselioğlu et al., 2023; von Lucke, 2025). Instead, it reflects more complex causal dynamics, shaped by structural conditions and competition among internal actors with divergent visions of how the EU should wield its power.

The chapter first outlines an analytical framework that distinguishes three distinct modes of exercising market power. Building on this framework, it then develops a critical analysis of the geopolitical pivot thesis and offers an alternative interpretation of the Union's behaviour. The following sections deepen the empirical analysis by examining changes in the EU's discourse (what the Union says) and its, allegedly geopolitical, instruments (what the Union does). The penultimate section highlights the tensions in the exercise of market power by presenting three forward-looking perspectives on what aims the EU should prioritise: become a geopolitical power player, drive economic growth, or defend Europe's model of civilisation. The chapter concludes with recommendations on how the EU can deploy its market power most effectively.

THREE DIFFERENT WAYS TO USE MARKET POWER: NORM
DIFFUSION, EXTERNALISATION, AND STATECRAFT

Market power can be exercised more or less actively, based on a variety of techniques. This section distinguishes three ideal-typical modes of exercising market power. As will become clear, these ideal types are crucial for identifying *how* the EU uses its power and for interpreting what this exercise of power *means* for the EU’s international role. The first two ideal types—norm diffusion and externalisation—essentially support a rules-based international order. The third type—economic statecraft—challenges and undermines it. The three types are summarised in Table 2.1.

Norm diffusion refers to the spread of ideas and rules without direct pressure or negotiation from the EU. A well-known example is the so-called Brussels Effect, a term coined by Anu Bradford, Professor of Law at Columbia University. Bradford (2020) demonstrates that international companies sometimes apply EU regulations even when operating in non-EU markets, despite not being obliged to do so. According to Bradford, this occurs because EU rules are typically more demanding than those of other jurisdictions; products that comply with EU standards can therefore be marketed globally. It may also be costly and inefficient for companies to adapt products and services to multiple regulatory regimes. An illustrative case of the *Brussels Effect* is found in the global automotive sector, which

Table 2.1 Ideal-typical uses of market power

<i>Type of power use</i>	<i>Description</i>	<i>Examples of techniques</i>
Norm diffusion	External actors adapt semi-automatically to the rules that apply internally in a large internal market. Supports a rule-based international order.	The Brussels Effect, learning, emulation
Externalisation	Direct, active measures to get the outside world to adopt or approximate one’s own regulatory system. Supports, <i>in principle</i> , a rules-based international order, but can also lead to trade barriers.	Extraterritorial legislation, regulatory requirements in trade agreements, regime vetting
Economic statecraft	Market power is used as a means of pursuing key foreign policy and security policy priorities. Undermines a rules-based international order.	Sanctions, measures to increase autonomy, control of investments and trade flows

for years has competed to align most rapidly with EU carbon dioxide emission standards.

Once international companies adapt to EU rules, spillover effects can occur, influencing national legislation and international organisations alike. A recent study by the European Commission provides statistical evidence that other countries increasingly use EU regulations as templates when drafting requirements in areas such as health, safety, and the environment (Herghelegiu & Martin, 2023). The same study offers support for the central claim of the *Brussels Effect*: that the EU's influence on other countries' legislation in these areas is greater than that of the US and China. Because norm diffusion contributes to the international convergence of standards, it supports the liberal international order based on harmonised regulatory frameworks or rules and free trade.

The second type, *externalisation*, differs from norm diffusion in that the EU (and other large markets such as the US) deploys market power more directly and actively to shape external rules and practices. A variety of techniques are used, all of which create special incentives for foreign actors to comply with or approximate EU market rules. Many researchers see externalisation as central to sustaining a rules-based international order. Daniel Drezner (2008), for example, argues that the US and EU together underpin all significant international regulatory regimes by externalising their internal rules. Although externalisation involves a more direct and active use of power than norm diffusion, it is not about creating geopolitical dominance. Rather, it is about establishing economic incentives that can be used as a lever to initiate dialogue with external actors, with the aim of building international regimes, increasing the effectiveness of internal regulatory frameworks and creating a level playing field in international markets.

One common externalisation technique is the extraterritorial application of domestic legislation, that is, international companies are required to comply with EU rules even when they operate in other countries. For example, EU digital market legislation often applies to all services marketed within the EU or affecting European citizens, irrespective of where providers are based. Violations are punished with heavy fines and the threat of exclusion from the internal market. Another technique is conditionality in trade agreements. The EU frequently links free trade agreements to compliance with international conventions, such as the Paris Agreement adopted under the United Nations Framework Convention on Climate Change. As these examples show, a downside of

externalisation measures is that they can result in trade barriers if external actors do not adapt to EU requirements.

A further externalisation technique is regime vetting, whereby the EU systematically evaluates the adequacy of other countries' regulatory frameworks as a basis for calibrating market access. The EU applies this technique in a variety of sectors including forestry, fisheries, data protection, and financial services (Jarlebring, 2022, 2024). For example, in the fisheries sector, the EU draws up lists of countries which, in its assessment, do not practise sustainable fishing, and penalises them with reduced market access. The EU uses similar 'blacklists' to single out and penalise countries with inadequate regimes for corporate taxation and money laundering. Yet another example of regime vetting is found in the EU's General Data Protection Regulation (GDPR), which stipulates that personal data can flow freely only to countries that—in the EU's view—have adequate protection rules in place. These relatively harsh forms of externalisation are only developed in sectors where EU rules are stricter than those of its trading partners, and subsequently this difference in regulatory standards risks having a negative impact on the European market. Thus, externalisation is not only about the EU wanting to pursue a normative agenda, but equally about defending the internal market and enhancing Europe's competitiveness.

The third ideal type is the use of market power for foreign and security policy purposes, sorting under the broad concept of *economic statecraft* (Baldwin, 1985). Here, market power is deployed to punish, coerce, or weaken external actors, or to secure strategic autonomy. The most visible example is the EU's comprehensive sanctions regime against Russia following its invasion of Ukraine. Beyond Russia, the EU imposes sanctions on individuals or firms, mostly in response to human rights violations. In 2024 it had sanctions in force against almost 500 individuals from some 80 different countries (European Commission, 2025).

Economic statecraft also encompasses the use of control over strategic nodes in global markets, such as telecommunications or financial networks, for surveillance or to restrict access to critical flows (Farrell & Newman, 2019). In addition, it may involve reducing dependencies on foreign powers in security-sensitive areas by investing in domestic production and innovation, or by redirecting trade towards allies and trusted partners. Finally, economic statecraft can be exercised by screening and controlling external and internal investments and other trade-related flows

to prevent foreign powers from exploiting these flows in ways that could create security risks.

THEORIES ABOUT EU POWER: HOW GEOPOLITICAL CAN A UNION OF MEMBER STATES ACTUALLY BECOME?

Geopoliticisation implies that the dependencies created by international trade are increasingly seen as instruments for pursuing foreign and security policy objectives. Great powers focus their international clout on dominating international value chains and establishing hierarchical relationships, in competition with other great powers. Seen through the analytical framework developed above, the argument that the EU is making a 'geopolitical pivot' hence suggests that the Union is moving away from norm diffusion and externalisation as its primary mode of exercising market power. Instead, it concentrates its efforts on developing economic statecraft for primarily geopolitical purposes. Researchers who defend this view argue that such a pivot fundamentally alters the EU's international role and identity as a power. For example, Anna Herranz-Surrallés et al. (2024) see a mutually reinforcing relationship between a new geoeconomic world order, the EU's development of geoeconomic instruments, and the EU's identity as a geoeconomic power. Similarly, Pierre Haroche (2024) suggests the concept of *Geoeconomic Power Europe* as a lens for understanding this new EU, increasingly shaped by great-power competition.

Hannes Lenk's chapter in this volume describes many of the empirical observations and explanatory models used to support the geopolitical pivot thesis. A common analytical starting point is that China's integration into the global economy and the intensifying economic rivalry between the US and China have forced Europe's political elites to fundamentally redefine the EU's strategic direction. This strategic shift is usually traced in a change in political discourse; in particular, the EU has begun to portray China as a geopolitical rival rather than a trading partner and place a growing emphasis on European sovereignty and strategic autonomy. Much explanatory power is also attached to the so-called hegemonic stability theory. This theory holds that a rule-based world order, characterised by free trade and developed international institutions, can only emerge during periods when a dominant power guarantees compliance with international rules. In such periods, states can focus on maximising absolute

gains from trade without needing to worry about who they trade with or who gains the most from this trade. However, according to the theory, free trade will sooner or later allow other states to catch up economically, eventually challenging the hegemon's position. The resulting escalation of economic statecraft between the hegemon and its rivals leads to increasing geopoliticisation and, ultimately, the erosion of rules-based international order (Cohen, 2017; Gilpin, 1981).

The question, however, is how far these theories apply to the EU, which is neither a hegemon nor an emerging rival to a hegemon. I argue that the geopolitical pivot thesis exaggerates the direct impact of structural changes at the international level on EU action and disregards the internal constraints and driving forces that influence the EU's exercise of power (Jarlebring, 2024). An allegory helps illustrate the difference. The pivot thesis treats the EU as a large ship, once sailing in calm waters, now confronted by storms and hostile warships, with the captain ordering a dramatic course change and rearmament. By contrast, I suggest the EU is more akin to a vast train, guided by tracks laid over decades of integration, as well as by the train's many headstrong conductors, engineers, and passengers, and with each of its 27 carriages equipped with an emergency brake.

In more precise terms, unlike the US or China, the EU lacks a strong centralised political authority capable of steering in response to international pressures. Instead, its use of power is mainly shaped by internal factors: the extensive regulatory frameworks governing the functioning of the internal market; the Union's internal regulatory capacity; the various networks of policy entrepreneurs that have formed within and around the European Commission and compete with each other to shape its legislative and regulatory proposals; and the various interests and principles pursued by the Union's 27 Member States. The networks of policy entrepreneurs—politicians, officials, regulatory experts, civil society representatives, and business actors—shape the EU's external policy by leveraging the regulatory frameworks and resources created by EU integration. However, approval from EU Member States remains a prerequisite for the effective use of power. In practice, this means that the EU's policy instruments usually leave key decision-making in the hands of the Member States, which can thus block or water down decisions that do not benefit them.

This leads to two important reservations about the geopolitical pivot thesis. First, it is doubtful whether the EU has the institutional

prerequisites to translate market power into effective economic statecraft. Andrew Cottey (2020) demonstrates that the EU has struggled historically to set clear priorities and systematically avoids difficult foreign policy choices. A central limitation is that the EU's Member States frequently have conflicting interests and seek to block or dilute decisions that have redistributive implications that do not benefit them. Moreover, Member States typically resist transferring substantial powers to the EU level in areas deemed core national competencies, such as national security. As a result, the Union commands only a modest budget of about 1 percent of combined EU GDP and lacks both a police force and an army (Genschel & Jachtenfuchs, 2016; see also Demirci et al., 2025).

Second, it is questionable whether the EU can be expected to deprioritise the externalisation of its internal rules and principles. Rather, a geopolitical context is likely to intensify externalisation efforts, as it mobilises policy networks and provides new justifications for advancing their agendas. Policy entrepreneurs advocating regulatory priorities, such as environmental protection, may argue that the weakening of international regimes, like the Paris Agreement, necessitates stronger EU leadership. Meanwhile, policy entrepreneurs prioritising the EU's competitiveness are likely to call for EU externalisation measures to generate a level playing field when countries such as the US and China give unfair preferential treatment to their own companies. Externalisation agendas can be expected to gain particular traction when regime-building goals align with direct economic interests (Kelemen, 2010). For example, with the World Trade Organization's (WTO) dispute settlement mechanism paralysed by great-power rivalry, the EU has developed its own capacity to prosecute violations of WTO rules—both to defend multilateralism and to secure a level playing field (De Ville et al., 2023).

In summary, the alternative perspective advanced in this chapter predicts a 'geopoliticisation paradox.' In a context where the US and China are increasingly deploying economic statecraft, the EU also responds with a more active use of market power. Yet its strongest response lies not in security-oriented statecraft but in intensified efforts to externalise internal rules and principles. In other words, the EU's use of market power goes beyond the Brussels Effect and soft norm diffusion, but it does not signify a fundamental geopolitical pivot.

AMBIGUOUS CHANGES IN DISCOURSE: THE EXAMPLE OF ‘OPEN STRATEGIC AUTONOMY’

Advocates of the geopolitical pivot thesis often emphasise that the Union’s political elite has adopted a new discourse centred on power. This is difficult to deny. It has become almost routine for European Commission strategy documents—regardless of policy area—to open with references to a geopolitical world and to the need for the EU to become stronger and act more assertively on the global stage. Both speeches and official documents highlight European sovereignty, strategic autonomy, competition with rivals, and the imperative of becoming more realistic and less naive. However, proponents of the EU geopoliticisation thesis also tend to assume that the new discourse will translate into a fundamental shift in the Union’s actual behaviour—which is far from certain.

One frequently cited example of discursive change is the doctrine of *Open Strategic Autonomy* (OSA). Joan Miró (2023) traces how the concept of strategic autonomy first appeared in the field of defence policy to emphasise the need to reduce Europe’s military dependence on the US, and how the European Commission came to use it in policy documents in a wide range of areas, such as industrial policy, competition policy, digitalisation, climate, agriculture, financial markets, and trade. Pierre Haroche (2023) links the OSA doctrine directly to the European Commission President Ursula von der Leyen’s strategic leadership, interpreting it as an operationalisation of her ambition to lead a ‘geopolitical Commission.’ According to Haroche, OSA strengthened the coordination of external policy by bridging divisions within the Commission. Luuk Schmitz and Timo Seidl (2023) take the argument a step further by claiming that the Commission used the OSA as a so-called coalition magnet to mobilise and enable alliances among broader stakeholder groups in support of a new geopolitical direction for the EU.

The key question, however, is how deeply the new discourse actually reshapes the interests and ideas promoted by the Union’s many internal actors. In fact, speeches and official documents emphasising European sovereignty, security, and autonomy often *simultaneously* affirm the EU’s continued support for the rules-based international order. An alternative interpretation, therefore, is that the new discourse is developed to respond to internally conflicting pressures from different actors, without necessarily leading to a unified strategic line.

The ambiguity of OSA illustrates this dynamic well. Research shows that Member States diverge significantly in their interpretations of the doctrine. Free-trade and market-oriented countries, especially in the Nordic region, emphasise the 'open' dimension and distance themselves from 'autonomy,' which they view as protectionist. Niklas Helwig (2022) even argues that OSA was deliberately adopted because of its vagueness, allowing different actors to project their own priorities onto it. Similarly, Dennis Broeders et al. (2023) caution that the EU's geopolitical discourse in the digital realm may produce 'strategic cacophony' rather than coordinated action towards common objectives.

Returning to the three ideal-typical uses of market power, the EU's new discourse can be seen to reflect an emerging recognition that reliance on the Brussels Effect and on norm diffusion via international regimes is no longer sufficient. At the same time, fundamental disagreements remain over how the Union's power should be exercised—whether primarily through economic statecraft or through the continued externalisation of the EU's internal regulatory regimes.

NEW ECONOMIC STATECRAFT, BUT WITHOUT RESOURCES AND UNDER NATIONAL CONTROL

Part of the EU's response to international geopoliticisation has been the development of new instruments for economic statecraft. These new instruments are often rightly described as geopolitical, as they appear designed to influence geopolitical rivals, particularly the US and China.

Bauerle Danzman and Sophie Meunier (2024) argue that the EU has shown considerable ingenuity in developing what they term 'gEOeconomic instruments,' including the Anti-Coercion Instrument, the Regulation on Foreign Direct Investment Screening, initiatives to secure access to critical raw materials, and investments in strategic technologies such as semiconductors and batteries. Similarly, Kathleen McNamara (2024) frames these developments as a geopolitical market strategy, reflecting an interventionist industrial policy. She also argues that the EU has begun to embrace the use of the market as a weapon.

At the same time, systematic analyses of how the EU positions itself through market power remain scarce. The limited literature that exists suggests that the EU's clearest examples of economic statecraft—the Anti-Coercion Instrument and the foreign investment screening

regulation—remain relatively weak and underdeveloped (Mattlin & Poutala, 2022; Weinhardt et al., 2022). Industrial policy initiatives, such as those targeting semiconductors and batteries, have largely been funded by repurposing existing EU funds combined with national-level funding, rather than through new EU-level resources. Much of the emerging industrial policy consists of exceptions to EU state aid rules, exceptions that have mainly been used by Germany and France to benefit their domestic industries (Ambroziak, 2025).

The relative weakness of these instruments is not primarily due to the European Commission's caution in drafting proposals, but rather to the opposition from Member States. One example is the EU's Anti-Coercion Instrument, which in its originally proposed form granted the Commission significant autonomy to act, potentially creating centralised EU capacity for geopolitical action. During negotiations in the Council, however, a coalition of Member States amended the rules so that the instrument can only be used if it has the support of a qualified majority of Member States. Similarly, Member States have resisted allocating new funds to strategic technology initiatives. A Commission proposal to fund the Strategic Technologies for Europe Platform (STEP) with €10 billion was reduced to €1.5 billion during negotiations—a very modest amount when measured against US or Chinese investments (Financial Times, 2024).

Defenders of the geopolitical pivot thesis may counter-argue that EU statecraft is still nascent and may intensify under heightened geopolitical pressure. Historical precedents suggest that the Union can overcome internal divisions in crises, such as the 2008 financial crisis, the 2020–2022 pandemic, and the war in Ukraine. Yet these measures have not led to permanent expansions in EU resources, nor have they fundamentally altered the structural constraints on EU power. Member States seem to remain intent on controlling EU governance, especially instruments that can lead to large (asymmetrically distributed) costs or relate to security issues.

Mario Draghi's report on the future of European competitiveness (2024) is sometimes read as a sign that things are about to change radically, as it highlights the imperative of strong action, including large-scale investments. However, it can also be interpreted as evidence of the EU's inability to implement fundamental reforms, since the challenges identified in the report have long been known, yet the Union has taken no concerted or decisive action. Moreover, many of the report's proposed reforms appear politically difficult to implement. For example, financing

investments through joint EU bonds is likely to meet resistance in many countries, including Germany. Similarly, relying on the European Council to strategically steer the competitiveness agenda assumes both that it can prioritise certain sectors above others and that its decisions will strongly influence decentralised EU and national negotiations—assumptions that are far from certain.

Looking ahead, it is unlikely that the EU budget will see substantial increases in the upcoming negotiations on the 2028–2034 multiannual financial framework. Rather, the EU will seek innovative ways to leverage the limited funds already available at EU level, for example by providing guarantees for various, mainly private, investments through the European Investment Bank (EIB). Whether these instruments are suitable for super-power struggle is doubtful and their outcome remains to be seen. Arguably, it is even more uncertain whether the EU will succeed in building effective instruments to use the market as a weapon, or even to control outgoing and incoming investments.

Indeed, Draghi himself has since struck a more pessimistic tone. One year after his report, he concluded that Europe's hopes of converting its market size into geopolitical clout had collapsed: 'For years the European Union believed that its economic dimension, with 450 million consumers, would itself bring geopolitical power and leverage in international trade relations. This year will be remembered as the year in which that illusion evaporated' (Draghi, 2025, p. 1).

THE PARADOX: AN INCREASED EXTERNALISATION OF THE EU'S INTERNAL REGULATORY FRAMEWORK

Another, more paradoxical aspect of the EU's response to international geopoliticisation is its intensified effort to externalise internal regulatory regimes. Unlike economic statecraft, externalisation instruments do not require substantial new EU-level resources, nor do they encroach on core national competences. As a result, Member States are less inclined to dilute them or tightly control their implementation.

One prominent example is the CBAM, which imposes a levy on imports from countries that do not have carbon taxation systems that are equivalent to those of the EU.

While CBAM is sometimes depicted as an example of economic statecraft, it in fact exhibits all the main features of regulatory externalisation

(EU Regulation, [2023a/956](#)). First, the EU justifies CBAM through a typical combination of normative and economic considerations: the objective to combat climate change and prevent carbon leakage is compounded with the need to ensure a level playing field for energy-intensive industries. Second, to implement CBAM, the EU will need to establish a system for reviewing and assessing third-country regimes to determine whether they qualify for exemptions from EU levies (regime vetting). The fact that countries with equivalent carbon pricing systems can be exempted creates considerable incentives for these countries to align their domestic regimes with EU standards. Third, the EU seeks to leverage CBAM to build international regimes, specifically a multilateral climate club to pave the way for a global framework for carbon pricing. As an illustration of how CBAM contrasts with geopolitical struggle, in October 2023 the EU refused to include climate measures in a US-led sanctions initiative specifically targeting China's steel production, as this would conflict with the implementation of the rules-based CBAM.

The AI Act, adopted in May 2024, provides another recent example of regulatory externalisation. While some have described it as part of a geopolitical contest between the EU, the US, and China for digital leadership (Bradford, [2023](#)), the AI Act does not aim to dominate value chains or punish geopolitical rivals. Instead, it is the world's first general framework for responsible AI use, establishing what the EU calls a rights-based, human-centred approach and requiring authorisation for AI applications deemed high-risk (EU Regulation, [2024/1689](#)). The Act applies extraterritorially, covering suppliers and users in third countries if the data produced is used in the EU (Article 2.1c). Like CBAM, the AI Act promotes international alignment via 'digital partnerships' and a global code of conduct.

The 2023 Deforestation Regulation provides a third example of the EU's more assertive externalisation (EU Regulation, [2023b/1115](#)). It aims to prevent products linked to deforestation or forest degradation—such as timber, cocoa, and livestock—from being sold within the EU, by establishing an innovative system of regime control. The European Commission is tasked with classifying nations as high, medium, or low risk, based on the adequacy of their systems for preventing deforestation. The higher the risk level, the more rigorous the EU's requirements for importers to verify compliance.

Finally, the EU has adopted instruments to externalise its internal regimes on state aid and public procurement. The 2023 Regulation on

foreign subsidies distorting the internal market enables the Commission to block companies from non-EU countries that receive state aid from participating in EU public procurement (EU Regulation, 2022a/2560). Similarly, the 2022 International Procurement Instrument allows the Commission to restrict market access if third countries apply discriminatory procurement practices. While these instruments can to some extent be seen to target China, they are principles-based, anchored in the EU's internal regulatory regimes, and apply generally to all third countries (EU Regulation, 2022b/1031).

In summary, there is significant evidence that the EU has intensified its externalisation efforts. Although more research is needed to provide definitive explanations for this development, it is likely that internal factors are strongly influencing the EU's actions. A fundamental driving force lies in the networks of policy entrepreneurs who use the EU's internal regulatory framework and regulatory capacity, as well as the geopolitical context, to pursue their agendas. The main motivation lies not in security-oriented geopolitical struggle, but in generating international regimes, ensuring the effectiveness of internal regulatory frameworks, and creating a level playing field in relation to international markets.

THREE VISIONS OF EU MARKET POWER

This section examines three political visions that highlight the key choices confronting the EU in the exercise of its market power. Each perspective draws on ideas and policy proposals from ongoing debates about the EU's future.

1. *The EU as a geopolitical power player.* The first vision emphasises using market power to transform the EU into a geopolitical actor.

Prominent defenders include French President Emmanuel Macron, who in a landmark speech in April 2024 warned that Europe faces existential threats stemming from major powers' increasing disregard for international rules (Macron, 2024). Similarly, Ursula von der Leyen, in a June 2024 speech to the European Parliament, described an era of geostrategic competition in which economic dependencies are weaponised (Von der Leyen, 2024). Both leaders advocate a more active use of EU market power, combining economic statecraft and regulatory externalisation. Both called for a massive investment in Europe's market, in particular a

large-scale industrial policy to increase production capacity in security-critical areas, create control over strategic production chains, and make the EU more sovereign. Macron, in particular, called for a reformed common trade policy, using the internal market to ensure trading partners meet European standards across environmental, health, and social domains, reinforced by stronger border controls. As he pointed out, this is possible thanks to the EU's market power: '[O]ur strength is our internal market, with 450 million consumers' (Macron, 2024). Von der Leyen, for her part, proposed integrating instruments, such as infrastructure investment, trade, and macroeconomic support, to enhance the EU's leverage in relation to countries that have access to critical raw materials.

2. *The EU as an engine for economic growth.* The second vision prioritises economic competitiveness, arguing that competitiveness is a prerequisite for generating prosperity and a strong internal market.

This view is largely reflected in Enrico Letta's April 2024 report 'Much More Than a Market' (Letta, 2024). The report begins by noting that today's internal market accounts for a relatively small and rapidly shrinking share of the total global economy and that wars and trade conflicts are increasingly undermining the principles of a rules-based international system. Yet, it goes on to argue that the EU is still best served by seeking to uphold the rules-based international order and invest in the internal market, while ensuring economic security. The underlying message is that the EU should build market power, rather than seeking to use market power externally for political purposes. The report explicitly states that the EU can no longer expect its trading partners to accept its regulatory regimes, and that the Union instead needs to adapt the internal market and its trade policy to the changed global balance of power. The report refers to the Brussels Effect as an important mechanism but argues that it can no longer stand on its own and needs to be actively supported through regulatory cooperation. Although the report highlights in various ways the need to increase security in the internal market, it contains no proposals suggesting that the market should be actively leveraged to make the EU a geopolitical actor.

3. *The EU as a guardian of Europe's model of civilisation.* The third vision prioritises defending and exporting the EU's regulatory model as a civilisational project. At its core is the externalisation of

EU rules in areas such as animal welfare, environmental protection, and digital governance.

This perspective has champions in virtually every regulatory area where there are producer groups seeking protection from (unfair) competition from abroad or consumer groups fearing poor or predatory market practices. It is also defended, for instance, by actors within the European Commission who are in charge of specific regulatory agendas, for instance the Directorate-General for Climate Action or the Directorate-General for Digital Services. In this vein, a 2022 Commission communication titled ‘The Power of Trade Partnerships’ promised intensified engagement with trading partners to promote compliance with international labour and environmental standards. It also proposed using free trade agreements with third countries to sanction violations of international agreements, such as the Paris Agreement (European Commission, 2022). A broader version of this vision can be found in France’s left-wing coalition L’Union Populaire, which in its 2024 European Parliament manifesto called on the EU to adopt tough market rules and impose unconditional requirements on trading partners to comply with them (L’Union Populaire, 2024). In this view, European norms—and the consequent protection of European citizens and producers from both superpower pressures and global capitalism—take priority over concerns over imposing measures to facilitate trade and drive economic growth.

A BETTER CALIBRATION OF THE USE OF MARKET POWER

As the three perspectives outlined above demonstrate, the EU faces a difficult dilemma in exercising its market power, necessitating political choices. Yet, as emphasised throughout this chapter, the Union’s internal architecture predisposes it towards certain paths—at least in the short to medium term.

To revisit the analogy introduced earlier, it is problematic to think of the EU as a boat that can be steered in any direction simply by setting the captain’s compass. A more accurate image is that of a train whose course is guided by the tracks and the many actors involved in steering it, and whose speed is determined by the degree to which the Member States apply the brakes.

From this perspective, it is doubtful if the EU will seek to use its market power to become a true geopolitical player. Doing so would require Member States to agree on new ways of exercising power outside the EU's established governance traditions based on common rules, legislation and transnational regulatory networks, and support for international regime-building. Going 'all in' on economic statecraft not only risks failure and disappointed expectations but could also undermine the structures that underpin the EU's internal and external authority. A strong train driver may manage to steer the train in a new direction, but without proper tracks, how far can it run? And how many passengers might pull the emergency brakes if the ride becomes too turbulent?

By contrast, the EU is institutionally well prepared to exercise externalisation, precisely because it builds on legislation and transnational regulatory networks and is interlinked with international regimes. This mode of power is certainly not without tensions—particularly between the visions of the EU as a civilisational model and as an engine of growth—but it is nonetheless the EU's best chance to support and contribute to a possible reshaping of the liberal international order. Indeed, as long as the EU sets stricter internal standards than the rest of the world, functional necessity and domestic demand will drive externalisation, giving policy entrepreneurs new opportunities to advance their agendas externally.

Against this backdrop, it is recommended that EU policymakers adopt a dual strategy, analytically distinguishing statecraft from externalisation and developing responses tailored to each:

1. *Coordinate, rather than centralise, statecraft*

The EU should make a virtue of necessity by refraining from building a full-scale statecraft capacity at the EU level. Instead, it should focus on gradually increasing the coordination of Member States' statecraft using its regulatory toolbox. For example, the Commission could map vulnerabilities in supply chains and identify systemic risks but not seek to strongly control investment flows or use the market as a weapon. This would leave the Commission relatively weak as a geopolitical actor, but that is not entirely negative. A restrained EU avoids creating fears of dominance, reassuring partners that Europe remains committed to open trade. Moreover, this approach does not prevent forceful, coordinated action when genuine crises arise, as demonstrated during the international financial crisis of 2008, the pandemic of 2020–2022, and Russia's war in Ukraine.

2. *Strengthen the EU's capacity to calibrate externalisation*

The EU should invest in improving its capacity to calibrate regulatory externalisation to a geopolitical environment. The key challenge is to balance the power-based projection of standards with the preservation of open trade. Two guiding questions should frame this effort:

- Which international partners are likely to align with the EU in specific regulatory domains?
- What trade-offs—in terms of barriers or costs—are acceptable for achieving regulatory goals?

To answer these questions, the European Commission needs to cultivate its unique understanding of the relationship between the internal market and external markets and cast itself as an actor with superior knowledge of when and how it is possible to productively exercise externalisation. Based on such a position of epistemic authority the European Commission can shape legislation internally and build credibility externally when the EU engages in dialogue with trading partners. A practical step is to design EU laws with flexible externalisation clauses that are narrow enough to safeguard objectives but open enough to allow negotiation with partners. The EU is already experimenting with such instruments. Both the CBAM and the AI Act illustrate innovative approaches to regulatory externalisation, though their ultimate effectiveness remains to be seen.

Even if pursuing the dual strategy described above, the EU's future path will remain fraught with tension and risk. Yet by leveraging its strengths—coordination of Member States in statecraft, and strategic calibration in regulatory externalisation—the EU can enhance its security while contributing to an international order grounded not only in power but also in rules and principles.

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CHAPTER 3

Carrots and Sticks: Can the EU Balance Trade and Security in a Geoeconomic Order?

Hannes Lenk

INTRODUCTION

This chapter examines how the European Union's (EU) trade and investment policy has evolved in response to the emergence of a new geoeconomic order in which economic and security interests have become deeply intertwined. It argues that the EU's traditional liberal orientation—based on openness, multilateralism, and the pursuit of mutual economic gains—has gradually given way to a more strategic use of trade policy as an instrument of power and security. This shift, from carrot to stick, reflects the Union's attempt to balance openness and autonomy in an increasingly competitive and fragmented global economy.

The first section introduces the concept of the geoeconomic turn and situates it within the broader transformation of the global political economy. The second examines China's global struggle for economic and technological dominance and its implications for the liberal trade order. The third explores the broadening of the security concept and how economic security has come to shape trade and investment governance. The fourth

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section analyses the EU's emerging geoeconomic toolbox. The fifth section explores how 'open strategic autonomy' (OSA) serves as a guiding framework and conceptual anchor for the geoeconomic turn in EU trade policy. The concluding section reflects on the challenges of balancing trade liberalisation with strategic autonomy and ensuring that the EU's new geoeconomic posture remains compatible with a rules-based international order.

GEOECONOMICS: NEW RULES OF THE TRADE GAME

In the period following the Second World War, most states displayed reluctance towards open markets—with the notable exception of the US, which pursued a clear political agenda to reinstate liberal economic ideals in the global economy. The emerging order, gradually distancing itself from the economic nationalism that had characterised the interwar period, rested on the principle of non-discrimination in trade and was institutionalised in the International Monetary Fund (IMF), the World Bank, and the General Agreement on Tariffs and Trade (GATT). At the same time, states' right to intervene in markets to ensure domestic stability and social welfare was recognised. This balance between open markets and state intervention came to be known as an era of 'embedded liberalism' (Ruggie, 1982).

By the 1970s and 1980s, however, economic turbulence prompted a transition from embedded liberalism to neoliberal ideas. The conviction that unrestrained trade and investment flows would generate growth and prosperity became the new orthodoxy. The political narrative shifted decisively towards deregulation and privatisation, and free trade came to be seen as a universal vehicle for fostering an interconnected and prosperous global economy (Roberts et al., 2019). The transformation from GATT to the World Trade Organization (WTO) in 1995 and the subsequent expansion of the multilateral trade regime further institutionalised this neoliberal turn.

Despite deepening economic integration, security concerns were never central to the liberal economic order. GATT, and later the WTO, contained provisions allowing states to safeguard their essential security interests, yet such exceptions were rarely invoked. States recognised that frequent recourse to security justifications risked undermining the entire rule-based system (Bacchus, 2022). Instead, trust prevailed that economic interdependence would itself function as a guarantor of peace by raising

the costs of conflict—a logic often summarised in the maxim *Wandel durch Handel* (‘change through trade’).

The EU is in many respects a product of this era. Unsurprisingly, its trade policy embraced liberal economic principles, that is advancing liberalisation, rejecting state intervention in markets, and seeking deeper integration (Siles-Brügge, 2013). The European Security Strategies of 2003 and 2009 explicitly linked peace and regional stability to European integration, underscoring the central role of trade, the multilateral trading system, and economic cooperation for EU security (European Council, 2003, 2009).

From the mid-2000s onwards, however, the pendulum of liberalisation began to swing back. The 2008 financial crisis revealed vulnerabilities in the liberal order and challenged the notion of interdependence as a guarantee of peace and stability. The WTO was increasingly seen as incapable of disciplining forced technology transfer and industrial subsidies in non-market economies (Wemer, 2019). The paralysis of the WTO’s dispute settlement mechanism—the ‘crown jewel’ of the multilateral system—following US refusal to appoint new members to the Appellate Body, has left the institution dysfunctional throughout much of the 2020s.

Social and political developments such as the Occupy Wall Street movement and Brexit illustrated growing scepticism towards globalisation and a desire to ‘take back control’ over economic and social policy. The COVID-19 pandemic and Russia’s full-scale invasion of Ukraine further reinforced these dynamics. Together, these crises exposed the vulnerabilities of the global economic system and paved the way for a deep reorientation of EU trade and investment policy—a shift towards a new geoeconomic order (Freudlsperger & Meunier, 2024; Roberts et al., 2019).

According to Blackwill and Harris (2016), geoeconomics refers to the use of economic instruments to achieve geopolitical objectives. In this chapter, geopolitics is understood more broadly as the exercise of power in international relations to promote national interests and shape the global balance of power. The emerging geoeconomic order is therefore premised on the use of economic policy to manage political tensions. As economic policy shifts from a focus on absolute gains to relative gains, economic relations are increasingly viewed through a lens of power and security, where one state’s gain is perceived as another’s strategic loss. The boundary between economic competition and strategic rivalry is gradually dissolving, while Western states show renewed interest in industrial policy,

state intervention, and economic and technological nationalism (Capri, 2025).

The EU is not unique in this respect; the same geoeconomic turn is visible in other Western economies, not least the US. Yet, the EU has been slower to adapt to these trends. While the US resorted to unilateral trade measures and stricter controls on strategic technologies and investment, the EU continued to pursue multilateral trade liberalisation and free trade agreements. This reluctance partly reflects the EU's legal framework, which is designed to promote free trade and integration rather than geopolitical objectives (Rosèn & Meunier, 2023). Article 206 of the Treaty on the Functioning of the European Union (TFEU) mandates the Union to contribute to 'the harmonious development of world trade' and the progressive abolition of restrictions. Article 207 TFEU does permit trade defence measures, but primarily for the protection of the internal market, not for the pursuit of geopolitical goals. As Rönnelid argues in Chap. 4 of this volume, these institutional constraints of the internal market limit the Union's ability to enact targeted industrial policy; similar limitations exist in the trade and investment framework, though the Commission has increasingly stretched these boundaries to address new realities (Steinbach, 2023).

For decades, the European Union has leveraged its economic weight and large consumer market as a source of influence to advance objectives such as sustainable development, human rights, and labour standards, as well as to project values of democracy and the rule of law beyond its borders (Steinbach, 2023). Many of the EU's trade agreements include so-called conditionality clauses and dedicated chapters on trade and sustainable development. The Lisbon Treaty reform further anchored this approach in primary law. Under the Treaties, the common commercial policy must be conducted in accordance with the general objectives and principles of the Union's external action. These are set out in Article 21 of the Treaty on European Union (TEU), which explicitly refers to democracy, the rule of law, and respect for human rights.

Although the EU's trade policy instruments have long been used to pursue non-trade objectives, the common commercial policy has remained fundamentally rooted in liberal-market principles and a commitment to a rules-based international order (Steinbach, 2023). The central question today is how the EU can reconcile this liberal orientation with the emerging geopolitical reality.

The EU's complex institutional framework also imposes significant constraints on the introduction of geoeconomic instruments. There is a longstanding institutional separation between foreign and trade policy (Rosèn & Meunier, 2023). Decisions on restrictive measures and sanctions under the Common Foreign and Security Policy (CFSP) generally require unanimity, even though the implementing regulations that give effect to such measures are later adopted by qualified majority under Article 215 of the TFEU. By contrast, the common commercial policy has always been an exclusive EU competence, giving the Commission a leading role and allowing decisions to be taken by qualified majority. In practice, this means that it is considerably easier to adopt economic policy measures than to advance foreign policy initiatives at EU level (Freudlsperger & Meunier, 2024).

The challenges arising from this division extend beyond formal decision-making procedures to the underlying negotiation dynamics. Unanimity grants smaller Member States a disproportionately strong capacity to advance national interests by threatening to veto CFSP decisions. Cyprus blocked sanctions against Belarus in 2008 to extract concessions on EU policy towards Turkey, while Hungary has in recent years repeatedly obstructed consensus on sanctions against Russia.

The EU's legal and institutional framework thus favours a liberal trade and investment policy and makes it more difficult to adopt foreign policy instruments that restrict trade and investment flows. Considering the Union's constitutional order—and in particular Article 21 TEU—this also explains why the EU has traditionally relied on the internal market as a carrot to pursue a value-based trade policy, aiming to export norms of democracy and the rule of law through economic integration. As Jarlebring notes in his contribution to this volume, the internal market functions as a powerful lever of the EU's market power.

In recent years, however, the liberal approach has come under increasing scrutiny. This shift can be traced to Commission President Ursula von der Leyen's 2019 State of the Union address, in which she pledged to lead a 'geopolitical Commission.' Since then, the European Commission has effectively used the common commercial policy to develop a toolbox of geoeconomic instruments designed to promote the EU's strategic interests and strengthen its global competitiveness (Weinhardt & De Ville, 2024). Striking a balance between a security-driven trade policy and outright protectionism—protect but not protectionism—has become an explicit guiding principle. Yet the EU faces challenges in this regard, as the

emerging geoeconomic paradigm sits uneasily with the legal and institutional foundations of the Treaties (Steinbach, 2023).

To understand the evolution of the EU's new geoeconomic trade policy, two structural factors are essential. On the one hand, China's economic and technological rise provides the geopolitical context for the narrative that intertwines economic interests with security concerns. On the other hand, the progressive broadening of the concept of security has given the Commission the necessary room to construct a geoeconomic toolbox largely within the framework of the common commercial policy (Freudlsperger & Meunier, 2024).

CHINA AND THE GLOBAL STRUGGLE FOR ECONOMIC POWER

China's economic and technological ascent is arguably the most significant driver of the shift towards a geoeconomic order. Following the Second World War—and particularly after the collapse of the Soviet Union—the stability of global economic liberalism rested largely on US dominance. Together with like-minded economies such as the EU and Japan, the US shaped the rules, norms, and institutions that continue to underpin free trade and cross-border investment flows (Ruggie, 1982). This liberal order created a unipolar world that both benefited from and guaranteed economic openness. As economic gains and technological capabilities diffused globally, however, China emerged as a formidable power, challenging the West across economic, technological, and military dimensions (Roberts et al., 2019; Naughton, 2018; Kroeber, 2020).

From the 1980s onwards, China attracted Western multinationals not merely because of low labour costs but also due to relative political stability and improvements in infrastructure and logistics. Its accession to the WTO in 2001 further accelerated growth. According to World Development Indicator data, average tariff rates on goods declined from 35 percent in 1990 to less than 5 percent by the mid-2020s. Yet China's trajectory has been distinctive compared to most other late industrialisers. Rather than transitioning sequentially from low- to high-value production, China retained a dominant position in labour-intensive industries such as textiles and garments while simultaneously becoming a leading producer of advanced technologies. This coexistence of mass, low-cost manufacturing, and high-tech production—sustained through state planning, subsidies, and industrial coordination—sets China apart from other middle-income economies (Kroeber, 2020; Lin, 2012).

China has also become a central actor in the extraction and processing of critical raw materials essential for global production, from semiconductors and solar panels to magnets, batteries, and defence technologies. According to the US Geological Survey (2025), China accounts for approximately 99 percent of global production of gallium and 78 percent of graphite. China further dominates global production of germanium. China's real strength, however, lies in processing and refining these materials. The US Energy Information Administration (EIA) estimates that China processes over 90 percent of the world's demand of graphite. In respect of raw materials where extractive capacity is less concentrated, such as lithium or copper, China nonetheless dominates the world's supply of refined materials, meaning that even raw materials mined in Chile or Australia are likely to end up in Chinese processing facilities. China accounted for approximately 53 percent of the world's battery materials export in 2023 (EIA, 2025). This deep integration along all levels of global supply chains has enabled China to position itself as a pivotal supplier of both low-cost consumer goods and high-value strategic materials—making Chinese inputs almost ubiquitous in global value chains (Jepson, 2020). The escalating trade war with the US under the second Trump administration illustrates further that China is well-equipped to employ this dominance strategically by limiting the global supply of permanent magnets, lithium batteries, and related raw materials and production equipment with the help of extensive export controls.

Since the early 2000s, China's share of global GDP has grown steadily, while that of the US and the EU has declined. Despite persistent challenges—weak intellectual-property protection, forced technology transfers, and extensive industrial subsidies—China's vast consumer market remains a powerful magnet for foreign investors. Its deep integration into global supply chains has, to some extent, offset structural inefficiencies, cementing its role as an indispensable hub in the world economy.

By the mid-2010s, however, China's economic policy under Xi Jinping began to shift from export-driven growth towards strategic self-sufficiency. Since its 'Made in China 2025' initiative Beijing has focused on a set of strategic sectors and technologies, such as semiconductors, artificial intelligence, robotics, and biotechnology. Concepts such as military-civil fusion aim at engaging all levels of society by creating integrated partnerships that ensure that indigenous innovation and technology benefits China's strategic interests. The drive to expand indigenous innovation capacity and technological self-sufficiency is continuously reflected in the

preparatory works of the upcoming five-year plan (MOFCOM, 2025). Other initiatives such as the Innovation-Driven Development Strategy, adopted in 2026, are part of a broad push to implement the Made in China 2025 goals and achieve global leadership in frontier sectors.

Since 2020, the so-called dual circulation strategy has reinforced this trajectory by prioritising domestic demand and self-reliance while tightening market access for foreign firms. The aim is to reduce dependence on foreign technology and consolidate control over strategic sectors. Simultaneously, the Belt and Road Initiative (BRI) has become a key instrument for projecting China's economic influence abroad. Chinese firms dominate mining operations and major infrastructure projects, including telecommunications networks, across Africa, Asia, and even Europe, furnishing China with both physical control over strategic infrastructure and economic leverage (Bennon & Fukuyama, 2023; Doshi, 2021).

China's rise is especially significant because it presents an alternative model to Western liberal capitalism—a system of state capitalism that challenges the foundational principles of the liberal international order (Meunier & Nicolaidis, 2019). The Chinese state's strategic use of industrial policy and its control over finance and technology acquisition have accelerated innovation, narrowing the technological gap with the US. China's investments in 5G, artificial intelligence, quantum computing, and green technologies have made it a central actor in the competition for global technological leadership (Capri, 2025). As Zhang (2025) notes, however, China's ambitions are about ensuring self-sufficiency, productivity growth, and ultimately regime legitimacy—goals that render technology a means rather than an end in itself.

Militarily, China has also become more assertive, particularly in its posture towards Taiwan and the South China Sea, where it has constructed military installations on artificial islands in disputed waters. These developments directly challenge the US-led security architecture in Asia and illustrate the deliberate fusion of economic and military strategies in Beijing's quest for global influence (Doshi, 2021).

Optimism that China's integration into the global economy would eventually transform the country into a market economy has steadily eroded and so has the assumption that economic openness would foster a process of democratisation (Jefferies, 2020; Tsai, 2005). Instead, China's rise has coincided with a tightening of political control and the consolidation of an alternative state-capitalist model.

In the US, this disillusionment has been accompanied by a decisive shift in both rhetoric and policy. During the first Trump administration, China was officially labelled a ‘revisionist power’ and a ‘strategic competitor’ employing ‘predatory economics.’ In 2018, Washington imposed tariffs on Chinese steel and aluminium imports under Section 232 of the US Trade Expansion Act, invoking national security—a justification subsequently challenged by China at the WTO. The US, however, defended the measures under the GATT national security exception, marking a significant departure from the norms of restraint that had previously governed the use of such clauses (Bown & Keynes, 2020; Heath, 2021).

The Biden administration largely maintained—and in some areas intensified—this geoeconomic stance, extending export controls and introducing new tariffs on green technologies, electric vehicles, and potentially on ship-to-shore cranes where Chinese firms dominate the US market. Parallel developments in Japan, Australia, South Korea, and Canada reveal a broader trend among advanced industrial democracies towards securitising trade and investment policy (Blackwill & Harris, 2016; Nye, 2020). During his second term, President Trump has further expanded the strategic use of trade and investment instruments as tools of economic statecraft. His administration has temporarily imposed import tariffs of up to 145 percent on Chinese goods and introduced cargo fees on Chinese vessels, while simultaneously tightening export controls on advanced semiconductor technologies and extending outbound investment screening to emerging sectors such as autonomous vehicles. Notably, Trump’s second-term trade policy has not been limited to China. Through extensive executive action, his administration has implemented far-reaching tariffs and other restrictions on trade and investment under the banner of national security, targeting partners and competitors alike. These measures reflect an effort to reassert US economic power globally and to reconfigure international trade relations around a vision of national industrial and technological primacy.

Taken together, these measures reflect a paradigmatic shift away from the liberal belief in trade as a source of mutual gain towards a more conflictual logic in which economic interdependence is framed as a potential strategic vulnerability. The growing perception of China not merely as an economic competitor but as a systemic rival has recast its rise as a direct challenge to US hegemony and, by extension, to the EU’s global economic and security position (Meunier & Nicolaïdis, 2019; Doshi, 2021). For the EU, China has historically been both a vital trade partner and a

major source of investment. Member States, however, have long been divided on how strongly to respond to China's growing influence. Germany, for instance, has often advocated caution due to its deep export exposure—particularly in the automotive sector—while others have favoured a more assertive stance. This divergence has hindered the emergence of a unified and timely European response. The negotiations on the Comprehensive Agreement on Investment, concluded in principle in 2020 under the German Council Presidency, epitomised this tension. Talks were ultimately suspended after Beijing imposed sanctions on Members of the European Parliament in retaliation for criticism of human rights abuses in Xinjiang.

Concerns about China's expanding footprint in Europe—illustrated by acquisitions such as the port of Piraeus and the German robotics firm KUKA—have exposed strategic vulnerabilities in the European economy. This realisation prompted a political shift in the Member States and led the EU to tighten its trade-defence and investment-screening instruments. Although the Commission had proposed such measures as early as 2013, resistance from several Member States delayed adoption. By 2017, however, consensus began to form, driven partly by the risk that China would automatically obtain market-economy status under its WTO accession protocol, which would have weakened the EU's flexibility to investigate anti-competitive practices. That same year, then-Commission President Jean-Claude Juncker declared that the EU was 'not a naïve free trader,' signalling a shift towards a more defensive and strategic trade policy (European Commission, 2017). Under Ursula von der Leyen's leadership, the Commission has advanced this shift further, as it was gradually equipped with a comprehensive geoeconomic toolbox (Gehrke, 2022).

The EU's 2019 Strategic Outlook on China explicitly identified China as simultaneously a 'partner,' an 'economic competitor,' and a 'systemic rival' (European Commission, 2019). This framing reflects the EU's evolving geoeconomic orientation to manage the risks of asymmetric interdependence while preserving engagement where mutual benefit remains possible. High Representative Josep Borrell observed in 2024 that 'economic interdependency in which our project was based is being captured by political and geostrategic rivalries' where 'interdependency became a weapon, and it obliged us to think differently' (Council on Foreign Relations, 2024). The coercive measures imposed on Lithuania in 2021 vividly demonstrated the geopolitical risks inherent in deep economic entanglement with China.

In sum, China's rise—and the intensifying rivalry between Washington and Beijing—has forced the EU to recalibrate its trade policy. The Union now faces the challenge of maintaining competitiveness while safeguarding strategic interests, as it navigates an increasingly complex and multipolar global order.

(RE)DEFINING SECURITY

If the emerging geopolitical order entails a closer linkage between trade policy and security interests, then understanding what the concept of 'security' encompasses becomes essential. It is important to acknowledge that security is a social construct in that its meaning is intrinsically shaped by political narratives that respond to perceived external threats and evolving policy needs (Baldwin, 1997; Heath, 2021). Traditionally, security has been associated with military and defence concerns—that is, with national security. In this classical understanding, threats are tangible and clearly identifiable, typically involving direct physical harm or the risk thereof, which justifies the use or threat of military force (Buzan et al., 1998).

Over the past decades, however, the concept of security in international politics has expanded substantially to include a far broader and less clearly defined set of interests. This widening of the security agenda can be explained by three mutually reinforcing trends.

The Rise of Transnational, Non-traditional Threats

First, the emergence of transnational threats without a clear adversary has transformed how security is understood. Issues such as climate change and migration are increasingly discussed through a security lens. The EU has long integrated sustainability requirements into its trade and investment agreements to mitigate climate change and meet its commitments under the Paris Agreement. What is new is the framing of climate change not merely as an environmental concern but increasingly as a risk to national and international stability—a shift that has given rise to the concept of climate security (Thomas, 2017).

Within the European Commission, this linkage between climate and security is now a recurring theme: climate change is understood as a threat to health and wellbeing, a driver of migration and pandemics, and a catalyst of social unrest that can undermine global peace and stability. From a trade and investment policy perspective, this connection implies that

climate action has become a matter of geopolitical competition. As discussed in the previous chapter, the geoeconomic turn means that economic policy increasingly prioritises relative rather than absolute gains. Within this framework, ambitious climate measures can be perceived as a risk to the EU's global competitiveness if other major economies do not adopt comparable standards.

The 2021 EU trade strategy explicitly addressed this tension by linking climate policy to competitiveness and security (European Commission, 2021). Likewise, the 2023 European Economic Security Strategy emphasised the need to respond to such risks by diversifying energy supplies and strengthening cooperation with like-minded partners to guard against the potential security consequences of climate change (European Commission, 2023a). Throughout the 2020s, the EU faces greater difficulty in using its market power to shape global regulatory standards; it has increasingly resorted to unilateral measures that integrate sustainability concerns from a competitiveness perspective. Mechanisms such as the Carbon Border Adjustment Mechanism (CBAM) aim to prevent carbon leakage by imposing levies on imports that fail to meet EU environmental standards. The interlinkage between climate, competitiveness, and security thus reveals how climate policy itself has become an integral element of the EU's broader geoeconomic strategy (Weinhardt & De Ville, 2024; Buylova & Nasiritousi, 2024).

Reassessing Interdependence as Vulnerability

Second, mutual economic interdependence is now increasingly perceived as a source of vulnerability rather than strength. In a geoeconomic order, states that occupy central positions in global value chains can exploit these dependencies to exert economic coercion. As highlighted earlier, the EU and its partners are reassessing their exposure to external production networks by diversifying supply chains and incentivising reshoring or near-shoring of manufacturing capacity (Farrell & Newman, 2019; Nye, 2020).

Security risks in the 2020s arise across a widening range of technologies—from digital platforms and electric vehicles to advanced dual-use technologies and critical raw materials. Although China features prominently in political narratives as the main security risk, smaller economies that control key segments of global supply chains—especially in critical minerals—can also exercise considerable leverage. The broadening of the

security concept therefore extends the range of trade and investment flows that may fall under security reviews and potentially restrictive measures.

Moreover, economic security is increasingly understood not only as autonomy from external dependence but also as the possession of sufficient economic strength to project political and even military influence globally. Since ‘economic security’ lacks a universally accepted definition, it can thus easily be invoked to justify market-regulating measures through a security lens (Heath, 2021). The EU’s 2023 Economic Security Strategy underscores this trend by advocating policies to secure critical raw materials and technologies, strengthen technological sovereignty, and deter economic coercion by foreign actors (European Commission, 2023a, 2023b). As the next section will illustrate, many instruments in the Commission’s emerging geoeconomic toolbox serve precisely this function—regulating market relations in the name of security.

The Increasing Complexity and Interconnection of Global Threats

Third, the complexity and interconnectedness of global risks—ranging from cyber threats and technological dominance to foreign control of infrastructure—have blurred the line between economic and national security. Trade and investment policy must now include safeguards against digital espionage, technological dependency, and economic coercion (Heath, 2021). This includes protecting both digital and physical infrastructure from foreign interference. The EU’s Framework for Screening of Foreign Direct Investments (FDI Screening Regulation) embodies this concern. Foreign investments in strategic sectors and critical infrastructure are increasingly scrutinised to prevent potential control by state-controlled actors. The restrictions imposed by several EU Member States on Huawei’s 5G equipment—owing to its perceived ties to the Chinese state—illustrate how security considerations have become deeply embedded in investment policy. Both the 2021 trade review and the 2023 Economic Security Strategy call for further strengthening of FDI screening and the protection of critical infrastructure (European Commission, 2021, 2023a).

While security has always been present in trade policy, the widening of the concept challenges the foundations of the multilateral system, particularly the WTO. The imposition of tariffs on steel and aluminium, and, more recently, kitchen furniture, by the Trump administration under the banner of ‘national security’ raises concerns that GATT Article XXI may now serve as a pretext for protectionist measures, thereby eroding

confidence in what is left of the rules-based order. Although several countries, including the EU, have challenged these measures, the paralysis of the WTO Appellate Body since 2019 has left enforcement largely dependent on political rather than legal discretion (Bown & Keynes, 2020).

Implications for the EU

As seen in the previous section, the fusion of trade, investment, and security is also evident in the EU's evolving relationship with China. Growing awareness of the security risks associated with China's economic and technological ambitions has led the EU to adopt new trade instruments to protect its strategic interests (Bauerle Danzman & Meunier, 2023). The strengthening of the Union's trade-defence and investment-screening mechanisms is thus both a response to China's assertive economic statecraft and a reflection of a broader redefinition of security (Herranz-Surallés et al., 2024).

As China has become more confident in using economic policy to pursue geopolitical objectives, the EU's understanding of security in trade has fundamentally changed. The Union must balance the protection of its economic interests with the imperative of reducing strategic dependencies, particularly in critical technologies (Freudlsperger & Meunier, 2024). Initiatives to enhance technological sovereignty, diversify supply chains, and shield critical infrastructure from foreign control demonstrate how security considerations have moved to the core of EU trade and investment policy. The Commission's Economic Security Strategy embodies this evolution by integrating trade, investment, and security into a coherent framework designed to address the challenges of the new geoeconomic order.

The EU thus faces the task of developing its toolbox in a manner that manages this broad spectrum of security concerns without undermining its foundational commitment to openness and multilateral cooperation (Steinbach, 2023). At the same time, the Union must navigate complex institutional arrangements in which trade and security policies increasingly overlap while Member States' interests diverge. Because national security remains, under Article 4(2) TEU, a prerogative of the Member States, institutional fragmentation is a constant risk. Moreover, trade and security matters are rarely handled by the same ministries, either at EU or at national level, leading to coordination problems and inefficiencies.

Security concerns will inevitably override economic interests. Yet as the scope of ‘security’ widens and a growing share of global trade becomes subject to security-based scrutiny, the risk of trade-restrictive outcomes increases. To address these challenges, the EU must develop clearer criteria for integrating security into trade policy without eroding the liberal-market foundations that underpin both the internal market and the Union’s external economic relations. Achieving this balance requires deeper coordination between EU institutions and Member States to ensure a consistent and credible approach—particularly in managing relations with an increasingly assertive China.

MAPPING THE EU’S GEOECONOMIC TOOLBOX

The transformation of the European Union’s trade and investment policy can be most effectively analysed through a theoretical framework that categorises the instruments comprising the EU’s geoeconomic toolbox along two principal dimensions. The first distinguishes between defensive and offensive purposes. Defensive instruments are designed to safeguard the Union’s strategic interests—such as security and market stability—whereas offensive instruments aim to enhance the EU’s competitiveness or to advance policy objectives beyond the Union’s borders. The second dimension differentiates between sanctions-based and incentive-based mechanisms. Sanctions-based instruments impose economic costs on foreign or domestic actors to deter undesirable behaviour, while incentive-based instruments promote desired actions through positive inducements, for example, by encouraging investment in strategic sectors. Both sanctions and incentives may thus target actors inside or outside the Union.

This model, developed by Bauerle Danzman and Meunier (2024), provides a conceptual basis for understanding how the EU designs and applies its economic instruments in response to new geopolitical challenges. According to this framework, the Commission’s policy tools can be classified into four main types: offensive incentives, offensive sanctions, defensive incentives, and defensive sanctions. This taxonomy illustrates the evolving tension between the EU’s traditional commitment to multilateralism and its increasing reliance on unilateral geoeconomic measures (Roberts et al., 2019). Weinhardt and De Ville (2024) propose a different approach, suggesting that EU instruments primarily pursue three overarching goals—security, competitiveness, and sustainability. In this chapter, however, the argument advanced is that the broadening of the security

concept itself has led to a convergence between these goals, as competitiveness and sustainability have increasingly become integrated into a wider security paradigm. No analytical distinction is therefore made between these objectives.

Building on the model outlined above, EU instruments may also be situated along a spectrum from central to peripheral. The further an instrument is located from the centre, the more indirect its relationship to trade and investment policy. Central instruments are those directly based on Article 207 TFEU, while peripheral instruments draw upon other policy domains such as environmental, industrial, or the internal market, where trade effects are perceived to be indirect. Categorising the EU's legislation in this manner helps illustrate how the Union strategically employs trade and investment policy to pursue foreign-policy objectives.

Defensive Instruments

Defensive sanction instruments play a particularly important role in protecting the Union's strategic interests, as they enable the restriction of trade and investment flows and limit access to the internal market. These measures are, however, also the most far-reaching, since they carry a higher risk of retaliation and may escalate trade tensions, potentially straining the Union's international relations. The most prominent examples in this category are the FDI Screening Regulation, the Foreign Subsidies Regulation (FSR), and the Anti-Coercion Instrument (ACI). The FDI Regulation provides a framework for Member States to establish national mechanisms to review, condition, or prohibit investments that may pose security risks. It is clearly both defensive and sanctions-based, as it restricts access to the EU market for foreign investors, particularly in sectors sensitive to national security. The FSR addresses distortions on the internal market caused by subsidies granted by third countries, which threaten fair competition within the EU. By imposing corrective measures on firms that benefit from such subsidies, the regulation protects the level playing field among economic actors within the Union. The ACI, in turn, is designed to deter and respond to economic coercion by third countries, granting the EU the ability to unilaterally adopt countermeasures (Steinbach, 2023). It therefore embodies a defensive and sanctions-oriented function, reflecting the recognition that economic dependencies can be exploited for geopolitical leverage (Freudlsperger & Meunier, 2024).

Defensive incentive-based instruments, such as CBAM and the Deforestation Regulation, are designed to promote compliance with environmental standards through economic incentives rather than prohibitions. CBAM, grounded in Article 192 TFEU, ensures that foreign producers adhere to EU environmental standards by imposing costs on carbon-intensive imports, while the Deforestation Regulation restricts the import of products linked to deforestation unless strict due diligence requirements are met. Although both measures create economic costs, their primary function is to incentivise alignment with EU standards rather than to sanction non-compliance (Buylova & Nasiritousi, 2024). In both cases, access to the internal market is used as leverage to promote regulatory convergence.

Offensive Instruments

On the offensive side, the International Procurement Instrument (IPI) constitutes the only major example of an offensive sanctions tool. It is based on the principle of reciprocity and allows the EU to restrict access to its public procurement markets for economic operators from countries that maintain closed or discriminatory procurement systems. The IPI is offensive in that it seeks to improve market access for EU firms abroad, while using access to the internal market as leverage to incentivise other countries to open their own procurement regimes.

Offensive incentive mechanisms include the Critical Raw Materials Act, the Chips Act, and the Green Deal Industrial Plan. These initiatives seek to strengthen the EU's industrial and technological base and to reduce reliance on foreign suppliers. By encouraging investment and innovation in key sectors—such as green technologies and supply chains for critical materials—they aim to foster resilience and strategic autonomy (European Commission, 2023a, 2023b). These measures operate through positive economic stimuli, combining internal-market competences with industrial and environmental objectives.

A Balancing Act

The simultaneous use of central and peripheral instruments reveals the European Union's effort to balance its commitment to a rules-based multilateral order with a more assertive and strategically autonomous posture. Through its common commercial policy, the EU has primarily introduced

defensive, sanctions-based instruments that directly regulate trade and investment flows to safeguard strategic interests and strengthen security. Peripheral instruments, by contrast, have broadened the EU's geo-economic toolbox by incorporating environmental, industrial, and internal-market policies, thereby allowing the Union to pursue goals of resilience and sustainability beyond the traditional remit of trade policy.

Central instruments such as the FDI Screening Regulation, the FSR, and the ACI are inherently unilateral and trade-restrictive, offering immediate protection and deterrence against perceived security risks. Yet their proliferation also entails risks as they are likely to provoke retaliatory measures from global partners, complicate trade relations, and invite scrutiny under WTO disciplines (Steinbach, 2023). Their dominance reflects the EU's view that today's principal security vulnerabilities are rooted in trade and investment interdependence.

Peripheral instruments, typically incentive-based, operate through positive inducements rather than restrictions. Mechanisms such as CBAM, the Chips Act, and the Green Deal Industrial Plan aim to reinforce long-term sustainability, technological sovereignty, and supply-chain resilience within a multilateral framework. However, these measures also carry trade-offs as high compliance costs, the potential for internal-market fragmentation, and pressure on developing-country trade partners underscore the distributive implications of the EU's emerging industrial strategy.

Taken together, the growing reliance on defensive, sanctions-type tools suggests that trade has increasingly become the stick in the EU's geo-economic strategy, with even incentive-based measures having far-reaching punitive effects on third countries. This deliberate repurposing of trade policy as an instrument of security represents a significant departure from the Union's traditional focus on multilateral liberalisation and cooperative market opening. It reflects an evolving balancing act—between openness and autonomy, deterrence and cooperation, sanctions and incentives—through which the EU seeks to navigate an international environment increasingly defined by strategic competition and security concerns (Bauerle Danzman & Meunier, 2024; Weinhardt & De Ville, 2024).

FROM OPEN STRATEGIC AUTONOMY TO ECONOMIC SECURITY

The emergence of ‘open strategic autonomy’ as a guiding principle for EU trade policy can be traced to the European Commission’s preparatory work for the Trade Policy Review published in 2021. A concept that originally drew on debates in the CFSP and the Common Security and Defence Policy (CSDP)—strategic autonomy—was adapted to the trade domain with the help of ‘open’ as a qualifier (Herrmann, 2023). This formulation marked a significant reorientation as it signalled a managed trade-off between building autonomous capacities in strategic sectors and preserving the EU’s commitment to multilateralism and open markets (Steinbach, 2023). Within the Commission, and particularly in DG Trade, the inclusion of the term ‘open’ was deliberately chosen to reassure stakeholders and to temper concerns that a shift towards protectionism was underway (Gehrke, 2022). In the 2021 Trade Policy Review, OSA was placed at the centre of the Union’s trade strategy, creating a policy framework within which the Commission could justify more unilateral, security-oriented trade instruments. By anchoring these measures in Article 207 TFEU, the Commission leveraged its exclusive competence under the common commercial policy to advance a distinctly geoeconomic agenda (Herrmann, 2023; Meunier & Nicolaïdis, 2019; Bauerle Danzman & Meunier, 2024).

To integrate security considerations more deeply into trade, the Commission progressively articulated a plethora of flexible concepts—‘economic security,’ ‘level playing field,’ and several forms of ‘sovereignty,’ including digital, technological, and supply-chain sovereignty—together with the language of diversification and de-risking (Steinbach, 2023). These notions were explicitly linked to the overarching goal of achieving OSA and were used to justify specific trade policy measures (Rosèn & Meunier, 2023). ‘Economic security,’ for instance, became a central organising principle for reducing strategic dependencies and securing critical supply chains amid rising geopolitical tensions and growing exposure to economic coercion (European Commission, 2023a, 2023b; Roberts et al., 2019).

The FDI Screening Regulation illustrates the strategic use of OSA particularly clearly. During its drafting, there was substantial debate over the appropriate legal basis: Article 207 TFEU (trade) or Article 63 TFEU (capital movements to and from third countries). Adopting Article 63 would have placed the regulation under shared competence, increased the

need for intergovernmental consensus, and limited the Commission's role. Ultimately, the regulation was adopted under Article 207 as a framework measure on the grounds that it did not harmonise national screening systems but rather established a coordination mechanism among Member States for reviewing FDI. This decision gave the Commission a foothold in security-related aspects within the common commercial policy while preserving Member States' prerogatives in national security (Steinbach, 2023). The 2025 reform of the FDI Regulation, which seeks to expand the regulation's scope and partially align national screening mechanisms, lays bare the calculated effort to consolidate the Commission's previously contested authority at the trade-security interface (Bauerle Danzman & Meunier, 2023).

Other concepts have also been tied to OSA to reinforce the Commission's broader geoeconomic strategy. The 'level playing field' discourse has provided a justification for regulating global competitiveness in the name of security and fairness. The FSR targets firms that receive third-country state support, which distorts competition on the internal market. By investigating such firms and, where necessary, imposing redressive measures, the regulation not only safeguards fair competition but also promotes economic security by preventing undue foreign influence in strategic sectors (Herrmann, 2023; European Commission, 2023a, 2023b). Similarly, CBAM aligns with OSA by ensuring that EU environmental standards do not disadvantage European industries globally. Together, these instruments support a narrative of 'sustainable competitiveness,' where market openness is balanced with strategic autonomy through rules that internalise externalities and address asymmetric trade relationships (Buylova & Nasiritousi, 2024).

The Commission also framed multiple sovereignty claims—digital, technological, and supply-chain sovereignty—on OSA's conceptual foundation. These highlight the need to secure control over critical infrastructures, technologies, and supply chains essential for economic independence and resilience. 'Technological sovereignty' is exemplified in the European Chips Act and the Critical Raw Materials Act, which aim to strengthen domestic capacity in semiconductors and critical inputs, reduce dependence on external suppliers, and consolidate technological leadership (European Commission, 2023a, 2023b; Weinhardt & De Ville, 2024). In parallel, 'de-risking' and 'supply-chain diversification' have emerged as tactical components of OSA, particularly in relation to China. De-risking seeks to reduce strategic dependencies without severing economic ties,

acknowledging the complexity of global interdependence. This pragmatic approach is evident in instruments such as the ACI and the amended Trade Enforcement Regulation, which provide tools to counter economic coercion while maintaining engagement with major partners (Bauerle Danzman & Meunier, 2024).

Peripheral instruments—most prominently the Chips Act, the Critical Raw Materials Act, and the Green Deal Industrial Plan—complement these central trade tools by aligning with the autonomy objectives established under OSA. Although they rest on different legal bases, notably Articles 114 and 173 TFEU, they share the aim of reducing dependencies in critical sectors and securing resilient supply chains. Their coordination with the OSA framework reflects an increasingly complex governance dynamic that spans multiple policy areas but ultimately supports a common strategic purpose. This alignment creates coherence across different policy strands and, by linking them to core trade instruments, lends greater legitimacy to measures whose trade effects are indirect (Weinhardt & De Ville, 2024).

In sum, the Commission has leveraged its exclusive competence in trade to deploy OSA as a ‘portal’ concept through which a security perspective can be embedded within trade policy. By connecting OSA to flexible notions such as economic security, de-risking, and supply-chain diversification, it has effectively expanded the reach of the common commercial policy to meet new geoeconomic challenges. This calibrated approach has allowed the EU to navigate a rapidly changing international environment and to assemble a comprehensive geoeconomic toolbox—while maintaining a rhetorical and legal commitment to openness that anchors its strategy in the language of ‘open’ strategic autonomy.

CONCLUSIONS: SECURITY AT ALL COSTS?

The European Union’s trade policy has undergone a profound recalibration in response to global developments that have placed geoeconomics at the centre of international relations. This evolution marks a departure from the EU’s traditionally liberal orientation towards a more strategic use of trade policy as a tool for managing security challenges. The new geoeconomic approach increasingly relies on unilateral trade measures that, while addressing vulnerabilities, also test the boundaries of the post-war, rules-based international trade order.

This shift has been driven primarily by China's economic and technological rise and by the broader reconceptualisation of security to include economic and technological dimensions. The EU has responded swiftly by developing a suite of innovative instruments combining both defensive and offensive strategies, grounded in sanctions and incentives alike. Instruments such as the FDI Screening Regulation, the FSR, and CBAM serve multiple purposes: they protect the internal market, promote sustainability, secure strategic supply chains, and strengthen technological sovereignty.

Nevertheless, it is notable that the core instruments developed to address these new security challenges are predominantly defensive and sanctions-based. The prevalence of such measures suggests that EU trade policy now functions more as a stick than as a carrot. This represents a significant break from the earlier liberal paradigm that sought to promote economic cooperation by opening markets and integrating partners into a rules-based system. Over time, this orientation could erode the EU's reputation as a reliable actor within the multilateral trade regime and increase uncertainty in international trade relations. If security considerations become overly dominant, they may also dampen global economic integration and weaken the open trading environment on which the Union itself depends. For the EU, the turn towards geoeconomics has largely been a reactive process—one shaped by external pressures rather than deliberate design. Yet becoming a more assertive trade actor does not necessarily require an ever-expanding geoeconomic toolbox. An alternative path remains available, one in which the Union seeks to lead by example, demonstrating that openness and strategic awareness need not be mutually exclusive. Such an approach would underscore both the economic and security benefits of open, rules-based trade while resisting the drift towards framing all economic relations through the lens of great-power rivalry. For doing so, the EU and the Member States would have to choose the more complex path to navigate.

The Commission has demonstrated considerable strategic skill in constructing a political narrative centred on OSA, effectively establishing trade policy as a new arena for security governance. By doing so, it has been able to leverage its exclusive competence under Article 207 TFEU to implement security-related measures that would otherwise fall within the domain of CFSP, where unanimity among Member States would be required. Yet it remains uncertain whether the balance between openness and autonomy can be sustained. If the security rationale becomes too

pervasive, the EU's actions risk being perceived as protectionist rather than security-oriented, potentially prompting retaliatory responses from other major actors such as the US and China. It may therefore be time for a more balanced strategy—one that reintroduces a few carrots. Expanding the use of incentive-based instruments that foster positive cooperation with strategic partners could be crucial to ensuring that the EU continues to function as a driver of global economic stability and sustainable development.

To promote a more balanced use of trade policy in pursuing security objectives, several measures could be considered. First, clearer boundaries between market-regulatory and security-related actions are needed. Trade policy should not be treated as a universal instrument for pursuing foreign policy goals. Sharper differentiation between market regulation and security policy would mitigate the risk of overreach and enhance predictability—an essential condition for both European and international economic actors. Second, security assessments in trade and investment should be grounded in evidence and expert analysis. A security policy that is overly restrictive could undermine economic efficiency and innovation capacity, potentially harming the EU in the long run more than greater autonomy might benefit it. Cross-sectoral expert groups should therefore be involved in identifying and assessing security risks, ensuring that measures are proportionate and empirically justified. Third, the Union should establish an institutional safeguard against competence overreach. To ensure that the Commission does not extend its authority beyond the limits of the Treaties, mechanisms are needed to prevent the incorporation of security issues properly belonging to the foreign and security policy domain under the umbrella of trade policy. More systematic legal scrutiny of legislative proposals could help preserve institutional balance and ensure that trade policy remains confined to its intended scope.

These recommendations aim to ensure that the EU's geoeconomic strategy does not undermine its long-term commitments to sustainability, openness, and multilateralism. By clarifying the role of trade policy in security matters, strengthening the evidence base for decision-making, and maintaining institutional safeguards, the EU can remain a credible and effective actor in global economic governance while protecting its strategic interests in an increasingly uncertain world.

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CHAPTER 4

Can There Be Effective Industrial Policy on the EU Internal Market? The Role of Law in a Time of Geopolitical Competition

Love Rönnelid

GEOPOLITICAL CHANGE AND INDUSTRY POLICY IN THE EUROPEAN UNION

This chapter analyses the relationship between the rules of the European Union's (EU) internal market and the most historically successful strategies for industrial policy. In particular, it focuses on the tension between the legal framework of the internal market and the new political demand to expand EU industry policy. The East-Asian programmes for industry policy are highlighted as historical forerunners and are used as a point of reference for the analysis. Some of the main features of these political economies are examined to enable comparison with the legal solutions inherent in the internal market's overarching regulatory structure. The aim is to contribute to a reflexive discussion about the role of internal market law in an era of industrial policy.

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There are fundamental differences between the law of the internal market and historically successful industry policy. In particular, the legal configuration of the internal market makes it difficult to discipline private actors, centralise industry policy within the Union, and recover public investment when industry policy has proven successful. It also creates litigation risks due to current interpretations of non-discrimination. While discussions about and changes to public procurement and state-aid rules are ongoing, they are far from the sort of reorganisation necessary to create policy space in order to emulate previous success stories. A key question is whether continent-wide industry policy can be made effective without fundamentally reorganising the internal market with its basis in the four freedoms. As EU leaders have often placed great faith in the internal market, not only as a tool for economic engineering but also as a means of supporting peace and democratisation, a debate about creating effective industry policy capacity on the continent will also require grappling with these ideas. Finally, as EU law has served to depoliticise the internal market (by shifting power to decision-making through law), undoing this strategy will open up a plethora of underlying political tensions that have until now been suppressed by the structure of the internal market.

It has become commonplace to argue that the geopolitical climate of the 2020s has put the EU in a difficult position. Several factors have contributed to the discussion about a reformed and more active type of industrial policy in Europe, not least the effective use of industry policy in countries that are faring better than the EU economically. As a successor to the earlier East-Asian developmental model, China operated famously intense industry policy before, during, and after its integration into the global economy. As the leading manufacturer in many large sectors, the Chinese economy has been portrayed as a threat to the EU. In the US, politicians on both the political left and right have pushed for more active industry policy, and both the Biden and Trump administrations have carried out such shifts. US regulations that aim to support green energy (The Inflation Reduction Act) and semiconductors (The CHIPS and Science Act) have changed the industrial playing field, both in the US and in the EU. Sometimes as direct reactions to the Chinese and US initiatives, discussions in the EU on industrial policy have intensified and certain policy initiatives have been initiated.

There are three main rationales for industrial policy: in situations when a country is far from the technology frontier, to enable pushing ahead in

developing a new technology, or to develop domestic capacity for security reasons. The first rationale concerns situations when industry policy aims to emulate valuable economic activities that already exist elsewhere. The aim is to catch up with more advanced economies. This, of course, is a primary argument for industrial policy in developmental contexts (Meier, 2004). For the EU, this rationale is particularly strong when the Union wants to catch up and develop central technologies that exist in more advanced forms elsewhere (perhaps with respect to semiconductors, green technology, or platforms for e-commerce). The second rationale applies when public policy aims to develop yet unavailable technologies, where the private sector is unwilling or unable to allocate resources for them. Historically, this has involved state-supported research in military and space technology, but also state-led development to foster green technology (Mazzucato, 2013). With respect to the EU, this might involve industry policy to trigger technology shifts needed for the green transition or to develop regional technological capacity in the defence sector. The third rationale for industrial policy is the perceived need to develop domestic capacity within an area for reasons of self-sufficiency. Following the pandemic of 2020 and Russia's full-scale invasion of Ukraine in 2022, there have been calls for increased European self-sufficiency (strategic autonomy) with respect to the capacity to produce medical equipment, vaccines, and defence materials, for example.

This chapter takes the approach of investigating the rules of the internal market as 'background conditions' (see Hale, 1923; Samuels, 1972; Kennedy, 1991) that are likely to affect the Union's capacity to carry out the kind of industry policy discussed above. The goal is to examine the fundamental characteristics of EU law, which are often taken for granted, to understand its relationship to industrial policy. To elucidate how the law of the internal market might affect EU capacity for industry policy, the chapter draws on Wilhelm Röpke's thinking. Röpke was a leading thinker in the mid-twentieth century, who was influential in shaping the law of the internal market. Returning to his scholarship helps outline the overarching strategy inherent in the construction of the internal market. Additionally, the chapter employs Morris Cohen's classic analysis of the interplay between property and sovereignty to the rules of the internal market (Cohen, 1927 with a large secondary literature). His analysis allows showing how property and sovereignty requires each other and should be viewed as a sliding scale. Tools in this tradition can be used to understand how property and sovereignty interact, particularly how extensions of

private rights may limit the capacity of the public sector to act (see further Kennedy, 2013).

The chapter indicates structural challenges inherent in switching to active industry policy under the present legal configuration of the internal market. First, it details some of the main characteristics of the law of the internal market in the EU. Second, to demonstrate how these characteristics constrain effective industry policy, it uses North-East Asian economic models as a point of comparison. These political economies are widely regarded as key cases of successful industrial policy (e.g., Ainiger & Rodrik, 2020; Cimoli et al., 2015). The chapter focuses on the historical periods when these ‘tiger economies’ experienced rapid growth, as well as the years immediately preceding them (as this is when the groundwork is often said to have been laid). Third, it discusses potential and ongoing changes to EU law that are being undertaken with a view to make room for industrial policy, and contrasts these adjustments with the historical examples. Finally, it reflects on why changes to enable industry policy might be hard in the political climate of the EU.

Even as documents such as the Draghi report have indicated problems for the European economy (Chang, 2025), it is still common to see the rules of the internal market as a part of the solution for the economic predicament of the Union. In addition, there are strong normative ideas vested in the legal construction of the four freedoms. For instance, the internal market is often imagined as a peace project through economic interdependence or as an economic tool for democratisation. The coupling of such normative ideals with the internal market might render reform more difficult than it would otherwise have been. Nevertheless, comparing the present legal rendition of the internal market to the successful industry policies of the past can help indicate ways forward for an EU that chooses to create space for effective industry policy.

THE INTERNAL MARKET AND ITS UNDERLYING LEGAL STRUCTURE AND LEGITIMATION

The EU is to a large extent a political entity constructed through law and exercising power through rules. It is common to highlight that the Union is a creature of law or a ‘community of law’ (European Parliamentary Research Service, 2017). Relative to the combined GDP of the Member States, the budget of the Union is not decisive and its military power is not

concentrated. Rather, the Union's power operates through rules in domestic agencies and courts. Also, in its external relations it is common to portray the EU as largely projecting power legally, for example through the 'Brussels effect' (e.g., Ylönen, 2025). In sum, EU power is largely judicialised and decentralised to technical experts in various domains.

The legal nature of the EU's power stems from how legislation is created in the Union as well as the power granted to courts, in particular the Court of Justice of the European Union (CJEU). Many of the Union's legislative competences aim to give effect to the four freedoms, and other legislation is also often evaluated according to its effect on free movement. The central Ordinary Legislative Procedure is intended to craft compromises between the Commission, the European Parliament, and the Council. This often leads to open-ended provisions, making it hard to challenge the later interpretations of the CJEU. Prominent academic works in both legal and political scholarship have described the emergence of the EU as a process where the CJEU has gradually expanded the effectiveness of the rules that construct the internal market (Weiler, 1991; Alter, 2003). Private parties can challenge domestic legislation to assert wider economic freedoms under EU law. Additionally, domestic courts can submit legal questions to the CJEU on behalf of individuals and corporations through the system with preliminary rulings. Thus, this system affords private parties the power to challenge domestic regulation in order to protect their economic interests and to affect the development of EU law. Using Cohen above, it makes sense to say that the Union's legal structure strengthens property at the expense of sovereignty.

A significant idea within the European project has been that economic integration will drive political integration. Since at least the Coal and Steel Community, it has been argued that aligning the economies of Europe would decrease the risks of conflict. This has led to a system where the four freedoms of people, goods, services, and capital have been given a semi-constitutional status. The regulatory strategy is frequently used to harmonise or approximate legislation, often with the underlying idea of achieving the economic ideal of efficient allocation of resources through the price mechanism. Over time, the *acquis* has expanded to include additional rules deemed necessary for the operation of the internal market, such as protective measures for workers and the environment. Such rules must also typically be justified based on how they affect free allocation of productive resources on the internal market under EU law. Together with competition law, the rules giving effect to the four freedoms make up the

core EU law of the internal market (for a detailed treatment, see Barnard, 2022).

Because EU law promotes free movement (and thereby economic allocation), the internal market is constructed so as to curtail governmental capacity to intervene in the economy. Two examples are the rules on public procurement and those limiting state aid. Both these areas of law aim to decrease the state's capacity to influence private decision-making in order not to disturb the price mechanism. By controlling how states procure goods and services and the extent to which public resources can support private activities, it is believed that resources will be more efficiently allocated leading to economic gains. This brief overview of the internal market already indicates that core areas of EU law are not ideally suited for active industrial policy. EU law often discourages public decision-making with a view to allow private initiative to flourish. It aims to expand the internal market by strengthening private rights and by decreasing sovereign decision-making power.

It is instructive at this point to take a retrospective look at Wilhelm Röpke's idea of how law should reduce sovereign capacity over the economy. His thinking can help illuminate the origins of the narrative through which the internal market has been viewed as a project for peace and democratisation. Röpke, an influential ordoliberal economist, is viewed as a key thinker behind the EU internal market. He advised leading European politicians such as Konrad Adenauer (Ptak, 2015) and his trilogy about international economic integration was read 'as a kind of bible' by thinkers when the early European project took shape (Foucault, 2004, p. 104). Like other thinkers in the ordoliberal tradition, Röpke focused on how rules should enable allocation through the price mechanism. Much ordoliberal thinking concerned how law could be used to constrain public influence over the economy (see Brabazon, 2017 for contributions on this topic). However, Röpke was the primary thinker in this tradition to theorise supranational law (Sally, 1998, p. 131). While it is widely acknowledged that EU law bears a significant imprint of ordoliberal thought (Dale & El-Enany, 2013; Deutscher & Makris, 2016), the relationship between ordoliberal judicialisation and successful industry policy is less well appreciated.

In his lectures at the prestigious Hague Academy, Röpke describes how he envisions international economic integration to enable increased influence of the price mechanism. He argues for law to curtail state sovereignty and in particular states' capacity to plan the economy. According to Röpke,

diminishing ‘national sovereignty is most emphatically one of the urgent needs of our time’ (Röpke, 1954, p. 250). A central part of this strategy was using international organisations to reduce domestic and supranational planning capacity. State capacity for supranational planning was called ‘excess sovereignty’ by Röpke (1954, pp. 249–250). His influential lectures spell out ways in which such sovereignty can be reduced legally (*id.*, p. 251 *et seq.*, discusses his ideas on European integration). He believed allowing such excess sovereignty in Europe would result in a ‘Continental “Grossraum” of sinister memory’ (Röpke, 1954, p. 242). Like other ordoliberal thinkers he thus connects the ability of the public sphere to steer the economy with authoritarianism (cf. Hayek, 1976 [1944]). For this reason, Röpke envisioned a European project that would constrain the ability to plan domestic economies and remove the ability to carry out planning on the regional level. He called this reduction of state capacity ‘depoliticisation’ (Röpke, 1954, p. 224).

This depoliticising power of law has arguably been central to the political success of the internal market. Since European decision-makers are allowed limited discretion over economic allocation, deeper cooperation has been easier to achieve in the residual domain. In this sense, legal depoliticisation of the internal market has likely contributed to the political success of the European project. Moreover, it is common to imagine the EU as a project for peace and democratisation, in line with a Röpkean vision about peace through an ungoverned economy. Such legitimisation lends an air of progressiveness to the European project, which might otherwise be perceived as technocratic. In a famous article, Joseph Weiler called such a strategy of legitimisation ‘messianic’. He considers it central, in addition to other more commonly discussed types of legitimisation, based on either the procedure or the outcome of rules (input and output legitimacy). Weiler highlights how this messianic legitimisation contributes political clout to the European project, but may become ineffective in the long run (Weiler, 2012). If one accepts that depoliticisation has enabled European cooperation, it is reasonable to ask how the prevalence of messianic legitimisation might affect the potential for ‘re-politicisation’. Perhaps the justification of the internal market as a tool for democratisation and peace could provoke opposition to changes that would reverse legal depoliticisation in order to enable greater economic sovereignty.

EAST-ASIAN INDUSTRY POLICY AND LEADING MODELS EXPLAINING ITS ECONOMIC SUCCESS

The most prominent examples of successful industrial policy derive from the experiences of East Asia. As mentioned above, these models are viewed as examples to emulate by leading thinkers. Below follows a description of some aspects of industry policy from the Japanese, South Korean, and Taiwanese models as developed in particular during the 1950s, 1960s, and 1970s, drawing on leading scholars (Johnson, 1982; Amsden, 1989; Wade, 1990). These models are also broadly similar to Chinese policy (see Qian, 2017).

One of the main characteristics of East-Asian development models was their relatively large state capacity to steer capital allocation: In Japan, the central bank had *de facto* control over the lending by private banks. In Taiwan, large state-owned companies wielded power in central sectors. In South Korea, the state seized control of most banks. Thus, while these countries built on private ownership, the state exercised decisive influence over which sectors were prioritised with respect to financing. For this reason, state power became decisive in many cases, since these were largely capital-scarce environments. Under these conditions, rules that were formally non-binding were often followed to remain in good standing to ensure access to future funding. This type of ‘administrative guidance’ also relied on the state’s numerous opportunities to influence firms, for example with regard to taxation, lending, access to foreign currency, or through the granting of licences and permits (see in particular Johnson, 1982). In such a climate, the state’s long-term economic orientation became a guiding framework for private firms, due to the risk of reprisals or the withdrawal of support if they were deemed not to contribute to the long-term economic strategy. Chinese industrial policy similarly required ‘insecure property rights’ (Qian, 2017). Thus, these legal systems prioritised state steering capacity over property.

All the countries mentioned gave economic support to targeted sectors. For example, the Taiwanese strategy targeted semiconductors and the South-Korean strategy targeted telecommunications. The exact form of support varied: state subsidies, favourable loans, protection from foreign competition, or tax rebates were all employed. In some instances, such advantages were paired with reciprocal demands at the outset. In other instances, the state imposed new requirements on sectors as the strategy developed. In these ways, state support or protection was combined with

counter-demands on private actors. The legal-institutional framework granted the state capacity to intervene and change conditions as the economic situation developed.

The degree of competition in a sector was often significantly affected by a number of state interventions. A sector that the state looked to develop was initially not subjected to full domestic or international competition. This perceived need to moderate the degree of initial competition was particularly evident in the Japanese strategy. The state aimed for moderated competition in sectors where it aimed to emulate a foreign technology. The idea was that domestic learning was necessary to compete with foreign firms using the mature technology. When a technology was sufficiently developed domestically, the initial protection and support would be phased out. At times, the state conditioned continued support on the emulation of further technology or on increased export. World markets were then used as benchmarks for quality and to ensure that products were competitive. Over time, support was phased out (Hausmann & Rodrik, 2003).

These countries crafted long-term strategies for developing targeted sectors. Sequencing support for relevant component technologies, materials, and subcontractors was necessary to enable technological leaps. This form of long-term strategy required powerful centralised administrative agencies. Because of their importance, power, and prestige, these agencies attracted top talent. The most famous example is probably the Ministry for International Trade and Industry (MITI), which played a decisive role in the Japanese economic strategy in the post-World War II era. To achieve such independence, these agencies were granted broad competences to implement reforms with significant discretion, and with limited legal oversight to review decisions (Ohnesorge, 2003; Boyd, 2003). Unlike the EU's strategy of expanding the internal market through private actors, these systems rarely provided opportunities for judicial review. The East-Asian systems emphasised state capacity over the rights of private parties. Using Cohen's terminology, these were political economies that allowed for more sovereignty and less strong property.

In terms of international commerce, all of these states were selective with respect to foreign direct investment and its integration into domestic economies. Japan and South Korea were generally restrictive with respect to foreign investment. While Taiwan and China adopted a more welcoming attitude, they instead at times imposed more stringent conditions on foreign companies. All of the relevant countries used tariffs to impose

trade protectionism at times. As previously discussed, however, such support was not permanent, but phased out once protection had allowed development of a sector (or failed to do so). Together, these policies enabled these economies to manage their connection to the global economy to some degree (Rönnelid, 2022).

In economic terms, the strategies combined import substitution with export promotion. Initial selective protectionism paired with subsequent export promotion enabled the transition to a system deemed to constitute free trade.¹ These countries made intense use of market mechanisms, but with a clear understanding of *how* these markets were to be constructed and employed. They used both regulation and deregulation, but not according to the taken-for-granted view that regulation always constrains corporations and that deregulation benefits them. Deregulation was applied to agencies intended to steer the economy. And while these states sometimes imposed hefty demands on corporations, they regulated entire sectors. Importantly, this did not mean that such corporations became unprofitable. To the contrary, many of them remain profitable decades later (such as Samsung or companies in the Taiwanese semi-conductor industry), in part through early state strategy, support, and finance. This brief explanation alone shows why commonplace dichotomies with respect to industry policy—such as market mechanisms versus planning, protectionism versus free trade, and regulation versus deregulation—should be reconsidered in serious discussions about industrial policy. Historical case studies reveal that focusing on these dichotomies obscures how and why these policies were successful. It is instead the skilful combination and execution of these aspects that explains their success. Central to this is the capacity to combine state planning with market mechanisms by extending advantages and pressuring corporations to employ new technologies or expand into new sectors.

Thus, the aforementioned strategies relied on market mechanisms, while putting rules in place that allowed the state to exercise control over the economy. Most explanations for this success emphasise the use of

¹The meaning of ‘free trade’ has changed significantly over time and is therefore something of a deceptive term. For example, Adam Smith is often read to chiefly have wanted to combat monopolies, while less concerned with tariffs. By way of contrast, the World Trade Organization system has focused heavily on reducing tariffs, while caring little about monopoly power. To the contrary, during the peak years of ‘free trade’ during the 1990s, it was considered to include the expansion of intellectual property rights—per definition a form of legal monopolies.

market-affecting rules that combine the ability to support and protect sectors with those enabling guidance and control over commercial actors. Leading commentators often employ the metaphor that these states successfully combined both sticks and carrots (e.g., Di Maio, 2009). In addition to the support granted to companies, these successful strategies differed from less successful versions of industrial policy in their capacity to remove support and impose discipline to ‘prune’ sectors (Hausmann & Rodrik, 2003). This is a central factor to remember when evaluating European suggestions for industrial policy at this geopolitical moment.

Perhaps the most influential explanation for the success of these industrial programmes is Alice Amsden’s idea of a ‘control mechanism’ (Amsden, 2001). The control mechanism can be viewed as an explanation for how sticks and carrots can be combined institutionally. According to Amsden, successful strategies differ from unsuccessful ones in how they use institutions to enforce reciprocity. This ensures that subsidies and support do not become mere ‘giveaways’ (Amsden, 1989, p. 8). The conditionality and control imposed on companies are thus seen as requirements in exchange for state subsidies or protection. The farther a country was from the technology it wanted to emulate, the larger the need to ‘get prices wrong’ (Amsden, 1989). This slightly provocative quote means that the more integrated the country is with international economic structures where it is falling behind, the less information can be gathered from market signals (for this interpretation of Amsden, see Mazzucato, 2005, p. 128). The control mechanism required institutional and political power to enable the relevant public actors to impose discipline and withdraw support where needed. As might be evident, the legal structure of the EU needs a substantial overhaul to replicate this.

It is precisely the capacity to impose discipline and remove support that differentiated the success stories of East Asia from other forms of industry policy (Di Maio, 2009; Hausmann & Rodrik, 2003). A common point of comparison is the Latin-American countries that attempted to industrialise using import substitution. Overall, these countries are said to have had less capacity to impose discipline and to remove subsidies. This lack of discipline might have resulted from too strong separation of powers, excessive influence of traditional sectors (e.g., the landowning class), or insufficient centralisation of power to execute industrial policy. When support and protection were provided without the capacity to withdraw them, to prune, or to impose discipline, the societal value of expended resources was not realised to the same extent. The result was inefficient use of public

resources. This state support often became, in Amsden's terminology, mere giveaways, and did not trigger long-term structural change in the economy.

A central question for European industrial policy will be the extent to which the Union can muster the resources necessary to impose this control, steering power, and discipline. As should be clear from above, EU law largely aims to reduce state control and allocation with respect to market components such as persons, goods, services, and capital. From the point of view of someone with a Röpkean inclination, this creates beneficial depoliticisation leading to free allocation. However, recall that an increase in individual economic choice (property) through free allocation comes at the expense of decreased planning capacity (sovereignty). This very capacity is said to distinguish examples of successful industrial policy from less successful policy.

LEGAL ADJUSTMENTS TO ACCOMMODATE INDUSTRIAL POLICY

As discussed by several contributions in this volume, the attempts to create a European agenda for active industrial policy involve many aspects of external policy. These include screening of foreign investment and tariffs on imports of production emitting large quantities of greenhouse gases. Such aspects largely do not affect the rules on the internal market, but rather affect the access to it. It is on the internal market where one is more likely to observe friction between the type of successful industry policy discussed above and EU law. While the internal market is designed to enable free allocation of goods, services, people, and capital, industrial policy aims to direct resources towards particular sectors or objectives. Since industrial policy concerns using public power to allocate resources to specific sectors (for reasons of technological change, security, or environmental concerns) where they otherwise would not have moved, it stands in obvious tension with rules aiming at free allocation.

It appears that present EU industrial policy largely operates within the confines of the background conditions set by the internal market. From the Commission, a central idea has been to support companies in targeted sectors. This has been described as a form of industrial strategy aiming at 'de-risking', where the EU seeks to create 'investibility' for private capital by reducing risks (Gabor, 2023). A clear example is the Commission's

industrial plan for the European Green Deal (European Commission, 2023). It aims to make business easier by supporting corporations, but does so without clear reciprocal demands (see further Kampourakis, 2025). This type of thinking differs from East-Asian strategy, in the sense that it mainly works to enable the supporting side of the control mechanism. There is a lack of tools to control and steer corporations towards the imagined net-zero future.

The intensified discussions on active European industrial policy have also triggered suggestions or/and certain changes to EU law to accommodate industrial policy. One central aspect in the debate about industry policy concerns the ability to give out subsidies under EU law and their potential effectiveness. In response to this, several legal proposals have emerged. First, regulatory changes to allow more state aid have been adopted and further ones are discussed (e.g., Wiberg et al., 2020). The discussions have largely concerned the ability of the EU to match support granted by the US and China. Since these types of subsidies will be given out by individual countries, there is a concern that only the large Members States will be able to match the support given by the US and China, respectively. In case of further liberalisation of state-aid rules, coordination is likely to be key. An obvious risk is that the political will or economic resources of individual Member States might not match the perceived needs. Another issue is that Member States may be more likely to listen to existing sectors with the ability to lobby than to representatives of sectors that have not yet been developed through industrial policy. Lastly, there is a risk that companies play Member States off against each other, especially if a subsidy agenda cannot be coordinated at the Union level.

Second, there are discussions on changes to public procurement rules.² Such discussions concern both changes to the current procurement rules, or suggestions for how to work more actively within the present regulatory framework. For example, one could allow for more direct targeting of European corporations, or operate more actively to exclude competitors, for example where these receive state support, such as under the International Procurement Instrument. A more far-reaching suggestion would be more direct targeting of central businesses or technology clusters within the Union irrespective of foreign support of competitors.

²See, for example, the Commission Staff Working Document Evaluation of Directive 2014/23/EU on Concessions, Directive 2014/24/EU on Public Procurement and Directive 2014/25/EU on Utilities, 29 October 2025, SWD(2025)332.

Such increased targeting of procurement to sectors or companies within the internal market would align more closely with the East-Asian strategies. However, it could trigger legal challenges from other Member States or their firms on grounds of discrimination. In addition, there is also the difficulty involved in coordinating strategic public procurement between Member States (as with respect to state-aid rules). Even if the capacity and willingness to use public procurement as an instrument for industrial policy increases, it may still prove difficult to implement such an approach across the continent without some degree of centralisation or coordination at the European level. Moreover, as industrial policy is at its heart about targeting firms, corporate clusters, or sectors, claims of discrimination are likely.

There are thus ongoing discussions on how regulation with respect to state aid and public procurement can be adjusted to allow further support of private actors. In essence, the suggested changes concern allowing freer use of public resources for industry political needs. Viewed through the lens of the East-Asian developmental trajectories discussed above, these suggestions allow for more ‘carrots’ from the public sector. As mentioned, a common reason distinguishing the success of these countries is the ability to combine such support with ‘sticks’. Recall the relative failure of Latin-American industrial policy, explained by the inability to impose control or pruning of targeted sectors. Moreover, the East-Asian role models were often highly centralised, with clearly insulated agencies that could operate independently without legal review in order to push technological change. This centralisation seems to have been required in order to execute a long-term plan for how the economy should be transformed. These powerful agencies held official and unofficial tools to carry out economic transformation. In the context of industrial policy, ‘incentives are not enough’ (Cimoli et al., 2015, p. 128). In successful industrial policy, the state assumes a role as a dynamic driver and proactive creator of sectors (see Mazzucato, 2013).

FOUR CENTRAL ISSUES FOR FUTURE EUROPEAN INDUSTRY POLICY

Building on the discussion of the challenges involved in implementing effective industrial policy at the European level, several questions merit further examination. The first concerns within which institutional unit this policy should be created and rolled out. The second concerns how the EU

should develop tools for efficient control and discipline within the internal market. The third concerns the question of how discrimination between actors on the internal market should be solved. The fourth relates to how the public sector should be able to recuperate some of the gains from successful technological breakthroughs, in order to finance continued industrial policy.

As has been indicated earlier in this text, the fragmented institutional structure of the Union makes steering and guidance of the economy hard. It is not easy to know where such decision-making power could be localised. The European project is institutionalised through separation of powers between the Member States and the Union, with central domains constituting shared competences. In addition, there is division of power between the EU institutions. Furthermore, the legal construction of the internal market is largely made up by case law where the CJEU has established constraints on industrial policy. Such legal structures might be hard to affect without deep changes in the economic imaginary of the CJEU or to the foundational treaties of the Union.

Moreover, there are probably too many and too weak institutions for industrial policy at the European level. There is a lack of coordination among the many institutions, perhaps due to the consolidation of the EU during a time when faith in the role of the state in the economy was at its lowest. Merely within the field of development banks, there are three relevant European actors: the European Investment Bank, the European Bank for Reconstruction and Development, and the Council of Europe Development Bank (only the first of these is an EU institution). Taken together, this fragmented institutional landscape makes economic planning at the regional level complicated. As seen above, this would seem to align neatly with a Röpkean view of the world. The above-mentioned examples of successful industrial policy were instead coordinated by powerful administrative organs, such as the MITI in Japan. These institutions were able to recruit top talent at least in part because they enjoyed power and prestige. The very lack of ‘big thinking’ in institutions hampers the recruitment of top talent needed to develop strategic industrial policy (Mazzucato, 2005, p. 128). Thus, the weak capacity to execute industrial policy in the first place might in turn affect recruitment negatively. A central issue for EU industrial policy is thus how to develop capabilities in tandem with recruiting personnel with the goal of changing the overall thinking of a number of institutions. As competences are currently widely dispersed, there is also an urgent need for centralisation.

The second question concerns the capacity of the EU to develop requisite disciplinary power over economic actors. The legal institutionalisation of the internal market through the four freedoms stands in contradiction with such capacity. As seen through the example of the industry plan for the European Green Deal and the overall analysis of the Commission's strategy of de-risking, tools to emulate the successful approaches are simply not there. In light of the present demands for subsidies, it is concerning that what appears to have discerned successful industrial policy from less successful examples is exactly such capabilities to steer, prune, and impose control. Recall that a common explanation for the relative failures of Latin-American industrial policy was the inability to exercise discipline in tandem with granted support. The EU might enjoy even less capacity to exercise control over the economy than these countries, due to its institutional configuration and the judicialisation of the internal market.

A particular legal factor to worry about in this context is the prevalence of the ideal of access to justice within the Union. Within the legal profession, access to justice is commonly espoused as an ideal (Rhode, 2001, p. 1787). The previously discussed development strategies were instead premised on a low degree of judicial control, through open-ended legislation interpreted by the relevant administrative actors, with few or no ways for private actors to challenge decisions legally. In this respect it is worth noting how closely the judicialised model of the internal market has been tied to messianic legitimisation. Within the EU, a strongly anti-state rendition of rule of law has taken hold, often endorsed by leading figures as a hallmark of democracy (for a discussion of different types of rule of law, see Santos, 2006). This includes the way the European project has become judicialised through individual rights. For example, in view of the CJEU's expansive interpretation of Article 16 of the EU Charter (see Gill-Pedro, 2022), there will be ample legal avenues to challenge industrial policy that attempts to push corporations in the direction of particular technologies or prune sectors that have received support. Such a use of individual legal (human) rights tends to enhance property and reduce sovereignty (Rönnelid, 2025).

The third question concerns discrimination on the internal market. The internal market is largely constructed through arguments about non-discrimination between European entities. The aim, of course, is that economic actors from different Member States should be treated similarly. This legal structure contributes to what Röpke called 'depoliticisation' by making it harder to steer resources to particular corporations or sectors. It

has in all likelihood contributed to political cohesion within the EU and allowed deeper economic integration. This depoliticising form of non-discrimination originally aimed largely at making sure that a Member State does not support its own economic actors at the expense of those from other states. However, it would also seem to risk restraining subsidies targeting one or more European corporations for reasons of industrial policy.

In the light of state-subsidised foreign competition, it thus becomes easier to create rules that target foreign companies, for example where they are emitting more greenhouse gases or accepting more subsidies than European competitors. However, the East-Asian type of industrial policy also aimed at targeting support and protection to selected domestic corporations, sectors, or corporate clusters. If the EU were to increase its industry policy along these lines, this would stand in sharp contrast with the anti-discrimination ideal of EU law. In particular, where support would be afforded at the Member State level, targeting particular commercial entities or groups, it would certainly raise claims about discrimination.

Though one can imagine that the lawfulness of such actions could be clarified, but such negotiations will likely bring political tensions to the fore. The strategy of depoliticisation might then gradually disintegrate and produce a legal landscape of complicated priorities and disagreement. In particular, it would seem likely that this type of agenda would grant advantages to companies in countries that are already technologically advanced. Perhaps political compromise to enable this would require finding ways to disperse the value chains of this strategy into countries without corporations in such sectors, or to also include other issue areas that would favour countries focused on for example agriculture or tourism. Nevertheless, renegotiating the foundational legal structure of the internal market in such a way that it will allow effective targeting and support of EU corporations is simply a difficult political problem.

The fourth question concerns how the public should be able to recuperate some of the value of technological breakthroughs driven by public investment. The issue of recovering value from subsidies can be seen as a special case of the broader question of capacity to impose discipline, but one that involves distinct challenges. A way to perceive public funding of industrial policy is a form of long-term and more risk-tolerant venture capital (Mazzucato, 2005, p. 124). Most supported projects under this type of regulatory system will not succeed, but a few might achieve significant success. The EU or the Members States do not have to always expect

full repayment on the money spent, but, over time, need to make sure to recuperate parts of the subsidies. Otherwise, the risk is that the gains are privatised and the losses socialised, as it is commonly said. Mazzucato has helpfully indicated how the state in this situation should adopt a ‘portfolio approach’ in line with a common thinking with respect to venture capital. Such a strategy only requires that some of the supported projects will reach success, as long as parts of those gains are recovered to the portfolio (Mazzucato, 2005, p. 125). One can imagine numerous legal avenues for this: taxation of new sectors, directing support towards public enterprises, requirements of public access to developed technologies, mechanisms for partial public ownership in supported industries, or requirements to reinvest into research and development. All these approaches come with their own difficulties. In particular, it will be no small feat to coordinate them on the Union level.

From the point of view of those studying successful industrial policy, the European decline appears like a natural consequence of the way the internal market is constructed. All four issue areas discussed above indicate substantial tension between the discussed models for successful industry policy and the legal construction of the internal market. There are substantial structural deficiencies in central EU law with regard to the ability to centralise and coordinate such policies; the exercise of public control over the internal market; the economic role of non-discrimination; and the capacity to recapture value from high-risk investments.

This conclusion could justifiably raise concern among European policy-makers. However, this plethora of difficulties should not be viewed as an insurmountable problem. Strategies for effective industry policy have always had to work within the given constraints and craft functional institutions within prevailing frameworks. Nevertheless, a sober assessment of the current constraints is likely to mitigate the risk of failure. In addition, one can imagine that the need for far-reaching intervention in the European context is smaller than in the East-Asian examples. In many areas, the Union might still be relatively close to the technology frontier, and consequently less intervention could be needed to catch up (for similar arguments, see Gerschenkron, 1952; Rönnelid, 2022). However, as mentioned initially, technological catch-up is not the only strong rationale for industry policy—strategic autonomy and environmental protection are two other core reasons. In the latter two cases, the risks for EU industrial policy might be more acute. An overarching risk in this situation is the commonplace claim that state support without the capacity to steer and

control explains less successful instances of industry policy. Carrots without sticks might be worse than doing nothing at all.

FINAL DISCUSSION: THE CURRENT PREDICAMENT

There are substantial economic risks inherent in trying to push for more active industrial policies within the framework of the present-day internal market. If policymakers choose the route of increasing subsidies, without the broader ecosystem for industrial policy in place, such a strategy risks channelling public funds to sources with small benefits for the Union. The historical examples of support and subsidies without control and public leadership capacity are not encouraging. In the EU context, problems include limited steering capacity; weak mechanisms for recouping investments; fragmented authority among institutions and countries; and strong legal means to challenge public decisions. The depoliticisation of the present system has come with political advantages from the point of view of deepening European integration. However, the current legal arrangements rest on a deeply rooted political compromise that would need renegotiation if the Union wished to emulate the historically successful forms of industrial policy. In light of this, the sequencing should be to first increase centralisation, decrease access to justice, and increase capacity to steer capital allocation *before* protection is imposed and subsidies handed out. If this is not feasible, Union decision-makers are probably well advised to exercise significant restraint when handing out subsidies. Otherwise, the loud demands for state support, without the overall control mechanism, risk becoming mere giveaways.

In addition, the depoliticisation of the current system is politically strengthened by the messianic legitimisation, which is still strong in some quarters. Even though the most far-reaching ideas about the benefits of trade for peace and democracy (*Wandel durch Handel*, as the Germans had it) have lost significant ground after the authoritarian turn in China and the full-scale Russian invasion of Ukraine, there are still visions about the internal market as a project for democracy and peace. These ideas about the beneficial effects of trade have a long history, perhaps most well-known through Montesquieu's writings on *doux commerce* (see Larrère, 2014). It is still fairly common, in the mid-2020s, for European leaders to imagine the internal market as a project of peace and democracy. The *doux-commerce* imaginary—or to argue for the benefits of free supranational allocation—have traditionally been espoused by countries leading

the technological development, from the UK to the US, and lately also China (Reinert, 2011). This makes it perhaps likely that the European messianism will decline, or find new ways of expressing itself, if Europe continues to fall behind technologically. However, in light of the long-standing tradition of messianic thinking, it is easy to imagine resistance to deeper reshaping of the internal market due to this normative nesting. In addition, there is significant rhetorical capital invested in ideas about the EU as a proponent of a rules-based order, which might also make it harder to decrease legal power over the internal market. Recall that the success stories discussed above had legal systems that allowed for administrative steering of the economy with little legal interference. In light of this, one might consider it all but utopian to achieve a remoulding of the internal market so that it aids, rather than constrains, industry policy. However, it might also be that a continued European decline could trigger such worries that deeper legal reorganisation could become politically palatable.

One should also bear in mind the broader political repercussions of a potential recalibration of the internal market to meet objectives of industrial policy. The present judicialised solution has been politically successful through a strategy of slowly expanding the internal market through a step-by-step series of legal decisions by the CJEU. This type of integration would probably have been impossible to achieve through political deliberation. Through such a process, numerous shifts in the direction of free allocation have been taken, sometimes paired with small countermoves constraining such allocation. This overarching trend is justified by the idea that sovereign power should not too deeply affect allocative decisions. In that sense, it is fair to say that Röpke's spirit looms large over the project. One effect of this fragmented and market-expanding legal system is exactly a sovereign inability to control economic allocation. Such capacity was central to the above-discussed case studies.

A legal recalibration of the internal market to permit active industrial policy would likely enable the EU to strengthen its position in an increasingly multipolar world. At the same time, it would rekindle political and distributive tensions that the depoliticised legal system has kept under the surface. The current legal configuration of the internal market is likely to hide intense political distributive stakes between countries, regions, and sectors. The legal construction of the internal market thus acts as a Pandora's Box hiding political struggle that has to be faced if the Union would choose to walk the path of effective industry policy. In that sense, what is at stake in the question of industrial policy at the Union level is simultaneously a question of the whole legal-political compromise that the

Union rests upon. A shift in the direction of technological competition on the world level through active industry policy will likely require a deeper recalibration of the broader political economy of the Union. Such a reorganization of the internal market would decrease the risk of Europe successively declining to a continent of museums and sightseeing – to use a description that is rapidly becoming cliché. At the same time, political disagreement kept at bay by the institutions of the internal market would likely resurface if the Union were to make changes to allow for serious industry policy.

One lesson to draw from this study is to abstain from some commonplace dichotomies in discussions about industrial policy. The historical case studies above evade simple categorisation in terms of protectionism/free trade, pro-market/interventionist, or import substitution/export promotion. Neither is it helpful to classify them as simply as countries with little rule of law or low access to justice. A better way to understand these strategies is as economic systems that used market mechanisms for political goals, but where the balance between property and sovereignty was closer to sovereignty than in the current European legal solution. The use of such dichotomies shrouds the important take-aways from these political economies. At a point in time when Europe was close to the technology frontier, the costs to the Union of analysis in these terms might not have been high. The EU might then have benefited from such discourse in relation to developing states (Rönnelid, 2022). The situation in the middle of the 2020s appears to be different. Holding on to these dichotomies is not advisable in an era when both the internal industrial policy and the foreign trade of the Union are about to be recalibrated.

A more concrete lesson from this chapter is to initially find ways to coordinate European industrial policy, to ramp up mechanisms for control over the economy, and to develop structures to recuperate value from public investment—before expending large public resources on private actors. This would require a fundamental renegotiation of political issues kept silent through legal depoliticisation. If a foundational remaking of the legal web of the internal market proves impossible, the constraints of the current legal configuration should be taken into account in decisions about whether to subsidise. It is probably much more valuable to find ways to ramp up sovereignty in order to steer the economy than to expend large sums of money when the conditions to transform the economy are otherwise not there.

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Is Green Industrial Policy the Right Choice for the EU?

Christian Sandström and Mikael Stenkula

INTRODUCTION

Europe faces many challenges linked to the geopolitical realities of the 2020s. Since Russia's invasion of Ukraine, President Vladimir Putin has pursued an increasingly aggressive foreign policy. China has emerged as a new superpower with the ambition to set the agenda for the world's future development—economically, politically, and militarily. In parallel with this development, the US, following the re-election of Donald Trump as president, has been pursuing an isolationist and protectionist foreign policy.

The global context has, in many ways, contributed to the renaissance of industrial policy seen in the Western world during the 2020s. An increasing number of countries endorse targeted policy measures, contending that government intervention is crucial for fostering innovation and advancing a sustainable future. Mission-oriented innovation

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policies—large-scale government programmes and centrally directed industrial policies to address well-defined societal goals—are in the middle of the 2020s prominent topics on many governments’ agendas. This approach is endorsed not only at the national level but also by the European Union (EU), which has initiated large-scale projects and initiatives to advance active industrial policies (Wennberg & Sandström 2022; Henrekson et al., 2024, 2026).

The academic discussion on industrial policy has a long history, and its popularity has shifted over time. Large-scale government interventions have become increasingly popular following the contributions of Mariana Mazzucato on the entrepreneurial state and mission-oriented innovation policy (e.g., Mazzucato, 2018, 2021) as well as Dani Rodrik’s work on industrial policy (Rodrik, 2022). The changing geopolitical climate and the environmental challenges the world has been exposed to since then have made such ideas even more appealing. In Europe, these efforts are referred to as a ‘European Green Deal’, and the ambition is to accomplish a combination of economic and sustainable development (European Commission, 2025a; European Council, 2025).

The aim of this chapter is to analyse the choice facing the EU by highlighting problems associated with large-scale green industrial policy and by outlining more realistic alternatives. We argue that the political sector lacks the ability to identify future industries, products, and technologies for large-scale interventions to work effectively. An extensive support and subsidy system may also distort incentives, resulting in moral hazard. The political process is vulnerable to lobbying, and funds may end up in the pockets of special interests. Ultimately, there is a risk that large amounts of resources will be spent on initiatives that fail. This problem may be aggravated if support systems are set up at both national and supranational levels. In fact, there are already clear signs that the policies are not working. The EU’s largest effort to make batteries, Northvolt in Sweden, filed for bankruptcy in March 2025. Initiatives to make steel using hydrogen instead of coal are cancelled across Europe, despite receiving billions of euros in public subsidies. Germany experiences rising electricity prices and declining industrial output. The blackout in Spain in April 2025 raised concerns regarding the stability of an electricity system based on intermittent sources such as solar and wind power.

The chapter begins by discussing industrial policy and green initiatives in the EU, then reviews the associated risks. It next examines why

government intervention might still be warranted and concludes by outlining a more realistic path forward.

THE EU, INDUSTRIAL POLICY, AND THE GREEN DEAL

When the forerunner of the EU, the European Coal and Steel Community, was established in 1952, it consisted of six member countries with a well-defined mission centred on cooperation between their steel and coal industries. Over the years, cooperation has deepened and broadened to include more Member States. During the 2010s, the European Union intensified its ambitions in response to global environmental challenges. Many European policymakers increasingly emphasised green initiatives as priority areas warranting governmental intervention. In line with this trajectory, the European Commission announced the European Green Deal in December 2019, outlining a comprehensive framework of goals, regulations, and policies designed to address climate change and transform the Union into the world's first climate-neutral region by 2050.

An important part of the Deal concerns spending on industrial support. The investment pillar of the Green Deal is referred to as the Green Deal Investment Plan. Initially, the EU drew up an ambitious plan to mobilise funds of EUR 1 trillion through different forms of initiatives—and this amount refers only to funds needed for the first decade under the Green Deal (European Commission, 2020a). These efforts have grown over time. Support to industry will come through a range of different programmes and they include a variety of aid including credit support (cheap loans or credit guarantees), public co-financing, subsidies, and direct grants. Part of the support system is financed through the European Investment Bank (EIB), a body formally independent of other EU institutions, which has identified climate and environmental sustainability as a key priority. Within so-called *Important Projects of Common European Interest* (IPCEI), Member States can moreover cooperate and support specific projects that are deemed to significantly benefit the EU (see Stenkula, 2026, for an in-depth description and discussion of the support system).¹

¹On behalf of the EU, Enrico Letta and Mario Draghi highlighted the challenges and problems faced by the EU, pointing to the EU's low productivity growth. Both reports argue that the EU risks falling behind if it cannot raise the level of investment in the EU. As private initiatives and investments are not considered sufficient, they contend that more

Much of the support will go to renewable electricity production, such as wind and solar power. The goal is also for industries traditionally emitting large amounts of carbon dioxide, such as steel and cement production, to switch to fossil-free alternatives. In addition, hydrogen is identified as a key technology and the European Union adopted a hydrogen strategy in July 2020 to stimulate the use of hydrogen as a means to achieve climate neutrality (European Commission, 2020b). This was followed by the launch of the European Hydrogen Bank in 2022 to support selected hydrogen projects (European Commission, 2023). Estimates suggest that it would require at least EUR 320 billion to scale up the EU's hydrogen sector by 2030 (European Hydrogen Observatory, 2025).

Part of the green industry support will go through the Member States. But the EU has a general prohibition on state aid (though some exceptions are allowed) because it can distort competition between companies in different countries of the Union. However, following the COVID-19 pandemic and the Ukraine war, these restrictions were relaxed on a temporary basis, as politicians considered large-scale national aid and subsidies necessary to support the companies and sectors most affected by these events (European Commission, 2025b).

In March 2023, as the previous exemptions were set to expire, the European Commission adopted a new and more expansive exemption from state aid rules through the Temporary Crisis and Transition Framework (TCTF).² In line with the Union's overarching sustainability and climate-neutrality objectives, the provisions on state aid were here extended and adapted, allowing governments to allocate substantial public funding to advance the green transition. This approach was further reinforced in 2025 with the adoption of the Clean Industrial Deal State Aid Framework (CISAF) (European Commission, 2025c).

political initiatives are needed. The EU could coordinate, steer, and stimulate the level of investment at the supranational level to address the problems (Letta, 2024; Draghi, 2024). These reports did, hence, also stress the importance of political engagement, but they did not focus particularly on green investment.

²The impetus for the TCTF originated from the European Commission, which took the lead in its development. While the framework was shaped by consultations with Member States, the decision to adopt the TCTF ultimately rested with the Commission. Notably, the European Parliament and the Council did not participate in its adoption, as the TCTF was not legislated as a Regulation or Directive. Instead, it was established through a Commission Communication, meaning it was not subject to the co-legislative process involving both the Council and the Parliament (European Commission, 2025c).

One problem with all the national state aid was the skewed distribution between countries. The European Commission does not possess official or precise data on the total state aid disbursed by each Member State. However, in a policy paper the European Commission showed, for instance, that more than 70 percent of all notified state aid came from Germany and France (European Commission, 2024a), underscoring that state aid was unevenly distributed across the Union. This asymmetry highlights a fundamental dilemma for the Union—large and fiscally stronger countries are far better positioned to support domestic industries than smaller or less affluent members. In response, the issue of centralising (at least part of) industrial support has gained prominence on the EU agenda to avoid the distortions that national funding can create. Estimates suggest that roughly one-third of green funding is centrally managed at the EU level with the remainder allocated nationally through Member State plans (Pisani-Ferry & Tagliapietra, 2024). The unequal capacity of Member States to provide aid has thus become a key justification for pooling resources and coordinating support, mitigating internal distortions while simultaneously accelerating the transition towards a sustainable economy in the Union.

A dedicated organisation, the European Climate, Infrastructure and Environment Executive Agency (CINEA), was established in 2021 in order to support, coordinate, and help implement the Green Deal. The agency employs nearly 600 bureaucrats and experts in 2025 and is projected to expand further (CINEA, 2025).

Commission President Ursula von der Leyen has referred to the European Green Deal as the Union's equivalent of the moon landing (von der Leyen, 2019). When French President Emmanuel Macron delivered a widely noted speech in spring 2024, he also pointed out that the Union faces significant challenges. He called for a large-scale industrial policy that prioritises domestic industry and uses the single market to assert Europe's interests in the world (Macron, 2024).

Already during the 2008 financial crisis, the French President at the time, Nicolas Sarkozy, proposed an increased role for state aid but his idea was then rejected (Giuliani, 2008; Lequesne & Rozenberg, 2008). However, times have changed. Active industrial policy has attracted growing interest and support within the Union, and the European Green Deal illustrates the growing conviction that extensive state involvement is necessary to guide societies towards a sustainable future.

GREEN INDUSTRIAL POLICY FOR THE EU: A CRITICAL REVIEW

Industrial policy creates a variety of challenges. While the primary focus of this section is on the problems associated with government support, it is important to start by noting that state intervention and regulation *may* also enhance economic efficiency and foster development. Several examples of successful government initiatives at both national and EU levels exist. The technology to remove sulphur from oil using hydrogen was developed through interaction between the oil industry and the EU, primarily in the 1980s. EU legislation was also behind the phase-out of incandescent light bulbs and the introduction of much more energy-efficient LEDs. Fossil fuel drilling in the North Sea was successfully achieved partly due to large EU projects. There are also historical examples of how ground-breaking innovations have been developed through collaborations between the private and public sectors. Ericsson's close partnership with the Swedish telecommunications monopoly—the government agency Televerket—which led to the development of electronic switches and the first generations of mobile telephony in the 1970s and 1980s, is a noteworthy example (Eriksson et al., 2025).

While there are examples of government initiatives that have contributed to the development of the economy, the risks of a comprehensive green industrial policy, where the political sector directs vast amounts of resources to specific companies and solutions, may very well outweigh the potential benefits. The problem will be particularly pronounced if detailed resource allocation decisions are made on a significant scale on a supranational level—far from the entrepreneurs' experiences.

Previous research has identified a range of problems associated with large-scale interventionist industrial policy, many of which are directly relevant to the EU's extensive environment-related initiatives (see Wennberg & Sandström, 2022; Henrekson et al., 2024, 2026 for an in-depth discussion). These challenges are often interrelated and partly overlapping. The main issues are summarised below, accompanied by illustrative examples.

A common feature of many of the environmental and climate-related problems that the EU intends to address through supranational policies is that they are, in one way or another, what has come to be known as *wicked problems*. This term refers broadly to issues that are complex, context-dependent, uncertain, intractable, and span multiple policy domains with different value conflicts (Rittel & Webber, 1973). Environmental

problems can be considered a typical case of wicked problems because they often have no definitive end solutions, are deeply interconnected with other societal issues, and are usually cut across different parts of society simultaneously.

Several examples from history show that it is difficult, if not impossible, to solve such complex problems in any meaningful way by allocating and directing funds top-down through political decisions. It is not enough to have genuinely good intentions and abundant public funds. For example, despite good intentions, political consensus, and extensive resources devoted to interventions that were considered to be scientifically sound, the large-scale, centrally managed projects launched in the 2010s to address homelessness in the US were unsuccessful. The targets set were continually postponed and revised. The cost doubled, but the problems persisted. In the end, the cost of the government initiative amounted to more than USD 13,000 per homeless person and year, which would have been enough to rent apartments to all homeless people and thereby eliminate homelessness (Lucas & Boudreaux, 2024).

A common argument in favour of political intervention is that market actors, motivated by self-interest and constrained by imperfect information, are unable to guide the economy towards socially desirable outcomes such as climate neutrality. However, as emphasised in the Public Choice literature (see, e.g., Buchanan & Tullock, 1962; Olson, 1965; Tullock, 1965; Niskanen, 1971; Ostrom, 1990), similar limitations also affect politicians and bureaucrats.

Advocates of a state-directed mission-oriented innovation policy often ignore this kind of problem and (explicitly or implicitly) assume that bureaucrats and civil servants are unselfish and have no competing interests (Muldoon & Yonai, 2023, 2026). While it is likely that both politicians and bureaucrats are not driven solely by self-interest, it would be naïve to assume that decision-makers are entirely free of this.

Many case studies of failed government initiatives have also shown that government actors often act out of self-interest rather than for the common good (see, e.g., Flyvbjerg et al., 2002; Fiedler & Wendler, 2015; Björnemalm et al., 2024; Niskanen, 1971). Unfortunately, political priorities often dominate industrial policy initiatives rather than difficult technological and economic trade-offs. Politicians may decide to invest in what will attract the most attention and votes in the short term—but which may not be optimal from other perspectives. For example, spending large amounts of public resources in bad times on building roads and bridges in

sparsely populated areas that are not needed is a textbook example of a political failure (but all regional infrastructure investments are, of course, not necessarily inappropriate). Many examples of politically stated promises of growth and prosperity have failed, and in retrospect, many failed initiatives appear unrealistic. Critical questions are, however, often absent when these kinds of projects are announced in the media.

Another more fundamental problem with state-directed industrial policy may be that many policy decision-makers rarely have the information needed to effectively and efficiently design large-scale projects. Even when policymakers possess state-of-the-art knowledge and a clear understanding of the solutions required to achieve socially desirable objectives, they often lack the practical and context-specific information necessary to realise these goals through top-down government initiatives (see, e.g., Buchanan & Tullock, 1962; Olson, 1965; Flyvbjerg & Sunstein, 2016). There are often no clear pathways to a solution. Many problems and difficulties associated with large-scale, though well-intentioned, government initiatives are often only discovered after they have been attempted. Even individuals with a genuine desire to plan or implement initiatives that they believe will benefit society have limited knowledge and skills (a classical reference here is Hayek, 1945).

There are many examples of knowledge problems associated with political governance. Waldron and Coyne (2024) show how difficult it is, for example, to develop the economies of developing countries and their political institutions with targeted aid without sufficient information and feedback. This can easily lead to unintended consequences. Other examples include the Brazilian government's attempt to create a thriving domestic shipbuilding industry when the domestic industry did not have the conditions to succeed. The industry initially flourished, but the politicians underestimated the costs of developing skills and capabilities in the sector, which were too high. Attempts to rebuild the industry that had collapsed in the 1970s ultimately resulted in a costly failure (Alves, 2024).

Allowing substantial public support for the private sector—whether directed towards green projects or not—can, further, give rise to problems of rent-seeking and lobbying. Potent and concentrated interest groups, such as large companies, trade unions, or professional associations, can often use their networks and financial resources to influence policy—often in areas where these stakeholders have an information advantage over the political sector (Choi & Storr, 2019; Wolton, 2021; Albareda et al., 2023). These actors can then try to influence the design of, for example,

regulations, compensation schemes, and tax structures for their advantage. It may well be that responsible authorities are indirectly controlled by the regulated—rather than the other way around. Ultimately, interest groups may exert pressure on policymakers to secure various forms of financial advantage, resulting in rent-seeking behaviour. Rapidly increasing allocations of resources to different areas from the political sector are likely to increase the scope and scale of rent-seeking.

If companies can obtain extensive resources by lobbying for more support measures, they also have strong incentives to devote themselves to such activities. Less effort can then be spent on producing and delivering valuable goods and services to customers. Under such circumstances, the likelihood increases that companies and organisations will become *subsidy entrepreneurs*, that is, actors who devote time and effort to benefit from various politically decided benefits in the form of grants and subsidies. In Sweden, for instance, companies that systematically apply for and receive grants and support from the government tend to have lower productivity (Gustafsson et al., 2020).

The Organisation for Economic Co-operation and Development (OECD) has also highlighted the risk that large government initiatives may be shaped by the needs of different special interests (OECD, 2021). As the political sector is rarely omniscient and much information is often local, fragmented, and dispersed across society, the OECD stresses that policy initiatives must often be developed in interaction and collaboration with established stakeholders. Therefore, they will likely have a very strong influence on the resource allocation process. As a result, large-scale initiatives tend to favour special interests or institutional entrepreneurs, and policies may focus on areas and industries where there is ample room for lobbying and clientelism rather than on the most socially valuable projects (Tullock, 1965; Niskanen, 1971; Ansell & Gash, 2008).

In the market for political resource allocation, it is often contacts, lobbying, and cunning that secure additional resources rather than the existence of a promising business idea. Holcombe (2018) has written extensively about this problem, analysing and illustrating what he calls *political capitalism*. By political capitalism, Holcombe refers to a system of private ownership of companies that make money by extracting resources from the public sector. Resources can be extracted directly through grants and credit guarantees but also through regulations and tariffs.

When a policy decision is taken to implement a particular green initiative, it also usually means that significant resources are made available to

selected actors in the form of preferential loans, credit guarantees, research and development grants, or various subsidies. The availability of these types of resources will influence the behaviour and decisions of the actors. Many (large) companies may systematically exploit such political allocations, as stated above, but there is also a related problem as companies may become less prudent in their investment decisions, which can lead to increased moral hazard. Moral hazard occurs when an actor has an incentive to increase its risk exposure because a large part of the risk is borne by someone else (which, in this case, often means the political sector) (a key reference on moral hazard is Arrow, 1963). If the risk is borne by actors other than the supported companies themselves, firms may become less cautious in their risk-taking. Companies receiving ‘free money’ for high-risk (technical) projects may become immune to risk, which, in the end, may result in significant losses for society. These factors contributed to the credit expansion and the related financial crisis in the US in 2008–2009 (McDonald, 2012). Even advocates of industrial policy recognise that public agencies ultimately bear much of the downside risk (Mazzucato, 2013). The existence of targeted grants and cheap loans from a central authority can also mean that local politicians are tempted to get involved in technology with limited potential.

It is also probably more difficult to cancel projects when government is taking on a large part of the downside. Politicians may continue to spend large sums on failed projects, hoping that additional resources will solve the problem. In economics, this phenomenon is sometimes referred to as the *sunk cost fallacy*, which simply means that it is easy to feel committed to spending more money on already failed investments (Arkes & Blumer, 1985). Extensive research has shown the difficulty policymakers have in terminating projects that are performing poorly (e.g., Flyvbjerg, 2014). A classic example from the political sector is the Anglo-French Concorde prestige project (supersonic aeroplane), where politicians continued to spend money even though the project was doomed to fail. The term *Concorde fallacy* is also used to describe the inability of politicians to terminate failed projects (the term was coined by Dawkins & Carlisle, 1976). Politicians devoting taxpayers’ money to prestigious (technical) projects may become immune to bad outcomes, which, in the end, may also result in significant losses for society.

Other problems can be illustrated by using insights from behavioural economics, a discipline that integrates principles from psychology with traditional economics to explain why people often make irrational or

suboptimal economic decisions. For instance, politicians often present their ideas by highlighting the potentially very alarming or severe consequences that could occur if no policy action is taken. In behavioural economics, framing an idea in this way is known as presenting the message within a loss frame. The focus on negative outcomes creates a heightened sense of urgency, making voters more willing to accept large and costly policy projects. The need to weigh the effectiveness and (opportunity) costs of the proposed measures can thus be downplayed. This type of argumentation method has often been used to facilitate the approval of large-scale political initiatives (Schnellenbach, 2024).

The challenges and problems discussed above are all directly relevant to the European Green Deal and the specific EU framework for green support has been criticised on several grounds. The reliance on negotiation-based, case-specific support without transparent *ex ante* criteria fosters, for instance, rent-seeking and misallocation of public resources, diverting funding towards cost-inefficient projects (Dings & Sol, 2025). In addition, the framework is frequently described as overly complex and fragmented, with overlapping and occasionally contradictory guidelines that compel firms to manage parallel funding schemes operating under divergent principles and conditions. This structure tends to privilege large, established incumbents with the necessary resources, networks, and administrative capacity to navigate the system, leaving smaller and more innovative entrants at a disadvantage (Bergkvist et al., 2022). By contrast, the American model is less fragmented and more output-oriented, where subsidies are rules-based, open-ended, and decoupled from project-specific viability assessments, with much of the support delivered automatically through *ex post* tax credits (see Stenkula, 2026, for a further discussion).

The problems outlined above are not merely theoretical but have been manifested in several high-profile cases. A notable example concerns the EU's large-scale investment in hydrogen. Despite hundreds of billions of euros allocated to hydrogen projects, many initiatives encountered severe setbacks in 2024. Projects in the Swedish towns of Örnköldsvik and Långsele were terminated despite extensive EU support, and Ørsted—a global leader in developing, constructing, and operating offshore wind farm—shelved its hydrogen project in the Danish peninsula Jutland. In the steel sector, LKAB—a state-owned Swedish mining company—downsized and postponed the development of Hybrit and hydrogen-based sponge iron, while ArcelorMittal—the world's second-largest steel

producer—publicly declared that hydrogen had become too costly in Europe to represent a viable option, even with EU funding for its German operations exceeding one billion euros. In a similar manner, steel manufacturer CELSA cut down its hydrogen efforts in Norway, while Salzgitter and ThyssenKrupp are either postponing or reducing their attempts to make use of hydrogen in the mid-2020s. The hydrogen case illustrates the risks inherent in directing abundant targeted subsidies towards projects of questionable economic viability.

Criticism of these ventures was often countered with appeals to urgency. The CEO of H2 Green Steel—a company dedicated to decarbonising hard-to-abate industries and since 2024 known as Stegra—Henrik Henriksson, argued that ‘the planet is burning up’, while LKAB’s CEO, Jan Moström, insisted that ‘it must work’ (Dagens Industri, 2023; Sveriges Radio, 2022). Such statements exemplify how industrial policy initiatives may be defended within a loss framing discourse, where fear of inaction dominates rational assessment of feasibility (see Henriksson, 2026, and Johansson & Kriström, 2026, for a further discussion about Hybrit and Stegra).

Another case is Northvolt, a flagship project in European battery manufacturing that received substantial financial support from EU institutions, including credit guarantees from the EIB. Under the EU’s TCTF, one of the most extensive aid packages was directed to Northvolt’s future plant in Heide, Germany (European Commission, 2024b). Yet the company faced escalating challenges. The planned factory in the Swedish town Borlänge, which had been presented as a source of thousands of jobs and part of Sweden’s ambition to become a ‘battery superpower’, was cancelled in mid-2024. In Skellefteå, Sweden, Northvolt struggled with production difficulties and mounting financial losses, leading to significant layoffs in 2024. By October, the company’s debt burden and losses made its financial position appear untenable. The company filed for bankruptcy in March 2025 (see Sandström, 2025 and 2026, for more information about Northvolt).

Although Northvolt is partly a Swedish case, it highlights a broader structural risk associated with supranational industrial policy. The company’s credit guarantees, amounting to tens of billions of Swedish kronor (equivalent to billions of euros), represent resources that could have supported alternative firms or projects across the Union. Instead, venture capital interests with strong political connections have disproportionately benefited from EU support. These developments underscore that similar

risks of misallocation, rent-seeking, and capture are likely to arise elsewhere in the EU as Brussels expands its role in resource allocation under the European Green Deal.

However, this issue is even more complex, with additional aspects to consider as well. As mentioned in the introduction to this section, there may be good arguments for state intervention. For example, without state aid, the Airbus aircraft type would not have been developed to compete with Boeing, which would have been bad for the EU and for the competition in the aircraft industry (WTO, 2012). However, using this single example as a basis for supporting an extensive expansion of green public investments at the EU level is insufficient.

Illustrative examples of failed green technological public initiatives where the state believed it had the ability to ‘pick the winner’ and tried to steer the development in a specific direction are numerous. In Sweden, a bubble in ethanol cars and related biofuel production emerged in the early 2000s, driven by a combination of interest-group lobbying and political efforts to promote sustainable development (Björnemalm & Sandström, 2026).

Other examples include how the EU contributed SEK 550 million (approximately EUR 50 million) to Göteborg Energi (Gothenburg’s energy company owned by the City of Gothenburg in Sweden) to try to make biogas from forest residues. This project ended up costing taxpayers under the so-called Gobigas project up to SEK 2 billion (approximately EUR 0.18 billion). The same source of EU funds was also invested in a large wind farm in arctic climate, called Blaiken Vind. In 2020, three years after the inauguration in 2017 of 99 wind turbines, the company was forced to write down the value of the facility by SEK 500 million, which equals approximately EUR 45 million (Sandström, 2023). As a final example, Britishvolt in the UK was launched in January 2022 and was hailed by former Prime Minister Boris Johnson as part of the country’s green industrial revolution. The company received government support, but a year later, it went bankrupt (Sandström, 2023).

These investments would probably not have been made without significant public subsidies, and the resources could have been used for other purposes. Such failures will likely increase if the EU and its Member States intend to scale up their active industrial policy. The more the political sector plans to invest, the more the companies want to benefit from these resources, and the harder it will be for politicians and bureaucrats to

identify long-term winners (such as Airbus) among all the potential grant applicants.

The doyen of evolutionary and innovation economics, Richard Nelson, argues that many major societal challenges are difficult to address effectively through the historically large-scale government initiatives often referred to in the debate—such as Project Apollo and the Manhattan programme (i.e., the US moon landing and nuclear weapons development). Societies are capable of mobilising common resources to put a man on the moon, yet are unable to eliminate homelessness simply by increasing public spending on social programmes (Nelson, 1977). We believe the same analogy can be applied to environmental problems, which differ significantly from the previously mentioned successful projects. These were technically well-defined and delimited, making it relatively easy to finish the projects once they had produced the required results (in terms of technical solutions).

As a final note, there are also several other practical problems with this approach using ample public funds to target potential green solutions. In several critical reports, the European Court of Auditors (2024a, 2024b, 2024c, 2024d) has discussed the aid measures used and approved by the EU. The Court finds numerous problems and systematic shortcomings in the way the money is allocated and used. It also suggests that several improvements need to be made.

Based on these reports, it appears that the EU cannot accurately assess what to invest in, does not have the resources to check that the money is spent as intended, and lacks the ability to evaluate whether the investments have been beneficial (i.e., whether the benefits exceed the costs). The EU is not structured to implement this kind of active, large-scale green industrial policy. Advocates might argue that conditions are currently inadequate but that, with more resources over time, this strategy will become both worthwhile and necessary to address the climate challenge. Until the problem addressed by the European Court of Auditors is solved, it is nevertheless our view that the EU should be restrictive with this kind of policy.

THE NEED FOR GOVERNMENT INTERVENTIONS

One might ask why the interest in active, centralised, and selective industrial policy has increased so markedly in the 2020s, considering all the problems we highlighted above. Research and innovation policy has

traditionally addressed the market failures associated with new knowledge as a public good. A public good is a good whose consumption is non-excludable and non-rivalrous, meaning that it can be enjoyed by many simultaneously and that it is difficult to prevent actors from using it (Samuelson, 1954). New knowledge is also characterised by having positive externalities, which means that the social benefits of new knowledge are greater than the individual benefits for those who produce the knowledge (Paci & Usai, 1999). The traditional view has been that the state should increase research and technology-oriented activities in society but not control the direction. Instead, the choice of technologies and investments should be left to the individual companies and industries, that is, to the market.

This perspective is often referred to as *first-generation innovation policy*, which emerged in the 1960s. A *second generation* followed in the 1980s, emphasising innovation systems and the coordination of diverse actors (Nelson & Winter, 1982). More recently, a *third-generation innovation policy* has developed in response to contemporary global challenges such as climate change. This approach argues that governments should not only correct market failures but also provide strategic directionality, actively steering economies towards a sustainable future (see, e.g., Schot & Steinmueller, 2018, for an overview of the evolution of industrial policy).

Earlier justifications for active industrial policy were frequently associated with developing economies, where such measures were seen as a means to accelerate the catching-up process with more advanced countries. While this rationale has been particularly prominent in Asian and Latin American contexts, it is less directly applicable to the European Union. Proponents of the new framework, however, contend that governments in advanced Western economies also have both the capacity and the obligation to intervene more directly in markets, channelling firms and investments towards activities deemed socially desirable. This evolution is also visible in current debates on the regulation of artificial intelligence. The EU's Artificial Intelligence Act can be seen to reflect the broader shift from merely correcting market failures to actively shaping technological trajectories in line with societal goals (European Commission, 2025f). Other related arguments often used by advocates of a more active and selective policy in the EU are related to the fact that uncertainties and risks may be too high for new (environmental) technologies and solutions to be developed without significant government support (see, e.g., discussion in Jacobsson et al., 2017).

Further arguments for an active industrial policy are linked to developing self-sufficiency in key sectors that may be needed in future potential wars and crises. State support for agriculture rests partly on this latter argument. The changing geopolitical context of the 2020s has also led to the self-sufficiency argument being applied to other sectors, pointing to the value chain vulnerability built up in society following globalisation and trade liberalisation. The need for enhanced national or European self-sufficiency in key industries and critical areas appears increasingly desirable following the increased tensions in the world after the turn of the millennium. The EU has here launched the concept of *open strategic autonomy* as a European strategy to cope with the vulnerability that a global, liberal, and highly integrated economic system implies (see, e.g., Vranes, 2025; European Parliament, 2023a). The European Commission's proposal to establish a new European Competitiveness Fund aimed at directing investments towards strategic technologies aligns closely with this strategy (European Commission, 2025e).

There are other related problems associated with international trade. China actively supports its domestic industry with various subsidies and support measures. This development is not limited to China. During the presidency of Joe Biden (2021–2025), the US substantially expanded public investment in domestic industry. The Inflation Reduction Act (IRA), ostensibly framed as a response to excessive inflation, in practice encompassed a broad set of targeted support measures for firms operating within the US. Under President Donald Trump, many of these measures supporting green projects have been frozen, and the future trajectory remains uncertain (see Stenkula, 2026). Nevertheless, active industrial policy has become increasingly common among major economic actors worldwide. In this context, many argue that the most viable response for the EU is to adopt a similar approach. Advocates argue that by directing support towards the green sector, the EU can simultaneously strengthen the European industry and advance the green transition. Both the TCTF and the *Net-Zero Industry Act* can be understood as direct responses from the EU to US ambitions under the Biden administration. The *Net-Zero Industry Act*, as part of the European Green Deal, specifically seeks to accelerate and facilitate the Union's green transition (see, e.g., European Parliament, 2023b).

There is extensive academic literature discussing how the EU should best respond to the changing geopolitical landscape, highlighting the same dilemma as discussed above. For example, Ghauri et al. (2024) argue

that the changing geopolitical conditions have made many politicians feel they must use state aid to maintain and create new jobs within the country. The massive increase in state aid around the world is seen as the biggest threat to the liberal and open world order that has been in place since World War II until the outbreak of the COVID-19 pandemic.

An objection to our approach is, hence, that Europe must match its international competitors by heavily subsidising domestic industry in order to remain competitive. The green industry is just one sector that, in particular, requires large political support and directionality in response to the climate challenge.³

There are also other environmental aspects linked to this issue. Instead of directly subsidizing the green sector with public funds, politicians could impose trade barriers against the rest of the world. If the EU has higher climate ambitions than non-EU countries, this may require the EU to use so-called environmental customs duties. With these customs duties, imported goods from outside the EU are subject to tariffs corresponding to the increased cost that higher ecological requirements within the EU imply for the domestic industry. The EU has also introduced a Carbon Border Adjustment Mechanism (CBAM) as part of the European Green Deal following the Fit-for-55 strategy (European Commission, 2025d).

The risks with all these strategies are, however, considerable. Extensive public support for domestic industry may lead to a vicious circle, where states are constantly required to outbid their counterparts in the scale of support. The term *state-aid shopping* is sometimes used to describe this phenomenon where large companies try to extract as much aid or subsidies as possible from the political sector in different competing countries (see, e.g., discussion in Eisl, 2024). In the end, it is likely that the largest countries will be able to offer the most money. This imbalance between countries of various sizes distorts competition to the detriment of smaller countries. Placing public investments at the EU level could reduce this form of competition between the Member States *within* the Union. However, the race to provide the most extensive support will then instead

³The green transition can also be understood through the lens of *creative destruction* where structural change involves not merely supporting emerging green technologies but also allowing environmentally harmful industries to decline (Aghion & Howitt, 1992; Aghion et al., 2019). However, the social and economic consequences of such industrial restructuring—particularly plant closures and job losses—may generate resistance and inertia among affected groups. This is another aspect pointing to the importance of political engagement and well-designed compensatory measures to ensure a socially ‘just’ transition.

be between the largest economic blocs in the world economy. In this case, the problem has not been solved—it has simply shifted to another level.

It is also questionable whether the intra-European competition would be reduced if the public (and green) investments were made at the EU level. The EU must prioritise what it wants to invest in—the EU does not have infinite resources—and different Member States would probably try to convince the EU to prioritise investments that benefit their country most.

In addition, our reasoning in the previous section suggests that such initiatives run a high risk of failure. Transferring the risk to the political sector is problematic. The danger is that the private sector takes on too much risk and that too many private actors invest money in projects that ultimately are not viable. The problems of moral hazard are also substantial. Those countries that avoid large-scale combined environmental and industrial policy may be more competitive when these initiatives perform poorly or fail. In other words, large-scale active industrial policy appears to be a risky and poor long-term strategy. Those more restrictive in using subsidies and providing various forms of support to their domestic industry can instead focus on other parts of the economy and buy the rest of the world's subsidised products as inputs.

The risks of adopting a protectionist policy with trade restrictions are also far from negligible. This strategy may similarly encourage lobbying by industry groups seeking to be protected from outside competition. Instead of increasing the speed of transition to a sustainable economy, it could lead to the opposite if the EU fails to remain vigilant. Increased protectionism also risks leading to trade wars and closed borders (see, e.g., discussion in Zafar, 2025).⁴

ENVIRONMENTAL POLICIES THAT WORK

The EU's goal of climate neutrality is a challenge for Europe. Where pollution generates environmental harm, instruments such as taxes, legislation, and bans are required to address the shortcomings of market mechanisms. The EU has played a central role in this regard, with environmental legislation contributing to the gradual phasing out of toxic

⁴ Our concerns align partly with Jarlebring's chapter in this volume, which underlines the potential for policy entrepreneurs to push through their agendas and the risk of increased international tensions and trade wars.

substances. Traditional environmental policy tools—including taxes, fees, and prohibitions—have generally been effective in the European context. Greenhouse gas emissions in EU countries have decreased by 29 percent between 1990 and 2021. Twenty-four out of 27 countries have seen a decrease, while the Union’s GDP has increased by 62 percent. This reduction means that emissions per unit of GDP have fallen in all Member States. The results are also true if one considers consumption-based emissions. These have fallen by 27 percent since 1990, and there has been a reduction in 22 out of 27 EU countries. Air pollution has also fallen in the EU. Twenty-five of the 26 pollutants the EU measured between 1990 and 2021 have decreased. The average reduction for these is 61 percent, and in relation to GDP, which increased significantly over the period, the reduction is 76 percent (see Grafström, 2026, for a further discussion).

Based on the earlier arguments in this chapter, we believe, however, that a top-down policy involving large amounts of targeted support will not be the solution. This strategy could lead to a swelling administration where significant resources will be spent on failed projects. Instead of transferring national state aid to the EU level and expanding its scope, the development should be reversed.

It is too difficult for politicians and bureaucrats to identify future industries, products, and technologies and steer the economy effectively towards them through extensive support measures targeted at selected venture capitalists, companies, and government institutions. The political sector often lacks the competence and capacity to implement such strategies effectively. A more resilient system is required—one that does not depend on policymakers allocating vast resources to specific, targeted investments that are difficult to reverse and risk becoming malinvestments with substantial fiscal costs. Instead, policy should aim for a competition-neutral framework in which politicians are not tasked with selecting technological solutions or attempting to identify which industries may prove viable in the future. This conclusion also aligns with Sjöholm (2023), who states that it is highly uncertain whether the EU possesses the competence required for a comprehensive and active industrial policy to successfully steer development forward appropriately.

A well-functioning emissions trading system covering all sectors of the economy and including as many countries as possible must form the foundation for solving the climate problems in the world. Regulations and rules should be neutral and avoid distorting private initiatives, but environmental pollution must be priced. With such a system in place, it would

be possible to reduce the need for direct government green investment support to private actors. Hassler (2023) also concludes that centrally controlled public investments can be more limited when a well-functioning and comprehensive emissions trading system is in place. Although less visibly ambitious, this approach constitutes a strength, as it acknowledges the inherent uncertainty of technological development and avoids prematurely locking policy into specific technologies or products. By maintaining flexibility, it allows the most effective solutions to emerge in addressing the climate crisis. Creating an institutional framework that rewards and facilitates the entrepreneurial process, where companies constantly test new solutions or improve existing ones, is essential.⁵ In addition, a significant political risk often deters investors from making large and substantial investments. Political whims and a sudden enthusiasm for a particular solution can quickly turn into the opposite. Transparent, neutral, and long-term stable rules are needed.

Hence, support measures should be deployed in a general and technology-neutral way that does not distort incentives. Politicians could, for example, use various research and development tax credits instead of grants. These support systems do not need to distort competition like targeted grants because they are not targeted at specific firms or technologies. They require less public administration and, if properly designed, need not distort companies' risk calculations. Critics would argue that targeted subsidies are needed and were necessary, for example, for Denmark to become a world leader in wind energy and Spain in solar energy. However, both these energy sources are still struggling to remain financially viable in the mid-2020s, and it is arguable whether these are actually examples of successful investments.

Long-term investments in the underlying infrastructure are also needed to facilitate the industry's transition and willingness to invest. Europe needs to build better transmission capacity and grid infrastructure. The financial infrastructure could also be improved in the Union by creating a

⁵ Recent advances in artificial intelligence may further accelerate processes of *creative destruction* within the green transition. The interplay between AI-driven innovation and environmental objectives underscores the need for flexible, technology-neutral policy frameworks that accommodate rapid technological change without locking in specific solutions by political directive. The question about AI and the environment is, however, more complex, as AI technologies, for example, may require higher energy consumption. It is beyond the scope of this chapter to discuss this issue further (see, e.g., discussion in Kyriakarakos, 2025).

fully developed capital market union. The scope for increased, possibly coordinated, basic research should also be considered.

Finally, the closure of nuclear power plants that we have seen across the Union, such as in Germany (as part of their strategy called *Energiewende*), should be mentioned. In retrospect, this strategy appears less successful, and Emblemståg (2024) has shown that it would have been better (both from an environmental and from an economic point of view) to keep or even expand nuclear power in Germany (see Deshaies, 2026, for a further discussion about *Energiewende*). In order to succeed in the green transition, the use of nuclear power must be a part of the solution (IEA, 2019; Liu et al., 2023; IAEA, 2025). However, it is important to note that nuclear projects are not immune to the same challenges highlighted throughout this chapter, including rent-seeking and lobbying.

TOWARDS A MORE NEUTRAL AND RESILIENT EUROPEAN GREEN DEAL

This chapter has highlighted how industrial and environmental policies have converged in the EU. Environmental policy is no longer just about managing emissions through taxes, regulations, and prohibitions. Environmental policy is also about initiating and pushing through large-scale state-sponsored industrial investments. This idea is not unproblematic. Instead of allowing the public support system that has expanded during the 2020s among the Member States to be transferred and allowed to expand at the EU level, we propose that the EU return to the pre-pandemic situation with a restrictive approach to state aid for specific companies, industries, and countries.

There have, of course, been examples of successful government ventures and initiatives, and we do not suggest that everything politicians are involved in is bad or will fail. The changing geopolitical environment has also strengthened the case for greater state involvement in the economy. However, we argue there are significant risks with large-scale green industrial policy. As our chapter has shown, allowing the political sector and its bureaucracy to expand and control the direction and development of the economy at the EU level is not without its problems, regardless of the good intentions of its proponents.

Our overall assessment suggests that the EU should refrain from building up an extensive Union-level administration that tries to mandate a

green transition in a specific direction by favouring certain key solutions. It is difficult to successfully identify where and how increased public funds should be spent and who should have access to them. As our chapter shows, this may fail because it requires too much from the political sector. The knowledge, incentives, and skills at the EU level are inadequate to operate this form of political capitalism effectively. Cheap loans and large grants might also lead to recklessness in corporate risk-taking. We see how companies are set up only to apply for funds, which leads to distorted and unfair competition. Moreover, large industrial subsidies are rarely technology-neutral. If a specific company with a distinct technology receives billions in targeted subsidies, this money will crowd out other technological developments.

We argue that an alternative way forward is to focus on legislation and establishing a well-functioning and comprehensive emissions trading system. Traditional environmental policy, with outright bans and phase-outs of environment-related toxins combined with a price on pollution, is a conventional path worth pursuing further. Progress has been achieved through a combination of legislation and technological developments. Policymakers have often led the way but have also acted in coordination with industry, which has developed cost-effective alternatives.

Targeted grants are seldom technology-neutral and often entail administrative costs that only large firms are able to absorb. If additional incentives are required to accelerate progress, specific tax deductions for research and development in environmental technologies offer a more compatible alternative, aligning more closely with the principles of both technology neutrality and competition neutrality.

The identification and development of sectors, industries, products, and technological solutions should, as far as possible, be driven by private producers and consumers through market-based processes of exploration, experimentation, and selection. Potential solutions ought to compete within a free market under a technology-neutral regulatory framework, without political favouritism or targeted interventions. In our assessment, the geopolitical and environmental challenges confronting the EU have, with few exceptions, not altered this conclusion.

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CHAPTER 6

The European Union's Evolving Defence-Industrial Policy: Drivers and Future Challenges

Calle Håkansson

INTRODUCTION

Since the mid-2010s, the European Union's (EU) defence-industrial policy has advanced at a rapid pace. This heightened momentum and ambition reflect developments both within the Union and in the wider international context (Anghel & Jones, 2023; Fiott, 2023; Haroche, 2023; Andersson & Britz, 2025). These processes could be seen as not only transforming the EU into a more prominent actor in the realm of security and defence but also raising new and important questions about the future trajectory of the EU's role within this policy field. To explore this, the chapter aims to trace and explain the evolution of these developments, examining why and how the EU has taken several significant steps

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forward in this area. Specifically, it seeks to address two overarching research questions: How has the EU's defence-industrial policy developed historically? And in what ways has the war in Ukraine influenced the EU's progress in this domain?

While notable progress has been made in recent years, the EU's developing defence-industrial policy also faces a number of significant challenges ahead. These include the future of the US' engagement in European security, the ongoing implications of Russia's illegal war of aggression against Ukraine, and uncertainties surrounding the political and economic willingness of the Member States to continue deepening EU defence policy. All of these factors will shape the trajectory of European defence policy and the Union's defence-industrial capacity. The analysis in this chapter focuses on the defence-industrial domain for three main reasons. First, the war in Ukraine has clearly shown that defence-industrial capacity is of utmost importance. Second, the EU's institutions, particularly the European Commission, have long aspired to assume a leading role in Europe's defence-industrial development. Third, developments in this field demonstrate how crises can act as catalysts for additional steps in European integration, particularly in areas traditionally considered the exclusive domain of the Member States. This chapter shows that, over time, the policy area has become increasingly supranational, with EU institutions carving out a new role for themselves. At the same time, however, the political will of the Member States remains decisive in determining how far integration can advance (see also Håkansson, 2025).

The chapter is structured as follows: it begins with a historical overview of the EU's efforts—particularly those of the European Commission—to develop Europe's defence-industrial sector, highlighting the political and structural drivers behind this process. It then examines developments during the 2020s, with particular attention to the impact of Russia's 2022 war on Ukraine. The subsequent sections explore the key challenges the Union faces in strengthening Europe's defence-industrial capacity. The chapter concludes with a summary of the findings and outlines recommendations for strengthening European defence efforts.

HISTORICAL OVERVIEW: THE EU'S DEFENCE-INDUSTRIAL DEVELOPMENTS

The European Commission has long sought to regulate the defence-industrial sector in Europe. After the failure to establish the European Defence Community in the 1950s, the EU's predecessors largely avoided involvement in defence policy, focusing instead on economic integration. However, since the late 1990s, the Commission has once again pursued greater political influence in this field (Karampekios et al., 2018; Oliveira Martins & Mawdsley, 2021). In a 1996 communication, the Commission highlighted the problems caused by Europe's fragmented defence market, emphasising in particular the challenge posed by competition from American defence companies. It stressed that closer cooperation on defence materiel was essential for an effective European defence policy. To this end, it proposed new rules on public procurement, the facilitation of intra-EU trade in defence materiel, and stronger synergies between civilian and military industries (European Commission, 1996).

With little to no implementation of these proposals, the European Commission returned in 2003 with a new communication aimed at strengthening EU defence policy. This included proposals for improved rules on the transfer of defence products within the Union, new rules for defence procurement, and initiatives to support advanced research on global security (European Commission, 2003). These measures, however, faced strong resistance from Member States, who were wary of supranational elements in defence policy. Critics within the Commission itself also warned of the risks of an increasingly militarised institution (Mörth, 2003; Strikwerda, 2016). In all, this resistance led instead to the establishment of the intergovernmental European Defence Agency (EDA) in 2004, which was tasked with supporting capacity development in the defence-industrial domain, but not with developing a common security policy in the traditional meaning (Fiott, 2015).

Despite the establishment of the EDA, some parts of the European Commission continued to advocate for broader competences in the field of security and defence. Building on rulings by the Court of Justice of the European Union regarding national procurement practices, the Commission thus issued a new communication in 2007 (Ioannides, 2020). This ultimately led to the adoption of two directives: Directive 2009/43/EC on the transfer of defence products within the EU to facilitate a more integrated defence market, and Directive 2009/81/EC on defence

procurement. In this regard, the Commission drew on Court rulings to expand its role in this area (Blauberger & Weiss, 2013). The economic downturn following the 2008 international financial crisis, coupled with shrinking defence budgets, further increased pressure on Member States to cooperate in the defence-industrial field. Nevertheless, the two ‘defence directives’ had less impact than intended, particularly due to Member States’ concerns over sovereignty, as well as their ability to exempt themselves from the directives. Even so, they represented important steps in enabling the Commission to acquire new competences in the defence-industrial sector (Håkansson, 2021).

In 2013, the Commission presented a new communication that placed greater emphasis on a deteriorating security environment. It highlighted Europe’s changing geopolitical landscape and the complex threats facing the Union, proposing, among other things, a small preparatory action for research related to the Common Security and Defence Policy (CSDP). Though limited in scope, this initiative later proved important in paving the way for further defence-industrial measures. The Commission also suggested joint procurement and ownership at the EU level of dual-use (civilian and military) products, but this proposal was ultimately rejected by Member States (European Commission, 2013).

A major shift in this policy area came under the Juncker Commission, which took office in 2014. Jean-Claude Juncker’s strong leadership was critical for the Union’s political development, particularly given the increasingly top-down and hierarchical character of the European Commission (Håkansson, 2021). In 2016, under the leadership of High Representative Federica Mogherini, the EU also adopted the European Union Global Strategy for Foreign and Security Policy (EUGS) (EEAS, 2016). The strategy raised the Union’s level of ambition in defence and security and paved the way for new defence-industrial projects. The most notable example came in autumn 2016, when the Commission proposed the creation of a European Defence Fund (EDF) alongside a new EU-level defence action plan (Haroche, 2020; Hoeffler, 2023). The EDF, with a budget of €7.9 billion for 2021–2027, positioned the Commission as a key financier of defence research and development in Europe. Following the EUGS, the EU also launched Permanent Structured Cooperation (PESCO) to, among other things, support capability development, as well as the Coordinated Annual Review on Defence (CARD) as a tool for monitoring the defence plans of Member States to help coordinate defence

spending (Britz, 2023). In that regard, the EDF, PESCO, and CARD represented an integrated package of new EU defence initiatives.

Ursula von der Leyen, who succeeded Jean-Claude Juncker as Commission President in 2019, continued along this path with similarly ambitious defence and security policies. Notably, she established a dedicated Directorate-General for Defence Industry and Space (DG DEFIS) to implement the EDF and expand the European Commission's role in defence. These expanded ambitions were controversial, as Member States sought to avoid excessive supranationalisation of defence policy (Menon, 2014; Riddervold, 2016). To win their support, the Commission employed financial incentives and anchored the EDF initiative in its competences in industrial and internal market policy (Marsh et al., 2025; Håkansson, 2021).

Across all 14 European Commission communications on defence from 1996 to 2023, the Commission has consistently emphasised the need to reduce fragmentation in the European defence industry, strengthen synergies between military and civilian sectors, and enhance competitiveness. The main shift since the early 2010s, however, has been an increasing reliance on security arguments. The deteriorating security environment following Russia's annexation of Crimea in 2014 was explicitly used to highlight the necessity of further EU-level defence initiatives. The logic of integration has thus shifted from a primarily market-driven to a security-driven rationale in the 2020s and forward (Håkansson, 2023). Additional drivers included a strong Franco-German push for deeper security integration, uncertainty about US defence policy, and the political consequences of Brexit. Together, these factors have increased Member State willingness to strengthen EU security and defence cooperation (Béraud-Sudreau & Pannier, 2021; Brøgger, 2024; Sweeney & Winn, 2020).

Political and structural dynamics therefore help to explain the rapid integration process of recent years. Crises in particular have acted as accelerators, prompting new policies and institutional changes within the Union. The numerous crises of the 2010s and 2020s led to a greater transfer of competences to EU institutions, above all the European Commission, and sparked increased scholarly interest in crisis-driven integration processes (Hoeffler et al., 2024). In these crises, Member States have often called on the institutions to devise new solutions, enabling them to act as policy entrepreneurs. The close succession of crises has also created opportunities for institutional learning, allowing the EU and its institutions to build on past experiences (Jones et al., 2021; Riddervold et al., 2021).

THE WAR IN UKRAINE AND THE NEW EUROPEAN DEFENCE-INDUSTRIAL INITIATIVES

Even before Russia's full-scale invasion of Ukraine in 2022, the EU was already in the process of strengthening its security and defence ambitions. For more than two years prior to the full-scale invasion, work had been underway on the so-called Strategic Compass for security and defence (Sus, 2023; Sweeney & Winn, 2022). Conceived as a kind of defence policy white paper, the Compass was intended to guide and clarify the Union's level of ambition in this field into the 2030s. Initially, the uncertainty caused by the war raised questions as to whether the European External Action Service (EEAS) would postpone the launch of the Strategic Compass. Instead, the EEAS chose to raise its level of ambition, substantially revising the strategy in response to the invasion (Håkansson, 2025). The revised Compass brought forward numerous new initiatives: more than 50 of the 81 measures it contained were implemented within its first year (Clapp, 2022). It also explicitly identified Russia as a threat to the whole Union, an issue on which Member States had previously held differing views (EEAS, 2022). Russia's full-scale invasion of Ukraine thus shattered any remaining illusions of a peaceful neighbour in the foreseeable future.

Moreover, the Strategic Compass placed renewed emphasis on the defence-industrial dimension, a focus reinforced by the Versailles Declaration adopted just two weeks after the invasion. In this declaration, the heads of states and governments in the European Council underlined the need to strengthen Europe's defence-industrial capacity and tasked the European Commission and the European Defence Agency with presenting concrete proposals (European Council, 2022). As a first step, the Commission and the EDA presented a communication in spring 2022 evaluating European defence capabilities. It highlighted how long-term underinvestment had produced severe gaps in industrial capacity and inadequate stockpiles. A comparative analysis with other global actors illustrated the scale of the challenge: while the aggregated European defence spending between 1999 and 2021 rose by just under 20 percent, US spending grew by more than 65 percent, Russian by 290 percent, and Chinese by nearly 600 percent. The figures painted a bleak picture of Europe's preparedness (European Commission and HR/VP, 2022).

In response, the European Commission proposed several new initiatives to strengthen the European defence industry. In the short term, this

centred on creating an instrument to support joint procurement in the guise of the European Defence Industry Reinforcement through common Procurement Act (EDIRPA). In 2024, funds from EDIRPA were allocated to five cooperative projects—each receiving €60 million—for the joint procurement of armoured vehicles, artillery ammunition, and air and missile defence systems. The rapid mobilisation of EU funds was crucial to addressing stockpile shortages caused by Europe's extensive military support to Ukraine (European Commission, 2024). Studies of EU policy-making also suggest that such smaller, short-term initiatives often serve as stepping stones to larger, longer-term programmes (Håkansson, 2024; Hoefler et al., 2024; Marsh et al., 2025).

The war in Ukraine also underscored the urgent need to increase Europe's capacity to produce artillery ammunition and rockets. The extraordinary consumption rates during the conflict prompted Ukraine to request additional EU support in spring 2023. In response, the Union launched a three-track plan to deliver one million rounds of artillery ammunition and rockets within a year. The first track encouraged Member States to donate ammunition directly to Ukraine, with reimbursement available via the European Peace Facility (EPF). The second used €1 billion from the EPF to finance joint procurement of ammunition. The third focused on expanding Europe's industrial production capacity, leading to the adoption of the Act in Support of Ammunition Production (ASAP). With a budget of €500 million for 2023–2025, the ASAP regulation aimed to help industry optimise, expand, modernise, upgrade, or convert production facilities, as well as establish new capacity within the EU (Riddervold & Rieker, 2024). Taken together, EDIRPA and ASAP placed the EU in an entirely new defence-industrial context. By 2025, the Union's capacity to produce artillery ammunition had already increased by more than 50 percent, with further growth expected (The Economist, 2025).

Nonetheless, EDIRPA, ASAP, and the EPF were designed as short-term emergency measures. The European Commission therefore stressed the need for longer-term, well-funded initiatives. In spring 2024, it presented, together with the High Representative, both a new European Defence Industrial Strategy (EDIS) and a European Defence Industry Programme (EDIP) (European Commission and HR/VP, 2024). With a proposed budget of €1.5 billion for 2025–2027, EDIP was conceived as a transitional measure between the expiry of EDIRPA in 2025 and the start of the next multiannual financial framework in 2028. The new defence

industrial strategy (EDIS) set out a vision for a strong and resilient European defence industry as the basis for enhanced preparedness. Among its proposals were the creation of a new planning and procurement function for EU institutions and Member States building on the ad hoc structure created in 2022, tax reforms to facilitate defence production in Europe, and a review of the two 2009 defence directives. The Commission also proposed a European equivalent of the US Foreign Military Sales mechanism to support the export of European defence equipment, and suggested the establishment of so-called defence projects of common European interest. Modelled on similar initiatives in the civilian sector, these projects would benefit from increased EU funding and exemption from state aid rules. Together, these measures aimed to enhance European defence-industrial cooperation and procurement. The long-term objective is that by 2030, Member States should jointly procure at least 40 percent of all defence materiel, with at least 50 percent of defence spending directed towards equipment developed within Europe (European Commission and HR/VP, 2024; Marsh et al., 2025).

Finally, in the spring of 2025, the European Commission presented the new White Paper on European Defence and the ReArm Europe Plan. The plan was unveiled against the backdrop of transatlantic uncertainties under the new second Trump Presidency in the US, as well as the continued deterioration of the security situation in Europe. It sets out the ambition to mobilise €800 billion in defence investment across Europe over the coming years. This includes the new Security Action for Europe (SAFE) instrument, through which the Commission intends to raise up to €150 billion in loans on capital markets to accelerate defence investments in Europe. Member States will be able to access these funds via structured long-term loans, guaranteed by the EU budget, to enhance their military capabilities through joint procurement from mainly European defence industries. SAFE is in that regard designed to improve interoperability, cost efficiency, and strategic coordination across the EU. Moreover, EU Member States are encouraged to activate the Stability and Growth Pact's national escape clause, providing additional fiscal flexibility to increase defence spending within EU budgetary rules (European Commission, 2025; Clapp et al., 2025). To operationalise these efforts, the European Commission and the HR/VP in 2025 also laid out a Readiness Roadmap to 2030, which included the development of four flagship projects: the Eastern Flank Watch, the European Drone Defence Initiative, the European Air Shield, and the European Space Shield. All of these will have

defence-industrial components and are intended to drive greater cooperation within the field in the years ahead (European Commission & HR/VP, 2025).

A NEW ROLE FOR THE EU AND NATO

There are many reasons why stronger European defence-industrial integration and enhanced EU competences in this field are urgently needed. Above all, the war in Ukraine has shown that the scale of materiel and capabilities required is far greater than what European countries planned and procured during the decades of relative peace since the end of the Cold War. During that period, European armed forces also reoriented primarily towards international missions and operations, preparing for very different types of threats from those Europe faces today. In the mid-2020s, however, Europe is confronted with a highly skilled, revanchist, and expansionist adversary in Russia. This poses clear and demanding requirements for Europe's capabilities and defence-industrial capacity going forward. The battle-hardened, and in the event of a pause in fighting in Ukraine, partially reconstituted Russian military poses a significant threat to Europe in the foreseeable future, and is the threat European states must now prepare their military forces to face.

In addition, the EU is uniquely placed, compared with NATO, to support the European defence industry. Yet cooperation between the EU and NATO has long been complex, multifaceted, and marked by rivalry and friction. These difficulties partly stem from the Cyprus question, with Turkey and Greece opposing closer organisational cooperation (Ewers-Peters, 2022). They also reflect US and European concerns that greater EU defence integration might undermine NATO (Bergmann & Svendsen, 2023). In addition, both organisations' focus on international military operations in the late 1990s and early 2000s led to duplication and inefficiencies, while the European Commission maintained little to no direct cooperation with NATO. Since Russia's first invasion of Ukraine in 2014, however, the deteriorating security environment has driven closer EU–NATO cooperation (Hoeffler & Hofmann, 2024). Hence, a clearer division of responsibilities is visible: NATO identifies the capacities and materiel required for Europe's defence, while the EU contributes by financing and building them through its initiatives. Since 2016, cooperation has also been institutionalised through three joint declarations between the EU and NATO (Ewers-Peters, 2025). With Sweden and

Finland joining NATO in 2023 and 2024, 23 of 27 EU members are now also NATO allies, providing a stronger foundation for cooperation. This means that the EU, through both its budgetary resources and its regulatory powers, can create the conditions to better integrate and develop Europe's defence market—something it has successfully achieved in other policy areas (Bergmann & Besch, 2023).

The EU has therefore become a clear enabler of defence within NATO, primarily through the defence-industrial initiatives it has launched since the 2010s. These, along with efforts to improve military mobility, demonstrate how the EU, by using its financial and regulatory tools, contributes to NATO's deterrence and defence. Yet cooperation challenges remain. For example, the then-NATO Secretary-General Jens Stoltenberg warned the EU in 2024 against introducing its own military standards or capability requirements for Member States (Financial Times, 2024). This is an issue that will require closer attention in the future. Still, strengthening EU defence capacity should no longer be viewed as a binary choice between NATO and the EU. On the contrary, NATO benefits from stronger EU defence cooperation, which in that regard contributes to a fairer transatlantic burden-sharing.

The rising cost of defence materiel also makes it increasingly difficult for individual Member States to shoulder the investments required for advanced systems, such as next-generation combat aircraft, drones, and missile systems. Stronger European-level coordination is therefore essential (Hartley, 2011). Yet Member States often continue to prioritise domestic industries or seek non-European solutions, producing a fragmented market with more expensive and less efficient outcomes. Since 2022, many states have opted for 'off-the-shelf' purchases from outside the EU in order to replenish stocks and support Ukraine (see e.g. discussions in: Hackett & Schreer, 2024; Maulny, 2023). While these short-term solutions are understandable, they risk undermining Europe's defence industry over the long term, as systems procured today will remain in use for decades. Russia's full-scale invasion of Ukraine in 2022 has, however, also stimulated renewed European investment in munitions, unmanned systems, land platforms, and air defence capabilities, although the naval and aerospace sectors have thus far been less significantly affected (Hammarstedt et al., 2025).

Over the past decades, the fragmentation of the European defence industry has also been regarded as one of the principal impediments to the development of more integrated armed forces in Europe (Håkansson,

2023). This fragmentation has, as noted, historically stemmed from a strong preference for national procurement policies and the preservation of industrial sovereignty, with European states traditionally prioritising investment in their domestic defence industries. Nonetheless, the extent of fragmentation is more complex and nuanced than many earlier analyses have suggested. As of 2025, it is primarily attributable to legacy systems and divergent national requirements rather than to current industrial conditions, such as production capacity. Excessive consolidation, as illustrated by the experience of the US, may also entail disadvantages, including reduced competition and heightened vulnerability arising from supplier concentration (Andersson & Britz, 2025; Hammarstedt et al., 2025). Looking ahead, Europe must therefore continue to rebuild and enhance its defence-industrial production capacity. In this context, the European Union can play a pivotal role in reinforcing and further developing Europe's collective defence capabilities.

We can therefore expect EU institutions to continue working towards expanding defence-industrial integration. As shown earlier, crises, such as the war in Ukraine, often act as catalysts, generating new solutions and a higher level of political will. In the wake of both the Russian war on Ukraine and the COVID-19 pandemic, the Commission has broadened its geopolitical ambitions. This is evident in the defence-industrial sphere but also more widely, where trade and industrial policy are increasingly used as instruments of security and defence policy (McNamara, 2023). These ambitions are also reflected in Ursula von der Leyen's political guidelines for her second term as Commission President, which again placed security and defence high on the policy agenda. For the 2024–2029 mandate, the European Commission has for the first time appointed a Commissioner for Defence and Space, Andrius Kubilius. Taken together, these developments suggest that the EU and its institutions are set to play an increasingly prominent role in European defence. Ultimately, however, progress will remain contingent on a range of internal and external factors shaping both overall defence policy and the Union's defence-industrial ambitions.

FUTURE UNCERTAINTIES AND CHALLENGES FOR THE EU

In pursuing the new ambitions that have emerged since the outbreak of Russia's full-scale war against Ukraine in 2022, several major uncertainties must be taken into account. Above all, political developments within the

EU, and the willingness of Member States to allow the Union to play a stronger role, will be decisive for the success of these initiatives. By the mid-2020s, Member States will negotiate the next multiannual financial framework (MFF) beyond 2027, which sets the Union's long-term budgetary priorities. While recent initiatives represent new and innovative steps, they will require a substantially larger budget if the EU is to develop and strengthen its defence-industrial base. It is in that regard unclear whether Member States will prioritise these areas in the MFF for 2028–2034. This is linked to concerns about excessive supranational involvement in defence policy, as well as to a more fragmented political landscape, in which support for Ukraine could become increasingly politicised. Both factors risk reducing the political will to strengthen EU defence capabilities.

Moreover, decisions on defence-industrial policy have long-term implications, as building resilient production capacity requires sustained investment over time. Another uncertainty is the gap between EU ambitions and actual implementation. As noted earlier in this chapter, the EU has repeatedly outlined long-term goals to bolster its defence-industrial base. Yet progress has been uneven, largely because Member States remain reluctant to cede influence in this sensitive area, prefer to support national industries, or continue to procure materiel primarily from the US.

Russia's political and military trajectory will also be central to Europe's defence requirements. The European security order will remain under severe strain for as long as Russia pursues revanchist and expansionist policies (Engelbrekt, 2024). This reality compels EU states to continue strengthening their collective defence capacity. The war in Ukraine has made clear that modern warfare is inseparable from robust defence-industrial capabilities and that Europe must assume greater responsibility not only for its own security but also for global stability.

A further challenge is the long-term trajectory of American engagement in Europe. Since the early 2020s, bipartisan consensus in Washington has framed China as the US' defining strategic challenge (Simón & Ernst, 2023). As geopolitical competition increasingly plays out in the Indo-Pacific region, US resources, materiel, and political attention are likely to shift further away from Europe (Aronsson & Ottosson, 2025; Simón & Boswinkel, 2025). A major conflict in Asia, particularly involving Taiwan, would have profound implications for European security, not least because Europe remains heavily dependent on the US for strategic enablers such as airlift, surveillance, and missile defence (Ruitenberg, 2025). In such a

scenario, many of these assets would almost certainly be redeployed from Europe. Investing now in Europe's own industrial capacity is therefore vital to reduce vulnerabilities. Furthermore, the war in Ukraine has also demonstrated that even the US lacks sufficient production capacity for high-intensity warfare. A stronger European industrial base could thus contribute to burden-sharing across the Atlantic.

The US has also traditionally played a unifying role in European security, a role that may diminish as American engagement wanes. The return of Donald Trump to the White House in 2025 has introduced renewed uncertainty regarding Washington's commitment to NATO and European defence. Trump's first presidency (2017–2021) was marked by transatlantic tensions. At the same time, Trump's earlier tenure also spurred the EU to launch several of the initiatives discussed in this chapter, including the EDF and PESCO, as European states sought to hedge against US unpredictability. Trump's first term also catalysed debate on Europe's need for greater autonomy, giving rise to the EU's ambitions for 'strategic autonomy', or the ability to act independently in foreign and security policy (Ewers-Peters, 2025; Helwig & Sinkkonen, 2022; Howorth, 2018; Varma, 2024). These debates are likely to resurface, with some Member States pushing for stronger EU cooperation while others prefer closer alignment with Washington. This could create divisions within Europe, with some governments potentially pursuing bilateral arrangements with the Trump and future US administration. In parallel, Trump's presidency may energise populist forces in Europe that oppose deeper integration (Besch & Varma, 2025). Thus, his return to office could either accelerate EU defence cooperation—by acting as a wake-up call—or exacerbate divisions and stall progress.

Europe must therefore be better prepared to manage its own security environment. Successive US administrations have pressed Europe to assume greater responsibility, yet the necessary steps have often been delayed. However, by 2025, under strong pressure from the US administration, NATO set a new 5 percent target for defence, of which 3.5 percent would be allocated to core defence spending and 1.5 percent to, *inter alia*, protecting critical infrastructure, ensuring civil preparedness, and enhancing national resilience (NATO, 2025). In all, this could be seen as both shifting the burden-sharing within the alliance—making NATO more European—and ensuring that the US remains engaged in NATO.

Nevertheless, the future of US engagement in NATO still remains uncertain. While legislation passed in US Congress makes it more

difficult for a president to withdraw the US from the alliance unilaterally, a president can still undermine NATO by reducing troop deployments, limiting exercises, or disengaging from political processes. Moreover, President Trump's rhetorical questioning of NATO's Article 5—the Alliance's collective defence guarantee—has already undermined NATO's credibility both internally and externally. Another open question is the extent of US military and financial support to Ukraine. Europe has the economic capacity to shoulder more of the burden, but in the short to medium term, it would struggle to compensate for a sharp decline in US materiel deliveries. This has led to new European procurement packages of American defence materiel under the Trump administration to support Ukraine with these capabilities (Jack & McLeary, 2025). However, this could also undermine European efforts to strengthen its own defence industry, though it may be seen as a necessity in the short to medium term.

In all, strengthening Europe's defence-industrial capacity is therefore critical—not only to sustain Ukraine's war effort but also to ensure that EU states can enhance their own capabilities. Whatever the trajectory of US policy, these trends should prompt a deeper debate in Europe on how to prepare for a possible reduction of US resources and commitments in the region (Barry et al., 2025). Leveraging the EU as a framework for this adjustment would be both resource-efficient and strategically beneficial, strengthening Europe's long-term defence capability.

CONCLUSION

This chapter began by tracing the historical evolution of defence-industrial dynamics within the EU since the 1990s. The historical overview provides essential context for understanding the political developments of the mid-2020s and why recent initiatives may mark significant steps forward for European integration in the defence sector. The analysis has shown that the EU and its institutions, particularly the European Commission, have assumed an increasingly prominent role in supporting and building up Europe's defence-industrial capacity. At the same time, the chapter has highlighted the persistent challenges facing earlier initiatives, as well as Member States' concerns regarding the Commission's expanding influence and ambitions in this sensitive policy domain. Nevertheless, we have long seen that crises can act as catalysts for new solutions and heightened ambitions across policy areas. In this regard, the war in Ukraine has clearly

served as a catalyst for defence-industrial integration in Europe. Security and defence, and in particular defence-industrial integration, have thus become an increasingly integral and natural dimension of the European Union in the 2020s. In that regard, the Union can be expected to continue to employ financial incentives and industrial policy to further strengthen Europe's defence capabilities.

That said, several aspects still need to be strengthened, and a number of uncertainties must be addressed. First and foremost, looking ahead, EU–NATO cooperation must be further reinforced and institutionalised. As demonstrated throughout this chapter, the EU has become an enabler of NATO's collective defence efforts, yet much remains to be done. Cooperation should be deepened in line with NATO's collective defence planning, in which the Alliance defines capability requirements and standards, while the EU supports development and procurement through its regulatory and financial instruments. Furthermore, the US' long-term strategic shift towards the Indo-Pacific region underlines the urgency of Europe assuming greater responsibility for its own security. A strong EU–NATO partnership will be a cornerstone of this effort. Moreover, Russia will continue to represent the principal threat to the security of EU member states for the foreseeable future. In this context, Europe must further strengthen its defence posture to ensure it is capable of deterring and, if necessary, responding to a peer adversary in the near term. This requires sustained investment in defence capabilities, enhanced readiness, and greater interoperability among European armed forces.

Finally, Donald Trump's second term as US president underscores the need for Europe to assume greater responsibility for its own defence and security. As outlined above, significant uncertainty surrounds Trump's approach to NATO and the US role in Europe. It is therefore vital to work towards a clearer and stronger European contribution within NATO, where European states shoulder a greater share of the collective burden. For the foreseeable future, Europe is likely to continue increasing and enhancing its defence spending. To ensure maximum value for money—or, in other words, greater bang for the Euro—Member States must strengthen their cooperation and make full use of the instruments and mechanisms available at the EU level. In this regard, the EU's further development, particularly in the defence-industrial sector, can make an important contribution to both strengthening NATO and reinforcing Europe's capacity to safeguard its own security.

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European Strategic Autonomy in the Field of Defence: Reconfiguration of Military Supply Chains Following Russia's Full-Scale Invasion of Ukraine in 2022

Martin Lundmark

INTRODUCTION

Following Russia's military interventions in Georgia (2008) and Crimea (2014), its imperial ambitions became increasingly apparent. These concerns intensified dramatically on 24 February 2022 with Russia's full-scale invasion of Ukraine. The outbreak of war triggered an unprecedented surge in demand for defence equipment. European donor nations were compelled to rapidly adapt logistics, supply chains, and ammunition production while simultaneously reinforcing their own military capabilities. This surge quickly exceeded available industrial capacity, with shell¹

¹In some texts the artillery munition is referred to as 'shells' and in other texts as 'grenades'. In official documents from, for example, the EU shells is the official designation. *Shells* is therefore the chosen designation in this text.

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production emerging as one of the most critically constrained segments of the defence sector (Boot, 2024).

The urgent need to expand production reshaped the European and global defence landscape, as states sought to strengthen industrial capacity both to support Ukraine and to bolster their own security. The war also exposed the European Union's limited military preparedness in relation to the Russian threat. As the conflict devolved into First World War-style trench warfare, Ukraine's need for shells became acute. By late 2022, EU Member States' stockpiles were severely depleted. Annual EU production of 155 mm shells stood at approximately 230,000—roughly one-third more than the US output—but was far from sufficient. In response, Member States aimed to increase production to 1.3 million shells by 2024 and 2 million by 2025. Yet coordination challenges and limited industrial capacity hindered timely delivery. In contrast, Russia was estimated to produce 5 million artillery shells and around 700 cruise missiles by 2024, far exceeding EU capabilities (European Commission, 2024a, 2024b; Fabbrini, 2024; Hellberg & Lundmark, 2025; Boot, 2024; McNeil, 2024a, 2024b).

This chapter's aim is to analyse how Russia's full-scale invasion of Ukraine in 2022 was a shock to the European organisation of military production as well as the EU aggregate war readiness and how initiatives within Europe have initiated dramatic coordination effects in defence in a short time. As is analysed and explained in this chapter, the Ukrainian war initiated far-reaching national, supranational transformations among institutions and the defence industry.

The chapter examines how Russia's 2022 invasion shocked Europe's military production systems, exposed weaknesses in EU defence readiness, and catalysed initiatives to strengthen European strategic autonomy. It analyses the evolving relationships among states, defence firms, and supranational authorities within European shell supply chains, employing the theoretical frameworks of strategic autonomy and dynamic capabilities.

It was apparent that the EU and its Member States were not sufficiently prepared nor organised to react to the security and military challenges rapidly introduced by the Russian full-scale invasion of Ukraine on 24 February 2022. The invasion showed that Russia truly constitutes an apparent threat to European security and the liberal, value-based world order. The drastically deteriorated threat situation demanded pervasive policy reforms to transform European strategic autonomy, war readiness, and security of supply of arms.

The research questions guiding this chapter are twofold. First: What policy initiatives and actions have the EU and its member states introduced and implemented post-2022 in order to strengthen strategic autonomy and the functioning of the EU defence industry, and how successful have they been? Second: What are the demands of an EU post-war defence market and security regime in order to be better prepared for a potential war?

The chapter begins by outlining Europe's defence and security challenges considering Russia's strategic and military advances in Ukraine. It then presents the theoretical framework, aim, and overall structure of the study. Subsequently, the analysis examines how the European Defence Technological and Industrial Base (EDTIB) has come to be regarded as a strategic asset for the European Union. The following section explores the shock induced by Russia's full-scale invasion of Ukraine in 2022 and the resulting transformations in both national and EU defence policy. Next, the chapter assesses supranational EU initiatives developed during Phase I to integrate defence-industrial and procurement strategies, expand production, support Ukraine, and reinforce Europe's strategic autonomy. This is followed by an analysis of the evolving relationships between the EU, Member States, and defence industries. The final sections summarise the main findings, outline the desired characteristics of Europe's post-war defence-industrial ecosystem, and provide policy recommendations for strengthening strategic autonomy, preparing for future crises, and increasing industrial output in order to meet the surge in arms' demand. The chapter concludes with reflections on the current turbulence surrounding EU strategic autonomy, its key contributions, and suggestions for future research.

THEORY

European Strategic Autonomy in Defence

European leaders have long debated defence self-sufficiency, now commonly termed *strategic autonomy*. Although definitions vary, the concept broadly refers to the EU's capacity to meet its own military needs and sustain an independent defence industry. Strategic autonomy is best understood as a continuum of dependency rather than an absolute condition.

The concept evolved through successive strategic developments. Following the Balkan wars, 9/11, and the Iraq War, Europe adopted its first security strategy in 2003 (Bartels et al., 2017). The European Parliament's, 2013 strategy emphasised the creation of a competitive arms industry to underpin autonomy and ensure security (European Parliament, 2013). Achieving this goal requires reducing reliance on external actors (Zandee et al., 2020; Helwig, 2021; Håkansson, 2021). Responding to US calls for greater European responsibility in defence, the EU launched collaborative initiatives such as PESCO and the EDF (Fiott, 2018; Retter et al., 2021). By 2016, strategic autonomy was defined as the ability to act independently while retaining the discretion to cooperate with partners (Borrell, 2024). As Russia's aggression grew, the resilience of the European Defence Technological and Industrial Base (EDTIB) became a strategic priority. Member States' responses to EU initiatives, however, revealed diverging national perspectives (Beaucillon, 2023; Kleczka et al., 2024; Michaels & Sus, 2024). The 2022 invasion of Ukraine elevated European security integration to new political prominence (Csernaton, 2022; Håkansson, 2024; Varma, 2024).

The concept gained wider practical relevance as a means for states to manage an increasingly volatile and ambiguous security environment (Vu et al., 2024). With the US prioritising China in its strategic outlook, Washington has encouraged Europe both to assume greater responsibility and to align with its stance towards Beijing (Varma, 2024; Desmaele, 2025). Conversely, China welcomes increased European autonomy, viewing it as a counterbalance to US–EU alignment (Calcara et al., 2025; Su & Liu, 2025). The Ukraine war ultimately exposed the EU's unpreparedness for large-scale conflict and reinforced the political urgency of strengthening both industrial and strategic autonomy—understood as ensuring one's own security without dependence on external actors.

Dynamic Capabilities

Dynamic capabilities theory posits that organisations must adapt to unforeseen change while sustaining competitive advantage (Teece, 2010; Barney, 1991). Firms must determine which resources to retain, how to coordinate them, and which capabilities to source externally—a view rooted in the resource-based theory of the firm. The framework is particularly pertinent to defence supply chains, which face frequent disruption

and high security sensitivity. Even basic munitions, such as shells, require complex production processes and strict customisation.

Russia's 2022 invasion revealed the EU's limited flexibility to respond to sudden surges in ammunition demand. Subsequent initiatives by national governments, the EU, NATO, and coalition partners have sought to enhance dynamic capabilities, resilience, and strategic autonomy within European defence industries (Hellberg & Lundmark, 2025).

Defence Supply Chains

Effective procurement and supply management depend on understanding the dynamics between suppliers, buyers, and end-users. Private defence contractors operate under profit-driven incentives (Fletcher-Chen et al., 2022), while public-sector procurement has prioritised cost-efficiency, often at the expense of long-term relationships (Holma et al., 2022). Relational and network theory highlights trust, interdependence, and collaboration as essential for resilient partnerships (Axelrod, 1984; Johanson & Mattsson, 1987; Axelsson & Easton, 1992; Carr & Pearson, 1999; Håkansson & Gadde, 2018; Gadde, 2021).

Privatisation and globalisation have weakened national loyalties (Hirsch Ballin et al., 2020; Pałka, 2020) and diversified procurement, fragmenting supply chains and heightening geopolitical risks (Stevenson & Spring, 2007; Kolk & van Tulder, 2010; Bode & Wagner, 2015; Mackay et al., 2020). Despite cost advantages, the resulting vulnerabilities underscore the importance of maintaining domestic industrial capacity (DeVore, 2021). Strategic autonomy and war readiness thus depend on predictable supplier structures and scalable production capacity (Hartley, 2023). Robust defence supply chains are essential enablers of both autonomy and operational readiness.

Phases in the Defence Market

The evolution of the European defence market can be divided into three phases (Hellberg & Lundmark, 2025):

- Phase 0: The *peace-optimised* market before Russia's 2022 invasion, characterised by stable supply and demand.

- Phase 1: The post-2022 transformation, marked by urgent institutional and industrial responses within the EU and Member States.
- Phase 2: A projected post-war phase, envisioning how market and industrial structures may evolve once the conflict concludes.

This tripartite framework enables analysis of the institutional and market transformations triggered by the war. The chapter combines the perspectives of strategic autonomy, dynamic capabilities, and defence supply chain theory across these phases. No prior academic work has applied the dynamic capabilities lens to analyse the development of European strategic autonomy after 2022 in conjunction with defence production systems.

Accordingly, this chapter examines how Russia's 2022 invasion shocked Europe's military production structures and exposed deficiencies in EU military readiness, while also catalysing rapid coordination and integration towards enhanced strategic autonomy.

EUROPE'S TECHNOLOGICAL AND INDUSTRIAL DEFENCE BASE AS A RESOURCE FOR STRATEGIC AUTONOMY

The conditions shaping the European defence industry have evolved significantly over time. The pre-war configuration—referred to here as *Phase 0*—lacked the robustness and readiness required to meet Europe's dual challenge of supporting Ukraine's defence against Russia while reinforcing its own military capacity (Hellberg & Lundmark, 2025). Historically, EU efforts to liberalise and support the defence market relied heavily on *soft law* instruments, using non-binding guidelines to influence Member State decision-making (Caranta, 2023).

After the Second World War, much of Europe's defence industry lay in ruins. The US played a decisive role in its reconstruction, promoting a unified defence framework that later evolved into NATO. Through economic assistance, low-cost arms sales, and technology transfers, the US helped rebuild European defence-industrial capacity, motivated by both strategic idealism and the desire to prevent the spread of communism (Giovachini, 2000; Schmitt, 2000, 2001; Hèbert, 2003; Geiger, 2003; Lundmark, 2011; Dinan, 2004).

The original 1957 EC Treaty (Article 296, now Article 346 TFEU) excluded defence equipment from the internal market, allowing Member States to prioritise national procurement and self-sufficiency. Limited

cooperation occurred through NATO and early European initiatives such as the Western European Armaments Group (WEAG) and the Organisation for Joint Armament Cooperation (OCCAR). From the 1950s, leading industrial powers—France, the UK, Italy, and Germany—initiated joint projects in missile and aircraft development, resulting in firms such as Airbus, Eurocopter, and MBDA (Schmitt, 2000).

Nevertheless, national self-sufficiency remained the dominant paradigm, constraining cross-border integration. Article 346 continues to grant Member States broad discretion to restrict cooperation on security grounds. While such protectionism may be legitimate, it has hindered the creation of a fully integrated European defence-industrial base. The question of Europe's ability to sustain its own defence needs has thus evolved into a pressing political issue in the 2020s.

Defence-equipment cooperation deepened during the 1960s, coinciding with a transatlantic debate on industrial integration. Shared goals of interoperability, standardisation, and cost-efficiency encouraged collaboration, while escalating technological complexity and cost-reinforced interdependence (Lundmark, 2011). Long development cycles, often spanning decades, further necessitated sustained multilateral cooperation.

Article 346 TFEU continues to permit exemptions from internal-market rules for essential national security interests, though these must be justified to the European Commission. As a result, Member States vary considerably in their application of defence-procurement rules, which operate within a complex system of national and international regulations (Trybus, 2002; Bratanova, 2004).

From the 1980s, public-sector reforms inspired by New Public Management (NPM) reshaped the European defence sector. Governments increasingly relied on private providers, transitioning from producers to customers and redefining their relationship with industry (Heidenkamp et al., 2013; Hartley, 2023). The UK led these reforms, privatising state assets and outsourcing services, while many other Member States retained partial state ownership to preserve strategic control.

By the early 2000s, defence manufacturing across Europe had become largely privatised and transnational, with ownership structures extending across borders (Hood, 1991, 1995; Grimsey & Lewis, 2004; Mundebo, 2008; Ettinger, 2011). Sweden pursued a particularly liberal approach, permitting full foreign ownership and promoting international collaboration in defence production (Deverell, 2025).

Although NPM reforms enhanced transparency and cost-efficiency, they often created bureaucratic rigidity, strained trust between authorities and industry, and limited the ability to respond to rapid external shocks (Mundebo, 2008; Ettinger, 2011). By the early 2020s, these shortcomings prompted renewed interest in more collaborative and adaptive governance models.

Directive 2009/81/EC marked a milestone in harmonising EU defence procurement, seeking to promote transparency and competition while safeguarding national security (Gombos & Szűcs, 2019). Yet, despite formal integration into the single market, many defence companies rely on international supply chains, leaving national self-sufficiency below 50 per cent in some cases.

Globalisation and privatisation have weakened traditional notions of national loyalty and increased reliance on foreign suppliers. While diversification has delivered efficiency gains, it has also fragmented supply chains and heightened exposure to geopolitical risks—a vulnerability exposed during the COVID-19 pandemic. Conversely, strong domestic defence industries enhance military adaptability and national resilience (Stevenson & Spring, 2007; Kolk & van Tulder, 2010; Bode & Wagner, 2015; Mackay et al., 2020; DeVore, 2021; Hartley, 2023).

The evolution of the European defence market since the Ukraine war—and the EU’s subsequent reform initiatives—can thus be interpreted as a reaction to decades of globalisation and declining state control over an increasingly *peace-optimised* defence industry (Hellberg & Lundmark, 2025).

RUSSIA’S GEOPOLITICAL AMBITIONS JUMPSTART EU SECURITY AND DEFENCE

Russia’s full-scale invasion of Ukraine triggered a sharp and sustained surge in demand for defence equipment. To support Ukraine’s armed forces, European nations rapidly adapted logistics, production systems, and ammunition supply chains—most notably in the shell market, which was among the first and hardest-hit segments (Boot, 2024).

At the same time, donor nations sought to reinforce their own military capabilities, exposing structural weaknesses in Europe’s defence-industrial base. By the mid-2020s, demand for munitions and related equipment had reached unprecedented levels, far exceeding existing production

capacity. The need to expand manufacturing reshaped the global defence landscape, as states raced to strengthen their industrial foundations in response to the war's prolonged demands. In response to Kyiv's urgent requests, the previously mentioned ambitious EU goals to raise annual production to 1.3 million shells by 2024 and 2 million by the end of 2025 were formulated. Progress however fell short, hampered by limited industrial capacity, fragmented coordination, and logistical bottlenecks across Member States.

RAPID AWAKENING TO EUROPEAN STRATEGIC AUTONOMY IN DEFENCE

The concept of European strategic autonomy has gained renewed prominence post-2022, with defence-sector initiatives emerging largely in response to Russia's war against Ukraine (Fiott, 2024). The geopolitical shock resulting from Russia's 2022 invasion at first overturned beliefs in the value-based, liberal world order. Around six months after the February invasion, arms donations and military support to Ukraine commenced. The donations required elaborate logistical supply chains that gradually expanded in volume, but struggled to keep pace with the European surge in demand. In parallel with the massive donations to Ukraine, European nations had to replace donations as well as strengthen their military capabilities in numbers as well as sophistication. The nature of the war in Ukraine also turned out different from expected with an escalation especially of drone warfare. The EU self-imposed commitments to support Ukraine thus resulted in an enforced priority on enhancing European defence-industrial production capacity, developing and producing novel weapon systems, and achieving self-sufficiency in arms. This shift aimed to decrease dependency on the US for arms supply—hence the encompassing priority on the credibility and robustness of EU military strategic autonomy.

Under Phase 1, a transformation is underway to strengthen Europe's military preparedness, resilience, and cross-border supply chains, while advancing harmonisation and integration within the European defence market. Member States continue to prioritise the protection of national industries and technologies (Lundmark, 2019, 2022). Nonetheless, the war in Ukraine has accelerated coordination in defence-materiel production across Europe.

Understanding the relationships between suppliers and buyers is crucial for effective procurement and supply-chain management. In practice, cost considerations often override long-term security-of-supply concerns. Under New Public Management (NPM), buyer–supplier relations became transactional and governed by formal contracts, with limited scope for trust or continuity. This contrasts with insights from civilian supply-chain research, which emphasises the role of collaboration, shared objectives, and mutual trust in achieving resilience and efficiency (Håkansson & Gadde, 2018; Holma et al., 2022).

Achieving strategic autonomy requires self-sufficiency in key technologies, reduced dependence on external suppliers of strategic materials, and greater supply-chain resilience. These objectives are central to the EU's ambition to navigate an increasingly volatile geopolitical environment (Teer & Bertolini, 2022; Fiott, 2024; Hellberg & Lundmark, 2025; Andersson & Britz, 2025). By the mid-2020s, the EU has sought to reinforce the European Defence Technological and Industrial Base (EDTIB), reduce reliance on the US, and strengthen its own defence-industrial and military capacity.

States and defence companies operate according to distinct logics. Governments are guided by security policy and national defence strategies, while firms act according to market rationality, profitability, and competitiveness. Since the mid-2010s, European states have prioritised weapons security of supply and societal resilience. Military readiness can no longer remain 'peace-optimised', as during Phase 0. Thus, national demand for armaments has risen sharply, both to support Ukraine and to replenish domestic stockpiles. Meanwhile, the European Commission has sought to foster supranational cohesion in the defence-industrial domain (Fiott, 2024).

For industry, rapid production increases have been constrained by shortages of skilled labour and critical inputs. Final producers, such as ammunition and shell manufacturers, are cautious about large-scale investments without long-term guarantees, limiting the pace of capacity expansion (Boot, 2024; Politico, 2024). This places defence firms in a favourable negotiating position vis-à-vis both national governments and EU institutions regarding co-financing.

The EU has established several mechanisms to enhance harmonisation and cooperation in defence procurement. The European Defence Agency (EDA), created in 2004, supports Member States in developing joint capabilities and fostering collaboration. Directive 2009/81/EC on

defence procurement (European Commission, 2009) introduced rules to ensure transparency and non-discriminatory tendering processes (European Commission, 2014). Building on the Lisbon Treaty, the Permanent Structured Cooperation (PESCO) framework was launched in 2017, committing participating states to devote at least 20 percent of their capability development funds to multilateral EU projects (Calcara, 2020). By October 2025, 75 PESCO projects were active (European Council, 2025).

The war in Ukraine underscored the need for genuine strategic autonomy—encompassing resilience, flexibility, and endurance—to manage unforeseen crises. It exposed deficiencies in Europe’s rapid-response capacity, revealing that strategic autonomy had remained largely aspirational. By the mid-2020s, the debate now encompasses both Europe’s military capabilities and its industrial foundations. Key dimensions include dependence on the US, the balance between EU and NATO roles, internal political unity towards Russia, security of supply, and the employment implications of defence-industrial policy (Brøgger, 2025; Ostanina & Tardy, 2024).

The EU–US capability gap has long shaped this debate. The US maintains a dominant position in defence technology, reinforced by strict export controls such as the International Traffic in Arms Regulations (ITAR), which restrict modification or use of US-made systems without prior authorisation. Between 2005 and 2015, US defence procurement outpaced the EU’s by a factor of two to three annually, while its research and development spending was six to seven times higher. Over 95 percent of US defence R&D supports domestic firms, whereas EU investments remain fragmented across Member States (Lundmark, 2019; Knutsen, 2022).

EU INITIATIVES POST-2022 STRENGTHENING EUROPEAN STRATEGIC AUTONOMY

Act in Support of Ammunition Production

In the summer of 2022, Ukraine consumed ammunition at three times the rate of Western production. By mid-2023, Russia was firing three times as many shells daily as Ukraine, rising to nine times by April 2024 (Boot, 2024). Efforts to drastically increase EU production had commenced, but

with results far below formulated goals. Increasing from the 2022 EU level of 230,000 155 mm shells per year to much higher levels proved difficult. The 2022 commitment to donate 1 million shells in 2023 was nowhere close to being met. Assessment of the annual production capacity was 400,000 by November 2023 (Boot, 2024).

The massive consumption of ammunition and equipment in Ukraine has placed additional strain on Europe's defence industry. EU realised that supporting Ukraine's war efforts also strengthened the EU strategic autonomy by keeping the war at a distance. Expanding production capacity requires recruitment, training, and capital investment—processes dependent on long-term order commitments. To address these challenges, the EU launched the *Act in Support of Ammunition Production* (ASAP) in October 2023 to strengthen the donations to Ukraine, targeting annual shell output of 2 million units by the end of 2025 (European Commission, 2024b).

Complementary national and regional initiatives have emerged, notably in the Nordic region. In March 2024, Sweden and ammunition manufacturer Nammo received EU support to boost production; Norway and Finland likewise secured EU funding for their facilities. Sweden, Finland, and Norway had earlier agreed (in 2018 and 2022) to pursue joint long-term self-sufficiency in ammunition production, including detonator manufacturing. Denmark joined this cooperation in October 2023 through a seven-year agreement. In 2024, Sweden's Defence Materiel Administration (FMV) formalised an ASAP implementation agreement with Nammo, co-financed by the Swedish state and the EU. However, Sweden's influence is complicated by Nammo's ownership structure—jointly controlled by the Norwegian and Finnish governments—and its tri-national production footprint (Hellberg & Lundmark, 2025).

Scaling up shell production extends beyond building new factories. Bottlenecks persist throughout subcontractor networks and upstream supply chains. Shell bodies are manufactured in Norway and Finland, while a key explosive compound is produced solely in Poland—creating critical dependencies that demand close cross-border coordination. New facilities must also meet stringent security standards, adding cost and complexity. Although ASAP supports expansion in explosive production, shortages of other raw materials and components remain pressing. By late 2025, supplier bases for several key inputs remain narrow, with many production units relying on the same vendors. Industry estimates suggest that capacity investments typically require one to two years before full production is achieved (Politico, 2024).

European Defence-Industrial Strategy (EDIS) and the European Defence Industry Programme (EDIP)

In March 2024, the European Commission introduced the European Defence Industrial Strategy (EDIS) to address deficiencies in EU defence preparedness revealed by the war in Ukraine. EDIS aims to establish, over the long term, a more coherent EU-wide framework for joint defence procurement and capability development, increase intra-EU procurement, and strengthen the European Defence Technological and Industrial Base (EDTIB). Through a series of interlinked measures, the Commission seeks to expand the EU's supranational role in defence—an ambition that has historically faced resistance, particularly from Member States with advanced national defence industries. EDIS also challenges procurement practices that prioritise acquisitions from the US (Ostanina & Tardy, 2024).

Linked to EDIS, the European Defence Industry Programme (EDIP) was presented in May 2024 as a targeted investment plan to reinforce the EDTIB. Its initial proposed budget amounted to €1.5 billion. In 2022, only 18 percent of intra-EU investment in multinational military development projects—and an equivalent 18 percent of total defence procurement—was collaborative, leaving 82 percent at the national level. The Commission's target of 35 percent joint procurement represents a significant shift towards multilateral coordination. At the same time, approximately 40 percent of Member States' procurement was directed to the US, a share that rose following the outbreak of war in Ukraine (Hellberg & Lundmark, 2025).

While EDIS serves as a strategic policy framework rather than a binding legal instrument, EDIP's adoption requires approval from both the Council of Ministers and the European Parliament. To reinforce supranational governance of the EDTIB, the Commission created the Commissioner for Defence and Space on 4 June 2024. This role complements the High Representative for Foreign Affairs and Security Policy, who retains responsibility for broader EU military strategy through the *Strategic Compass*. The Defence Commissioner's mandate focuses on industrial integration and capability development, reducing the influence of the internal market portfolio over the defence sector. A potential challenge arises from the division of responsibilities: PESCO projects remain under the Commissioner for the Internal Market, while EDIP projects fall within the Defence and Space portfolio. Andrius Kubilius of Lithuania was appointed as the first Defence Commissioner on 26 September 2024. In

his inaugural statement in October 2024, Kubilius called for a substantial budget increase, proposing that EDIP's allocation should reach €10 billion by 2028 (Håkansson, 2024).

The debate on European defence self-sufficiency intensified further in 2025 following remarks by US President Donald Trump, who suggested that the US might not uphold NATO's Article 5 collective defence commitment for allies failing to meet spending targets. This statement reignited calls for the EU to strengthen its independent defence capabilities and deepen its strategic autonomy.

CHANGING RELATIONSHIPS BETWEEN BUYERS, SELLERS, AND EU MEMBER STATES

Despite rising industrial output, aggregate shell production remained far below demand. Many ammunition manufacturers had adapted their processes during a prolonged period of peace, creating 'peace-optimised' production systems geared towards stable, predictable requirements. International backlogs among major Western producers further delayed deliveries (Hellberg & Lundmark, 2025). Upgrading defence capabilities is inherently time-consuming, encompassing government commitments, industrial orders, production, and eventual deployment by the armed forces.

Supply chains, long optimised for cost-efficiency and lean production, proved ill-suited to sudden surges in demand. Previous closures of industrial capacity, especially for critical inputs, and the centralisation of chemical and explosive production further constrained responsiveness. As a result, many countries began strengthening coordination with domestic suppliers in 2023–2024, adopting longer-term planning horizons.

By the mid-2020s, the EU and its Member States were shifting from transactional buyer–seller relations towards more trust-based, long-term partnerships. Governments and industry increasingly sought to reconcile economic realities with strategic imperatives, though most transformation occurred at the national level as states prioritised self-sufficiency and war preparedness (Hellberg & Lundmark, 2025). EU initiatives such as ASAP and EDIS sought to enhance coordination and synchronisation across the European Defence Technological and Industrial Base (EDTIB). In the absence of a formal EU–NATO agreement, responsibilities gradually diverged under an implicit division of labour: the Commission coordinated industrial and supply-chain policy; NATO focused on military

capability development; and donations to Ukraine were managed bilaterally, with logistics jointly coordinated.

By 2025, shell manufacturing remained largely global due to limited domestic access to raw materials and key components. Ensuring supply security therefore required proactive risk management, international coordination, and technological solutions. Resilient supply chains depend on trust, access to alternative suppliers, flexible components, and adaptable production capacity.

Member States have launched a range of national investments to expand ammunition production and strengthen industrial resilience. Companies, often backed by state funding, have undertaken capacity expansions facilitated by EU mechanisms such as ASAP. Nonetheless, by the mid-2020s, desired levels of resilience and capacity had not yet been achieved, and production still fell short of demand.

Since 2022, both Member States and the European Commission have demonstrated a stronger commitment to building a robust defence-industrial base. This shift marks a departure from traditional New Public Management (NPM) governance, which had prioritised efficiency over adaptability. While the term ‘dynamic capabilities’ is rarely invoked explicitly, the evolving approach reflects its principles: flexibility, learning, and responsiveness. Trust has re-emerged as a cornerstone of resilient defence supply chains and strategic cooperation between suppliers, buyers, and end-users (Kalaitzi & Tsolakis, 2023).

A central challenge remains unresolved: should strategic autonomy be pursued primarily through national policy or a supranational EU framework? Historically, Member States have prioritised national strength, security of supply, and domestic procurement, while the Commission advocates greater European coordination.

The turbulence of Phase 1 exposed the limitations of the Phase 0 peace-optimised market model. Nations, NATO, and the EU alike were unprepared for a large-scale European war. The surge in demand, coupled with fragmented supply chains and simultaneous rearmament efforts, revealed insufficient dynamic capability and coordination. Governments were compelled to rebuild closer, trust-based relationships with defence industries, reminiscent of pre-NPM models.

Phase 1 thus represents a period of radical transformation in which Member States and the EU implement far-reaching changes in cross-border cooperation, strategic autonomy, and industrial adaptation. Phase 2 anticipates two potential trajectories:

1. Stabilisation, marked by a calmer security environment with enhanced readiness, robust supply chains, and sustained production; or
2. Prolonged tension, where persistent Russian aggression necessitates continuously high defence output.

In either case, strengthened European coordination will be essential. Initiatives such as EDIS and EDIP are likely to remain central, though their scope may be moderated by divergent national interests. Expected outcomes include stronger long-term, trust-based partnerships between states and defence firms; a more resilient and integrated EDTIB; and greater supranational governance, alongside a partial departure from NPM practices.

Member States will need to determine how far to align with the Commission's initiatives on strategic autonomy, challenging entrenched procurement traditions. These developments will also influence approaches to defence cooperation, security policy, and relations with NATO and the US.

Some states are expected to retain firm national control over their defence industries, only partially aligning with the Commission's vision. Political developments, such as the re-election of Donald Trump in 2024, have raised further questions about NATO cohesion and future US support for Ukraine. Divergent national stances within the EU—particularly in Slovakia and Hungary—complicate efforts to maintain a unified European position.

Nonetheless, strengthening European strategic autonomy remains a central EU objective. Uncertainty over US commitments has reinforced the drive to enhance independent capabilities. In March 2025, the EU Readiness 2030 Plan was launched to provide financial instruments for expanding defence capacity through innovative loan arrangements. It invites Member States to activate the *national escape clause* of the Stability and Growth Pact to coordinate defence investments. Central to this initiative is the Security Action for Europe (SAFE) instrument—a €150 billion loan facility designed to mobilise public and private capital for defence investment (European Commission, 2025a). In parallel, negotiations are ongoing to reintegrate the UK into EU rearmament processes (The Guardian, 2025).

On the NATO side, the Capability Plan, presented under the Hague Summit Declaration on 25 June 2025, sets concrete spending commitments: allies pledged to allocate 5 percent of GDP to defence and security,

with 3.5 percent for national defence and 1.5 percent for critical infrastructure contributions to NATO. The Alliance reaffirmed continuous support for Ukraine and pledged to strengthen transatlantic defence-industrial cooperation through innovation and emerging technologies (NATO, 2025).

A wide range of innovation initiatives is now mobilising significant resources—among them the NATO DIANA programme, the European Defence Fund, the Hub for EU Defence Innovation (HEDI), and EDIRPA, alongside national schemes. Many explicitly support Ukraine and encourage collaboration between defence and civilian industries, further reinforcing the EDTIB and advancing Europe’s overall defence capabilities.

STRENGTHENING EU’S STRATEGIC AUTONOMY AND WAR PREPAREDNESS POST-2025 THROUGH COORDINATION AND DYNAMIC CAPABILITIES

Europe has clearly moved beyond the peace-optimised Phase 0, entering a period of rapid, well-financed defence market expansion to meet significantly higher demand. While Phase 1—the full realisation of this transformed market—is still unfolding, Phase 2, representing the post-Ukraine war defence landscape, promises a larger, more integrated, and more resilient European defence market, underpinned by both national and supranational ambitions and moving decisively towards higher strategic autonomy.

Nevertheless, significant uncertainties remain, largely dependent on the outcome of the Russia–Ukraine war and the strategic choices of Member States and the EU. The current trajectory demonstrates strong momentum, but the ultimate scope and structure of European strategic autonomy remain to be determined.

Regarding the first research question, a multitude of initiatives and actions have been presented in this chapter that have gradually deepened the supranational policy integration regarding strategic autonomy and the functioning of the EDTIB. Disagreements between Member States, however, halted the comprehensive financing arrangements introduced in 2025 for long-term EU policy integration and support to Ukraine. The more profound outcome of the political context is at the end of 2025 unclear and holds considerable uncertainties. The majority of Member

States show firm support for the continued strengthened strategic autonomy, but the policy dissonance shown by a smaller number of Member States can present a breadth of outcomes. The analysed initiatives and actions have pushed EU security and defence policy integration to unforeseen levels. Member States have in parallel after 2022 raised defence funding to levels not seen since the Cold War. The NATO Capability Plan from June 2025 served as a strong enabler to enforce commitment to fundamentally raising rearmament and defence readiness.

Regarding the second research question, based on insights from this chapter, two overarching challenges stand out in the effort to strengthen the EU defence autonomy.

Firstly, EU Member States must individually and collaboratively enhance their dynamic capabilities in production, capability development, and military capacity to meet current and future security challenges. Some countries, such as Sweden, have historically pursued peace-optimised defence postures more rigorously than others, leaving significant gaps in readiness. During Phase 0—prior to the 2022 outbreak of the Ukraine war—relations and communication between defence authorities and the domestic defence industry were largely transactional, focusing on the execution of existing contracts rather than long-term strategic alignment. The war in Ukraine has necessitated a shared strategic vision with a longer-term perspective, prompting closer, trust-based relationships between governments and defence companies. Similar efforts are emerging across EU Member States, although substantial work remains before the necessary dynamic capabilities are fully realised.

Secondly, effective coordination between states, military procurement authorities, and the defence industry must evolve towards joint value creation, underpinned by trust-based cooperation. This transformation requires new business models that guarantee the long-term presence and stability of defence companies. Achieving this vision also demands more integrated, long-term investment arrangements. However, this chapter suggests that initiatives such as EDIS and EDIP are unlikely to be fully realised in the near term. Their ambitious supranational scope challenges Member States' traditional autonomy over defence policy and industrial priorities. The tension between national security priorities, defence-industrial policy, and EU-level strategic goals represents a particularly complex equation.

While the strength and credibility of Europe's strategic autonomy remain insufficient at the end of 2025, ongoing reforms, investments, and

trust-building initiatives indicate a trajectory of considerable growth and maturation. Building a resilient, flexible, and integrated European defence capability will require sustained commitment, coordination, and strategic foresight at both the national and EU levels.

PRESENT CHALLENGES IN THE CONTEXT OF EU STRATEGIC AUTONOMY AT THE END OF 2025

Since 2022, the EU has launched numerous ambitious initiatives to strengthen European defence capabilities while providing substantial support to Ukraine. By late 2025, several overlapping programmes aim to culminate in a major phase of investment in EU strategic autonomy. However, the degree of Member State acceptance and the long-term impact of these measures remain uncertain.

Debate continues over the potential use of frozen Russian financial assets to fund Ukraine's ongoing defence and post-war reconstruction. This proposal, revived in September 2025, gained urgency after the US administration indicated that Europe would need to shoulder the primary financial burden for the continent's security. As of October 2025, frozen Russian assets totalled approximately €250 billion, with €140 billion proposed as an interest-free 'reparation loan' to Ukraine (Reuters, 2025; EuroNews, 2025a).

The EU's overarching goal of strengthening strategic autonomy remains unchanged. Uncertainty over US commitment to NATO and to Ukraine has intensified Europe's determination to develop its own defence capacity. In March 2025, the EU Readiness 2030 Plan was introduced to provide new financial instruments for expanding defence capability across Member States (European Commission, 2025b). The Plan invites governments to activate the 'national escape clause' of the Stability and Growth Pact to coordinate defence investments. Its central mechanism, the Security Action for Europe (SAFE) instrument, is a €150 billion loan facility designed to mobilise public and private capital (European Commission, 2025a). In parallel, negotiations have begun to reintegrate the UK into EU rearmament processes (The Guardian, 2025).

In parallel, a broad range of innovation initiatives—such as the NATO DIANA programme, the European Defence Fund, the Hub for EU Defence Innovation (HEDI), and EDIRPA—are mobilising significant resources. Many of these programmes explicitly support Ukraine and foster collaboration between defence and civilian industries, thereby reinforcing the European Defence Technological and Industrial Base (EDTIB).

Europe has clearly moved beyond the peace-optimised Phase 0 and entered a period of rapid, well-financed defence-market expansion to meet sharply increased demand. While Phase 1—the ongoing transformation—continues to unfold, Phase 2, representing the post-Ukraine war landscape, is expected to yield a larger, more integrated, and more resilient European defence market, underpinned by both national and supranational ambitions. Yet considerable uncertainty remains, dependent on the war's outcome and Member States' strategic choices.

In March 2025, the SAFE instrument was launched, followed in June by the announcement of a forthcoming roadmap for EU defence readiness. The Defence Readiness Roadmap 2030, presented on 16 October 2025, builds on the EU White Paper for Defence Readiness (European Commission, 2025c). As a non-binding communication outlining the implementation of *ReArm Europe*, the Roadmap identifies four European capability gaps to be addressed by 2030 through *European Readiness Flagships*: the European Drone Defence Initiative, Eastern Flank Watch, European Air Shield, and European Space Shield. Together, these initiatives aim to reduce dependency on the US and counter the Russian threat, while consolidating long-term support for Ukraine. Unanimous agreement by all 27 Member States is required for implementation (EuroNews, 2025b; European Commission, 2025c).

The most financially consequential decision—whether to use frozen Russian assets to fund Ukrainian support—was due at the European Council meeting on 23 October 2025. However, no consensus was reached. Hungarian President Viktor Orbán declined to participate in the Roadmap discussion, while Belgium opposed the proposed financing model, arguing that its banks would bear disproportionate risk as custodians of the majority of frozen assets. As a result, the Roadmap was not adopted; a less ambitious version is expected to be presented in December 2025. Legal disputes among Member States regarding the legitimacy of using frozen Russian assets as loan collateral have further delayed progress (European Parliamentary Research Service, 2025; European Council, 2025).

Shell production, a key indicator of rearmament of Europe and of the support to Ukraine, has reflected the mixed results of the ASAP initiative. The EU's goal, set in 2023, was to raise annual production from 230,000 to 2 million shells by the end of 2025. According to Commission data and industry estimates (European Commission, 2025d), actual capacity will reach only 500,000–600,000 shells—significant growth, but well below

target. Constraints in the supplier base mean full realisation will not occur until the late 2020s.

Further complications have arisen within the Union. Hungary and Slovakia have distanced themselves from EU policy, aligning more closely with Russian narratives and questioning continued support for Ukraine. Both remain dependent on Russian energy supplies. Hungary, in particular, has obstructed EU and NATO policy initiatives. The Czech presidential election of October 2025 brought to power a government less supportive of the Commission's agenda for European strategic autonomy. At the end of October 2025, Hungary expressed that it strives to join forces with Slovakia and the Czech Republic in a Ukraine-sceptic alliance. This nascent bloc could obstruct EU initiatives for long-term support to Ukraine and seek like-minded allies through the European Parliament (Politico, 2025).

Transatlantic relations also present growing uncertainty. The Trump administration has made clear that Europe must bear primary responsibility for supporting Ukraine's defence and reconstruction. The US has also reduced the level of advanced military technology supplied to Ukraine—particularly in long-range missiles, intelligence, and surveillance—thereby weakening Ukraine's strategic capabilities.

A striking example of evolving European commitment is Sweden's ambitious plan, announced on 22 October 2025, to supply 100–150 Gripen E fighter aircraft to Ukraine (Swedish Government, 2025). The joint letter of intent pledged to strengthen Ukraine's air defence, with initial deliveries scheduled within three years. However, the plan faces major challenges: financing depends on the reparation loan decision; existing Gripen production is committed to delayed deliveries for Sweden and Brazil; and potential US restrictions on the transfer of ITAR-controlled technologies, such as the General Electric engine, could hinder implementation. Furthermore, EU guidelines stipulate that no donated military system should contain more than 35 percent non-EU or non-Ukrainian components, while the Gripen's foreign content is roughly 50 percent (including the US, the UK, and Italian systems) (Simple Flying, 2024). The future course of the war may also render the loan scheme untenable if Russia achieves its strategic objectives.

The Gripen initiative, along with other elements of *ReArm Europe* and the Roadmap, was not adopted at the October European Council meeting. Significant uncertainties therefore persist regarding the realisation of the EU's ambitious plans for strategic autonomy and war readiness.

CONCLUDING REMARKS

The main contribution of this chapter lies in its analysis of the interactive dynamics between defence companies, states, and supranational institutions. It deepens the understanding of how military and security challenges are managed, with particular emphasis on preparedness, resilience, and capability-building within transnational defence supply chains. The chapter also anticipates a changed defence market and industrial landscape after the Ukraine war (Phase 2).

This chapter puts forward a novel theoretical combination by combining the perspectives of strategic autonomy, dynamic capabilities, and supply chain management. This combination of theory and perspectives brings a deepened explanation to the interplay between EU and the Member States' actions as a response to the Ukraine war while explaining the corporate inclusion in radically improving European arms production and war readiness.

The chapter also raises further questions for future research and policy. One key challenge is addressing supply chain bottlenecks to create robust, sustainable, and flexible solutions. Member States must deepen relationships with defence companies to secure resilient and adaptable value chains, which cannot be managed solely at the national level due to their inherently cross-border dependencies. Sustainable business models and investment structures are necessary to align the capability goals of companies, states, and the EU.

Another research venue is how the supranational EU initiatives will materialise and to what extent—on the Union level compared to the national level.

The respective mandate between EU and NATO for defence-industrial integration and capability development, and the outcome of the future military capability and security of Europe is in a state of transformation. Linked to this is how the US president—Trump or other—sets the US defence priorities between Europe, NATO, Ukraine, Russia, the US homeland defence, all in relation to the US engagements in the Indo-Pacific.

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CHAPTER 8

Health and Security: New Perspectives on the EU's Internal and External Action

Louise Bengtsson

INTRODUCTION

In her State of the Union address in September 2025, Ursula von der Leyen announced a ‘global health resilience initiative’ to combat health disinformation and strengthen global preparedness (European Commission, 2025a). While the details of this initiative remain to be seen, it should be understood as part of an ongoing trend through which the European Union (EU) is increasingly carving out a more geopolitical and security-oriented role for itself when it comes to health, both within the Union and outside its borders.

In fact, during Ursula von der Leyen’s first term in office between 2019 and 2024, the EU took a more strategic stance across practically all policy areas. The ambition to lead a ‘geopolitical Commission’ was already clear when van der Leyen took office in 2019, but was further reinforced after Russia’s full-scale invasion of Ukraine and the COVID-19 pandemic (Håkansson, 2024). During this period, the EU’s strategic interests have

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come to permeate several areas not traditionally associated with security. This includes a new focus on economic security and a more interest-based trade and industrial policy, where supply chain resilience and the ambition to reduce vulnerabilities have been key concerns. This development has often been described in relation to, among other things, the rearming of Europe and the strategic products and critical raw materials needed for both the digital and green transition. Less attention has been paid to the health sector, despite it being a clear example of this new geopolitical and security-oriented political shift.

The COVID-19 pandemic exposed weaknesses in the preparedness and health systems of EU Member States, while at the same time leading to a further intensification of existing geopolitical tensions. China and Russia strengthened their positions in many of the EU's partner countries, and the multilateral system was challenged at its core by the actions of the first Trump administration between 2017 and 2021. Major problems also emerged due to interruptions of global supply chains. The EU and its Member States, just like other high-income regions and countries, competed to buy vaccines and switched production to provide personal protective equipment and other essential materials for domestic healthcare systems.

At the beginning of the pandemic in spring 2020, the handling of the outbreak and its direct repercussions was largely uncoordinated as the Member States prioritising their own interests and supplies. The EU and its Member States subsequently pursued a more unified approach to the health crisis, not least with its joint vaccine procurement, and the European Commission has since worked for a more active and strategic role in health policy, both internally and externally. By the mid-2020s, a series of internal reforms have been implemented to strengthen the Union's joint preparedness and resilience in the field of health. This includes a new structure in the form of a Directorate-General within the Commission— DG HERA— for research, development and procurement of vaccines and other supplies to promote the EU's strategic autonomy in the pharmaceutical sector. Other important reforms include initiatives to address medicine shortages, such as the Critical Medicines Act, and revisions of the pharmaceutical legislation, which will lead to a better overview and reporting system for such scarcities. Another important area is the increased focus on national and EU-level preparedness plans.

A similar development can be seen when it comes to the EU's global role. In an effort to balance the actions of rival actors and address the

discontent that arose in the Global South due to the allegedly Eurocentric approach to vaccine procurement and related intellectual property rights, the Commission presented a new Global Health Strategy in November 2022 (European Commission, 2022).

How should we understand this deepened integration, accompanied by a new geopolitical and security-oriented discursive shift with a focus on preparedness, global positioning and strategic autonomy? This chapter highlights the recent expansion of the EU's role in the external and internal dimensions of health policy, drawing on previous literature on European integration in this field. The empirical data are drawn from policy papers and public documents from the EU institutions.

The chapter begins with an overview of how EU integration in the field of health has been studied in previous literature and introduces the chapter's analytical starting points. Specifically, it outlines how health policy integration has been understood from a neofunctionalist perspective as well as a case of securitisation. This is followed by an analysis of the legal and political framework for cooperation in the area of health at the EU level. To conclude, the chapter draws together different dimensions of the development of a more strategic, geopolitical expansion of the EU's role as a regional and global health actor since the COVID-19 pandemic.

PREVIOUS PERSPECTIVES IN THE LITERATURE ON THE EU'S ROLE AS A HEALTH ACTOR

An increased number of serious health crises, starting in the mid-1990s, have led to waves of deepened integration in the field of EU health policy (Bengtsson & Rhinard, 2018). There are several prominent examples of this. In the wake of the 'mad cow disease' that shook Europe in the 1990s, the Commission's Directorate-General for Health and Consumers (DG SANCO) was established. The anthrax attacks, which were carried out in several places in the US after the attacks of September 11, 2001, led to the establishment of the Health Security Committee at EU level, in which representatives from the Member States' agencies for infectious disease control meet and coordinate. Likewise, the SARS outbreak was followed by an extraordinarily speedy establishment of the European Centre for Disease Prevention and Control (ECDC) in Stockholm in 2005. The so-called swine flu (H1N1) in 2009—during which national 'hoarding' of vaccines created problems between Member States—led to the

strengthening of the EU's health security framework and a voluntary joint procurement mechanism for vaccines (Bengtsson & Rhinard, 2018).

Several studies have examined the EU's growing role in the field of health in recent decades, in particular to highlight the drivers behind the integration process. These studies have often been based on approaches drawing on neofunctionalism (Greer, 2006; Greer & Kurzer, 2013; Steffen, 2012; Greer et al., 2023). In terms of specific mechanisms, classical neofunctionalism argues that integration spreads to other areas due to links between different sectors and parts of the economy (what is commonly called a functional *spill-over*), as well as by the development of a preference for supranational solutions within elite groups (what is usually referred to as political *spill-over*) (Schmitter, 2005; Stefanou, 2007). The focus in this theoretical perspective is also on transnational interest groups and the EU's supranational institutions, in particular the Commission and the Court of Justice. Over time, neofunctionalism has also been reinterpreted, highlighting crises as a driving force for deeper integration (Niemann & Ioannou, 2015; Schmitter, 1970; Schmitter, 2005).

Several studies suggest that analytical tools from neofunctionalism provide a convincing explanation for the EU's growing role in the field of health since the 1990s, especially since cooperation has deepened despite the weak legal mandate in the Treaties and general reluctance of the EU's Member States. The fact that the EU's role has emerged gradually as a by-product of developments in other policy areas, such as trade, free movement in the internal market and labour law, is consistent with assumptions about functional and political *spill-over* and the transfer of allegiance by elites to supranational structures (Brooks & Guy, 2021; de Ruijter, 2019; Greer, 2006). The EU's response to health threats, including the COVID-19 pandemic, has even been highlighted as textbook examples of integration that occurs in line with neofunctionalism's assumptions (Greer et al., 2023).

Early research on the drivers of deeper integration in the field of health highlighted the Court of Justice's rulings in key court cases as the main driving force. The Court's decision rendered healthcare services offered by Member States subject to the principles of free movement, including patient mobility. More recently, research has highlighted the delegation of trust to the Commission as crucial, often in conjunction with an opening by the Court, after which the Commission advanced its positions through new proposals.

Research also highlights that transnational professional networks, for example in epidemiology, combined with funding from the Commission, have been important drivers of EU health policy (Greer, 2014). This applies in particular to communicable disease control and the establishment of the ECDC. While the agency was established in connection with the concern that SARS would reach Europe in the early 2000s, the decision itself was also based on the fact that there were already networks of infectious disease experts who argued in favour of a common communicable disease control authority (Greer, 2014). A similar dynamic can be seen in the pharmaceutical sector, where networks of experts and private actors reached a consensus on the need for an authority at EU level (Hauray, 2017).

Other research traditions outside of integration studies offer complementary perspectives that can better shed light on how discourse and meaning-making practices can shape the content and timing of policy proposals. For instance, research drawing on securitisation theory has examined how health issues have been framed through discursive linkages to security in different ways. The fact that the approach to pandemic preparedness and response, as well as infectious diseases in general, has been linked to different discourses and practices that shape ideas about safety and risk and influenced the types of policy measures that could be taken and their design (Bengtsson & Rhinard, 2018; Bengtsson et al., 2019; Elbe et al., 2014). At the same time, the securitisation of infectious diseases and pandemic influenza in the EU is part of a broader Western prioritisation of health security since the early 2000s (Bengtsson & Rhinard, 2018).¹ Such approaches highlight the need to ask questions regarding the meaning of security and what is to be protected, and more specifically what kind of politics that is enabled when something is proclaimed a matter of security.

In sum, approaches to the EU's growing role as an actor in the health field have often drawn on integration theory and neofunctionalism in particular, emphasising various kinds of spill-over processes as drivers. In

¹Notably, studies have highlighted that this agenda focuses primarily on preparedness, early warning and crisis management systems rather than prevention and broader public health perspectives (Aldis, 2008). While pandemic preparedness and management are important for global health, this framing has also been criticised for focusing resources and attention on precisely those outbreaks that risk reaching 'the West', rather than the more structural problems with health systems and access to health care that pose the most significant challenges in low- and middle-income countries (Aldis, 2008).

addition, studies drawing on securitisation theory have highlighted how various kinds of security discourse and securitisation practices shape how health crises and priorities are understood and acted upon. These analytical starting points are also useful for studying the strategic expansion of the EU's internal and external role after the COVID-19 pandemic. Before zooming in on this shift in more detail, the section below outlines the legal and political framework that constitutes EU health policy and how this has expanded following the pandemic.

THE LEGAL AND POLITICAL FRAMEWORK FOR THE EU'S ROLE AND ITS RECENT EXPANSION

Health policy is often described as consisting of two main areas—public health and healthcare services. The EU has developed an increasingly important role in these areas since the early 2000s, despite the fact that they both sort under Member State competences and the EU's role according to the Treaty should only be to coordinate and support national policies. Interestingly, EU health policy has often been developed drawing on alternative legal bases in the Treaty, in particular those that ensure free movement of people or the protection of workers (Brooks & Guy, 2021; de Ruijter, 2019; Greer, 2014). This has led to a relatively extensive system of institutions and policy frameworks, with the Commission's Directorate-General for Health and Food Safety (DG SANTE), the ECDC and the European Medicines Agency (EMA) at the centre, together with the newly established Directorate-General for Health Emergency Preparedness and Response Authority (DG HERA).

When it comes to the legal framework, the so-called single market article (114 TFEU) has enabled common legislation at EU level, for example regarding patients' rights to treatment abroad, regulation of tobacco products, medical devices, clinical trials, pharmaceuticals and more recently the free flow of health data. A wide web of soft policy initiatives also gives the EU a role in areas ranging from chronic diseases and mental health to healthcare systems, as well as general health systems oversight in the so-called European Semester process. Moreover, the EU may also legislate to uphold high protection standards through its food, agriculture, chemicals and environmental policies.

As regards the external dimension, the EU's role spans several policy areas, from development cooperation to trade and foreign policy,

including bilateral agreements, inter-regional cooperation and coordination in the UN context. In these areas, the EU's competences vary—trade is an exclusive competence, while development cooperation is shared with Member States, which can pursue independent policies in parallel.

Since the COVID-19 pandemic and the tensions following Russia's full-scale war in Ukraine, the EU has stepped up its role in both internal health policy and global health. This has led to strengthening of the EU's health security framework as well as new initiatives, strategies and institutions that affect both the EU's internal and external role. The internal initiatives have been presented as part of the 'European Health Union', a concept introduced by the European Commission President Ursula von der Leyen in her State of the Union speech in the autumn of 2020 (European Commission, 2020a; European Commission, 2020b). Under this umbrella initiative, reforms mandated EMA to monitor shortages of medicines and medical equipment, the Commission to review Member States' pandemic preparedness plans and the ECDC to adopt clearer recommendations. A new structure institutionalising the development and joint procurement of medical countermeasures such as vaccines—DG HERA—has been set up within the Commission. The EU has also been given the mandate to declare a health emergency for the whole of the Union and the Member States' obligation to coordinate within the Health Security Committee has been clarified. In addition, the EU is on track to take significant steps forward in terms of health data sharing, more effective pharmaceutical legislation and important soft measures against non-communicable diseases, such as cancer through the flagship 'Europe's Beating Cancer Plan' (European Commission, 2020b).

The EU's ambition to carve out a more extensive global role was demonstrated in the 2022 EU Global Health Strategy. In her State of the Union address in 2025, Ursula von der Leyen announced that the EU will lead a so-called global health resilience initiative to combat global health disinformation and strengthen global preparedness (European Commission, 2025a). This should be seen against the background of a widening financing gap as the majority of donors, not least the US, are all pulling out of health-related international development cooperation, causing soaring humanitarian needs. As various modelling estimates have shown, US global health funding cuts alone could lead to millions of additional deaths, over 14 million overall and up to 7.9 million child deaths, between 2025 and 2040 (Bengtsson et al., 2025).

DEEPENED INTEGRATION AND A GEOPOLITICAL AND SECURITY-ORIENTED DISCURSIVE SHIFT

The Race for Vaccines

Similar to the financial crisis and Brexit, where the EU is considered to have ‘failed forward’ (Jones et al., 2016), the Union quickly came out stronger during the COVID-19 pandemic, after the first months of botched attempts to muster a common European response (Bulmer, 2022; Dimitrakopoulos & Lalis, 2022). The initial period of turmoil, in which freedom of movement and trust between Member States collapsed, was followed by a series of reforms leading to deeper integration.

In this context, particular attention has been paid to vaccine procurement. Despite the lack of transparency and contractual problems of the Advance Purchase Agreements with the pharmaceutical industry that were pursued by the Commission on behalf of the Member States, the EU’s vaccine strategy allowed vaccinations to start simultaneously in all Member States, with sufficient doses for the EU’s adult population, as well as for some international donations (European Court of Auditors, 2022). Developing countries that lacked the same financial muscles, however, experienced the EU’s huge mobilisation as ‘hoarding’ (Dworkin, 2021). In addition, the EU and its Member States were very slow to allow temporary exemptions regarding intellectual property rights of COVID-19 vaccines, which would have facilitated global vaccination programmes and discouraged further spread of the outbreak (Dworkin, 2021). These and other issues related to ‘vaccine equity’ have strongly influenced the perception of the EU in many partner countries in the Global South.

A political factor that contributed to the launch of the EU’s vaccine strategy and procurement was, of course, the global ‘arms race’ to produce a functioning and safe vaccine. While many Member States at first seemed to prefer national solutions (also given the fact that health is national competence), a series of events helped the coalition of Member States and the Commission to rally support for a joint approach. Reports in German media suggesting that the Trump administration planned to conclude exclusive agreements with the German pharmaceutical company CureVac sent shock waves in Berlin and Brussels. American authorities had also approached the French pharmaceutical company Sanofi and announced a collaboration. These events paved the way for a more unified EU approach, starting with the Commission’s proposal for a mechanism

for a joint procurement of COVID-19 vaccines (Deutsch & Wheaton, 2021).

The increasingly polarised international situation also contributed to the EU Member States' willingness to pursue common solutions and manage the crisis jointly. When the first Trump administration threatened to leave the World Health Organization (WHO) and multilateralism experienced severe strain, a divided Europe in economic turmoil with high infection rates was not a desirable scenario for a union keen to showcase regional and rules-based cooperation. Scholars have thus interpreted the subsequent efforts by the EU Member States to come together, including through the joint vaccine procurement, as a way to protect the EU from legitimacy problems and strengthen its role as a global actor (Quaglia & Verdun, 2023).

Strategic Autonomy and Preparedness for Health Threats

In the midst of the pandemic, the concept of strategic autonomy was increasingly used by the European Commission and in EU documents in relation to access to medicines and essential medical devices. One of the most important priorities after the COVID-19 pandemic was to ensure that medical countermeasures, such as vaccines, would be made available during future crises. Among the most notable reforms were the revision of the EU pharmaceutical legislation, which would, among other things, create an EU-wide list of critical medicines and an associated alert system for monitoring shortages. Initiatives taken since the pandemic also include the creation of a European Health Emergency Preparedness and Response Authority (HERA), which, due to the reluctance of Member States, was never upgraded to a full authority but instead remained a structure within the European Commission. The organisation's mission was to ensure the procurement and delivery of vaccines and other medical countermeasures. The EMA was also strengthened, including its role in monitoring shortages of medicines.

In addition to the reforms above that link to strategic autonomy in the pharmaceutical area, the EU has also adopted proposals aimed at strengthening EU cooperation on health security and preparedness in a more traditional sense. The ECDC has been given a stronger mandate, including the task to issue effective recommendations on the management of health crises. It has also been given a more operational role, including through a task force that can be mobilised in the event of outbreaks of infectious

disease inside and outside the Union. In addition, the legislators have agreed to tighten the existing rules on EU cooperation on health threats and to strengthen national as well as EU-wide preparedness for health crises. As a result, the EU is now required to keep its own pandemic preparedness plan, while national plans have become mandatory and will be reviewed and evaluated at the EU level. This is a notable step, given that the area sorts under national competence. The Commission, moreover, is mandated to declare a public health emergency within the Union, thereby activating processes to monitor shortages of medicines or request various types of support from its authorities.

In other words, preparedness and security aspects of health policy are high on the EU's agenda since the COVID-19 pandemic and have been the focus of a number of internal reforms. The shortage of medicines as a problem is particularly evident in the political guidelines that have since been presented by Ursula von der Leyen for the 2024–2029 term of office, highlighting the fact that the EU is facing a serious shortage of antibiotics, insulin, painkillers and other products. A more recent action plan that was also mentioned in the political guidelines addresses cybersecurity of hospitals and healthcare providers (European Commission, [2025d](#)).

Positioning in a Changing World Order

The reforms to strengthen the EU's internal cooperation on health issues have provided the EU with a more solid basis for an active role in global health—the external part of the European Health Union.

Europe's changing view of China as a global player and the uncertainty surrounding the transatlantic link, especially due to the first Trump administration's threat to leave the WHO (which was later reversed by the Biden administration but notified again after the return of Donald Trump as president in 2025), also affected the political landscape and the range of initiatives that could be pursued by the Commission following the pandemic (Dworkin, [2021](#)). Within the so-called BRICS formation, China is working together with Brazil, Russia, India and South Africa to create new alternative collaborations and international structures, including in the field of health. At the same time, the EU is finding it increasingly difficult to have its global priorities heard. This is partly due to the discontent in the Global South following Europe's procurement of large quantities of vaccines and unwillingness to share intellectual property rights that could

have accelerated local vaccine production during the COVID-19 pandemic.

As mentioned earlier in the chapter, the COVID-19 pandemic exacerbated already existing geopolitical tensions between the EU and other actors (Giegerich et al., 2021), including China and Russia, but also with the first Trump administration, 2017–2021. Underlying dynamics were reflected in trade disturbances, disinformation campaigns and a general concern that the rules-based multilateral system was no longer to be taken for granted. Both Russia and China advanced their positions through the so-called vaccine and mask diplomacy and distribution of other forms of support to low- and middle-income countries. At the beginning of the pandemic, China also worked to limit scrutiny of its actions by withholding access to WHO teams and delaying the WHO response (Dworkin, 2021), while later launching a series of initiatives that portrayed the country as a champion of the Global South. In addition, disinformation regarding vaccines and the EU's role during the pandemic became an increasing problem, including on behalf of Russia (Deutsch & Wheaton, 2021).

In light of this, increased global engagement in the field of health emerged as a strategic necessity for the EU, both to secure access to medicines and deliveries within global value chains and to win over strategic partners in a broader global power struggle. Subsequently, the EU pursued an active vaccine diplomacy to distribute surplus doses and win allies, but at its core the vaccine strategy aimed first and foremost to provide the EU itself with sufficient doses.

A New EU Global Health Strategy with a Strategic Approach

In the wake of the pandemic, in November 2022, the European Commission presented a new Global Health Strategy (European Commission, 2022). The previous strategy from 2010 had had limited impact and was considered outdated, as it focused mainly on the EU's role as a donor in the field of health. The strategy from 2022 goes beyond the EU's role in development cooperation and is based on a so-called health in all policies approach, that is, the ambition of integrating health into all EU policy areas. Implementation is largely based on strategic partnerships and the 'Team Europe' model (see section below), which entails investments in strategic sectors in the EU's partner countries, rather than traditional development cooperation. The 2022 Global Health Strategy is also linked in terms of implementation to the EU's major strategic

infrastructure and investment initiative, the Global Gateway strategy adopted in 2021 (see below).

As regards the new EU Global Health Security Strategy presented by the European Commission in November 2022, there is a clear focus on health security and preparedness and response to health threats. At the same time, the strategy is clearly broader in its ambition. The global goals for sustainable development in the UN's Agenda 2030 provide a framework within which health is highlighted as an area that can contribute to the fulfilment of several of the goals. The approach is broad and includes three principles: (1) deliver better health and well-being for people across their life course; (2) strengthen health systems and advance universal health coverage; and (3) prevent and combat health threats, including pandemics, applying a One Health approach. The latter is a recognised intersectoral approach to health policy highlighting the interconnection between human, animal, plant and environmental health—an essential method to tackle problems such as the spread of infectious diseases as well as antimicrobial resistance.

Interestingly, however, the overall direction of the new EU strategy also presents global health as a key pillar of the EU's foreign policy and as an important geopolitical sector that plays a role in the EU's strategic autonomy. A link to a more geopolitical approach thus seems to permeate the communication around the new strategy. In practice, the implementation of this ambitious document remains to be seen.

Health and the Global Gateway

In terms of implementation on the ground, it is interesting to note that the 2022 EU Global Health Strategy was presented not only as a cornerstone of the European Health Union, but also a centre piece of the EU's Global Gateway strategy from 2021. This initiative is a flagship strategy designed to balance China's Belt and Road Initiative, which aims to mobilise up to €300 billion for partnerships that promote different types of infrastructure and investment efforts worldwide. An overarching aim of this strategy is to promote Europe's interconnection with the rest of the world. According to the European Commission, the Global Gateway represents a new European strategy to promote smart, clean and secure connections in digitalisation, energy and transport, but the initiative also aims to strengthen health, education and research systems in the EU's partner countries (Tagliapietra, [2024](#)).

The financial resources available to implement the objectives of the Global Gateway strategy will be mobilised through the EU budget, as well as from the Member States and the private sector (Tagliapietra, 2024). Over the period 2021–2027, it is envisaged to include up to €135 billion in investments from the EU budget and €145 billion in investment from European financial institutions and development banks. The main instrument for the period 2021–2027 is the European Fund for Sustainable Development Plus (EFSD+), which includes €53 billion in guarantees, which can provide up to €232 billion in sustainable investments over the period under consideration.

The Global Gateway strategy contains five main focus areas: digitalisation, climate and energy, transport, education and research, and health. In the area of health, the Global Gateway strategy focuses on securing supply chains and local vaccine production in strategic partner countries, as well as supporting the promotion of sustainable regulation (in particular in the pharmaceutical sector) and innovation (Tagliapietra, 2024). According to the European Commission, the health-related projects will help strengthen health capacities of partner countries around the world and prevent the spread of infectious diseases such as COVID-19, malaria, yellow fever, tuberculosis and HIV/AIDS (European Commission, 2025e).

The fact that health systems have been given an elevated place in the Global Gateway strategy has various consequences. On the one hand, depending on how the funds are channelled, this can contribute to fulfilling the EU's international commitments by supporting partner countries in the implementation of the 2030 Agenda objectives. Among other things, Global Gateway initiatives can lead to the promotion of local vaccine production and regional authorities and innovation in the field of medicines. On the other hand, the establishment of the Global Gateway also means access to new growth markets for EU industry and an opportunity for the EU to better position itself in the global race for infrastructure investment and influence in key countries, not least on the African continent. The idea is that the EU will be able to offer investments and cooperation as an alternative to China's engagement in the EU's partner countries around the world.

Strategic Partnerships with Key Partners

The promotion of EU interests through new strategic partnerships with third countries is a key motivation behind both the new EU Global Health

Strategy and the Global Gateway. Maintaining partnerships with the Global South through, for example, investments in health systems and local vaccine production is no longer just a matter of solidarity, but a necessity to secure value chains and overall influence vis-à-vis other actors, such as China and Russia.

In the field of development cooperation and related EU support for health systems in its partner countries, the EU's financial instruments have been merged with several other budgetary instruments for the EU's external relations, including for the EU's neighbourhood. Strategic partnerships with specific countries, where health support is used directly or indirectly as incentives to promote other EU interests, for instance curbing migration and protecting supply chains, are a development that requires further scrutiny. This is especially true in the African context—strategically important for the EU—where migration pacts and other cooperation agreements have been struck as part of broader political agendas. At the same time, the African regional context is also seeing an increasing focus on local ownership, domestic investments in health and consolidating regional institutions. As an example, important regional organisations, such as Africa Centre for Disease Prevention and Control (Africa CDC) and Africa Medicines Agency (AMA), have gained an increasingly prominent role, not least for local vaccine production.

The need for good relations with African partner countries in particular is clear from the EU's side, given the emergence of African regions as future powerhouses and arenas for influence. Strengthening the EU-African Union (AU) partnership, which covers a spectrum of issues beyond health and development cooperation, has been a key priority since the first von der Leyen Commission took office in 2019. Africa has also been the focus of EU vaccine diplomacy and related support following the pandemic, in part to address grievances about access to vaccines during the COVID-19 pandemic. At the sixth EU-African Union summit in 2022, the strategy *A Joint Vision for 2030* was adopted, which highlights the need to ensure fair and equitable access to vaccines. When donations became possible due to the large vaccine surplus in Europe, African countries quickly became the main destinations for vaccine diplomacy and distribution of such doses. However, these initiatives were perceived as being too late. The supply of donations also quickly exceeded demand, partly due to the absorption capacity of African countries but also due to irregular deliveries with short expiration dates (Dworkin, 2021). In the longer term, a key priority for African countries was support for local manufacturing and the transfer of

knowledge and technology from European authorities and pharmaceutical companies.

Various investment packages for partner countries have been presented by the EU since the pandemic, focusing on support for pandemic preparedness, health security and equitable access to basic health services. A flagship project is the Team Europe initiative for the production of and access to vaccines, medicines and health technologies in Africa (MAV+). The latter also involves African partners and aims to strengthen their local pharmaceutical systems and manufacturing capacity (European Commission, 2025b).

Team Europe to Strengthen the EU's Global Brand

From the COVID-19 outbreak in 2020 until the end of the pandemic, the Commission reports that the EU mobilised over €53.7 billion in health-related development assistance to more than 140 partner countries, mainly to ensure access to tests, treatments and vaccines, but also to strengthen health, water and sanitation systems and to mitigate the social and economic repercussions of the pandemic in low- and middle-income countries (European Commission, 2024a). In its policies, the EU committed in principle to promote universal, equitable and affordable access to vaccines in low- and middle-income countries and set up a vaccine-sharing mechanism. Together with the Member States, the EU thus established itself as a lead contributor to COVAX, a global initiative aimed at equitable access to COVID-19 vaccines within the framework of the WHO. The European Commission, the Member States and the European Investment Bank contributed more than EUR 5 billion in this regard. However, while the establishment of COVAX thanks to the European Commission and some of its members is partly a success, its lack of transparency and failures to deliver created distrust among low- and middle-income countries (Dworkin, 2021).

Moreover, while actors such as China and Russia were quick to use their support packages to exert influence at the beginning of the pandemic, the EU and its Member States initially did not have a common brand to highlight the extent of their financial support. The model and concept of 'Team Europe' were therefore created by Commission officials to highlight the EU's common role by gathering, streamlining and profiling the EU's and its Member States' overall contribution. In practice, the model implies deeper coordination and institutionalisation in particular

strategic areas in a partner country, pooling and aligning support from the EU institutions, the Member States (including their national authorities and development banks) as well as the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD).

In particular, the Team Europe model is used in several health-related areas of action to support the development of local vaccine manufacturing capacities in Africa, Latin America and the Caribbean. However, Team Europe initiatives are also present in a number of areas beyond health, including the green transition and support for infrastructure, and have become an important model for the implementation of both the Global Gateway. Most Team Europe initiatives in the field of health focus on projects on the African continent, in areas ranging from vaccine production to sexual and reproductive health and rights (SRHR), digital health and health security (Commission, 2025c).

The use of the Team Europe approach enables the EU and its Member States, as well as European development banks, to promote development and health globally and to safeguard European strategic interests. The EU's influence and reputation as a coordinated and thus financially stronger actor is (in theory) something that strengthens the EU's overall role vis-à-vis partner countries, and from which it benefits strategically and politically.

However, despite efforts to streamline the European 'team', a 2024 report by the European Court of Auditors highlights that EU health support to partner countries is still suffering from various problems (European Court of Auditors, 2024). The report stresses, inter alia, that while the European Commission allocates funds in line with its general priorities, these funds do not sufficiently consider the needs of partner countries. The Court also found that the effectiveness of the projects was hampered by coordination problems, inefficiencies and shortcomings in sustainability and monitoring. Moreover, the overlapping structure of implementation increased the costs of the projects, while there was limited visibility of EU funding among the target groups (European Court of Auditors, 2024).

In Defence of the Rules-Based International Order

In the EU Global Health Strategy, the European Commission states that the EU will contribute to a new global health order and robust global governance (Commission, 2022). Multilateralism is thus a cornerstone of the new strategy. Among the strategy's guiding principles is a

commitment to support a stronger WHO, to ensure coherence of action and address governance gaps, as well as to promote a stronger and more coordinated EU in international health fora (Commission, 2022).

In practice, previous tendencies towards rivalry between the EU and the WHO eased in the aftermath of the pandemic, mainly because of the first Trump administration's decision to begin the one-year process to withdraw from the WHO. This meant not only a loss of political support, but also potentially funding from the US, which was traditionally by far the largest donor to the organisation.

The WHO's late response as well as its lack of transparency in relation to China during the COVID-19 pandemic also led to a sense in Brussels that it was time for the EU to actively support the rules-based international order and pave the way for a reform of global health governance. In the Council conclusions of November 2020, the EU and its member states underlined their intention to work to strengthen the normative role, capacity and reform agenda of the WHO (Council of Ministers, 2020). A key ambition of the European Commission has also been to upgrade the EU's status as a formal rather than an informal observer within the WHO. In other words, strengthening the UN system and the WHO was seen as a strategic priority at a time when the rules-based international order was being fundamentally challenged.

In line with its own Global Health Strategy, the EU has also advocated for reform of the overall global health architecture, including its structures, institutions and agreements that govern cooperation at the global level. As an example, the then President of the European Council, Charles Michel, launched a campaign in 2021 for a new Pandemic Treaty within the framework of the WHO. When the initiative was presented, it was quickly supported by the WHO and around 30 leaders, including heads of government and international bodies (Dworkin, 2021). The resulting Pandemic Agreement, which was adopted in May 2025 after three years of lengthy negotiations, aims to address problems and inequities at all levels when it comes to pandemic preparedness and response (WHO, 2025). However, the most sensitive parts of the negotiations, on pathogen access and benefits sharing, were postponed for a future agreement (WHO, 2025). The tensions between Europe and low- and middle-income countries also seem to have resurged during this process. However, the ability to finally agree should be considered an unexpected success after years of negotiations. The final agreement was facilitated by the rapid withdrawal

of the second Trump administration from health-related development financing and its assault on national authorities.

*Health Priorities for the European Commission's
2024–2029 Mandate*

Ursula von der Leyen's Political Guidelines for 2024–2029 explicitly emphasise that security and competitiveness will permeate all policy areas (European Commission, 2024b). In the area of health, this is expressed in a focus on pandemic and societal preparedness, joint procurement and stockpiling of medical countermeasures, as well as the competitiveness of the European pharmaceutical industry, the latter being highlighted not least by the report on Europe's competitiveness presented by Mario Draghi (European Commission, 2024b). Ursula von der Leyen's second term in office has also brought an increased focus on preparedness against bioterrorism and cyberattacks against healthcare—with a dedicated action plan for cyber security in hospitals and for other healthcare providers (European Commission, 2025d). Other major initiatives include the Critical Medicines Act and the Stockpiling Strategy, which address strategic autonomy for products where there are only a few manufacturers or countries supplying the EU, ensuring access to advanced treatments and strategic stocks of key medicines.

At the same time, broader public health policy priorities such as a focus on mental illness in children and young people, cardiovascular diseases and a continuation of the EU's flagship initiative that was launched with the EU cancer plan are also found in von der Leyen's plans for the period 2024–2029. The work on antimicrobial resistance also plays a prominent role in both the policy guidelines and the Commissioners' mission statements. The latter poses a creeping threat that consistently jeopardises the resilience of health systems and makes it more difficult to combat a number of serious diseases.

Clearly, the focus of the Commission's policy agenda for 2024–2029 is on competitiveness and security rather than global development as overarching objectives. The external challenges and the geopolitical situation remain serious, not least in light of the fact that the war in Ukraine will continue to occupy the political energy and budget space of European leaders. Meanwhile, the direction of the second Trump administration has challenged the multilateral system, not least by its decision to leave the WHO and cut big parts of its health support. The appointment of Robert F. Kennedy Jr. as Secretary of Health and Human Services also means that

a vaccine sceptic leads the US Department of Health and Human Services. Meanwhile, European donors are also all stepping back on their global commitments, leaving soaring financing gaps.

CONCLUDING REFLECTIONS AND POLICY RECOMMENDATIONS

In conclusion, the dynamics following the pandemic led to a series of reforms and a strengthened mandate for EU authorities and institutions, including the EU-level review of national preparedness plans, institutionalisation of procurement and development of vaccines and other medical countermeasures, monitoring of shortages of essential medicines, sharper recommendations for infectious disease control and a renewed focus on the vulnerability of healthcare systems. These dynamics seem partly in line with neofunctionalism's assumptions of *spill-over* in the sense that crisis-driven externalities made integration spread from one sector to another, facilitated by a transfer of loyalty from national politicians to the EU institutions. Despite the sensitivity of Member States in terms of responsibility for national health systems, cooperation was pushed forward.

However, a clear discursive framing that has also been driving these reforms forward seems to relate to security and geopolitical concerns. The latter is related to the EU's overall preparedness for health crises but also its strategic autonomy, particularly when it comes to pharmaceuticals and vaccines. Furthermore, there is also an increasingly clear aspiration for a stronger and more strategic global role, with a new and ambitious EU Global Health Strategy and a focus on strategic partnerships to win the hearts and minds of partner countries in Africa in particular. A strong focus on protection of the multilateral system also seems to be the referent object of this overarching 'securitization' process.

In this context, it is worth reflecting on whose security is prioritised as part of this development. This chapter illustrates a turn towards the EU's self-interest in terms of good relations with strategically important partner countries, diversified trade relations and a strengthened position in a broader global power struggle. The same goes for initiatives that ultimately prevent health threats from reaching Europe, strengthening the EU's preparedness for future pandemics and its strategic autonomy in the medical field. After the withdrawal of the second Trump administration from global health security cooperation and development financing, reflected in the America First Global Health Strategy (State Department, 2025), the EU is likely to tilt even more in this direction.

In this context, the Team Europe model and new forms of funding are being used extensively to coordinate the EU's and the Member States' collective support and make it more visible. The result is a complex web of initiatives with many different funding streams, which generally tends to be more interest-based. At best, this benefits partner countries' development in key areas, such as local vaccine production and strengthened health systems. At worst, important development objectives may be disregarded and the EU's image and attractiveness affected, if it appears that the Union pursues purely transnational partnerships.

Therefore, in the EU's 2024–2029 legislative term, the Union needs to strike a balance between interest-based action and a more values-driven engagement, which could place greater emphasis on human security, local development agendas and the health needs in low- and middle-income countries. In this regard, the EU and its Member States should play an important collective role as donors and defenders of key values, including on women's health and sexual and reproductive health and rights. The latter should be based on a more genuine desire to contribute to global sustainable development and good health for all, as well as considering synergies with the EU's partner countries and their local needs.

A more values-oriented global engagement can also be seen as a long-term interest for the EU. The way in which the interventions are implemented and the extent to which local actors and development agendas are taken into account will determine how the EU is perceived and whether the EU and its Member States can gain the goodwill and soft power that is sought. This appears to be particularly relevant in light of the high level of discontent in the Global South following the EU's vaccine procurement and reluctance to share intellectual property rights. An excessive focus on the EU's strategic interests in this context, without regard for partner countries, could lead to serious setbacks, not least in view of Europe's fragile history as a colonial power.

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Navigating the EU Climate and Biodiversity Policy Agenda in a Geopolitical Unstable World

Susanne Arvidsson

INTRODUCTION

The United Nation's (UN) Intergovernmental Panel on Climate Change (IPCC) emphasised in its synthesis report from 2023 that global and comprehensive measures are needed to remedy the serious situation our climate is in (IPCC, 2023). However, the changing geopolitical landscape creates global tensions that in various ways affect how the social, environmental and economic sustainability challenges of our time can be solved. The situation is further complicated by a complex twin crises: increased climate change and accelerating loss of biodiversity. Today, there is a rapidly growing recognition that along climate change biodiversity is a material and strategic risk threatening global food supply, economic stability, as well as national and international security (NATO, 2024; Defra, 2026). Global political leadership is critical to combating climate change and reducing biodiversity loss. Yet this leadership has been notably absent.

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Climate change and biodiversity loss are evidently not among the prioritised issues for the second Trump administration. The question is whether the European Union (EU) will step up to assume the global environmental and climate leadership. With the European Green Deal (European Commission, 2019), the European Commission launched in 2019 an ambitious agenda to tackle the climate crises and become a climate-neutral continent. However, six years later the EU is clearly at a crossroads, navigating complex challenges requiring delicate manoeuvring of increased geopolitical tensions, armed conflicts and a confrontational Trump administration.

Since the late 2010s, there has been a paradigm shift in EU climate policy, with the European Green Deal clearly showing that the EU's ambition is not only to take the lead in the fight to combat climate change and biodiversity loss but also to set a global example. The Green Deal is a powerful package of policy initiatives to pave the way for the green transition in the EU and ultimately reach climate neutrality by 2050. The package supports the EU's transformation into a fair and prosperous society with a modern and competitive industry and growth economy. Mario Draghi's report 'The Future of European Competitiveness', presented in September 2024 (Draghi, 2024), also emphasises that an ambitious and successful climate policy, without an excessive regulatory burden, is central to strengthening the international competitiveness of the EU in general and the EU industry in particular.

The Green Deal's high level of ambition is unparalleled both internationally and in modern history. However, the question is whether the EU's climate policy and policy instruments are sufficient to promote the industrial transition. A comprehensive transition is needed to make a low-carbon, more resource-efficient and sustainable economy a reality. Is there sufficient knowledge in politics to understand the twin crises and to design policy instruments that meet the goals for both climate *and* biodiversity? An additional factor of uncertainty is the Omnibus proposal (European Commission, 2025), with its comprehensive simplifications of the planned sustainability regulations, which signals a reduced level of ambition of the EU sustainability agenda. Instead of shouldering environmental and climate leadership, there is a great risk that the EU's ambitious sustainability agenda will be permanently watered down.

Research shows that companies' preparedness for the EU's stricter sustainability regulations is relatively low (Arvidsson, 2022, 2023). In addition, there are major differences between how companies report sustainability performance, map climate-related risks and understand what a climate-related risk is (Andersson & Arvidsson, 2023a, 2023b). Companies' sustainability reporting has long been criticised for lacking value relevance and comparability (Arvidsson & Dumay, 2022). There is a risk that their reporting will not improve urgently enough, despite being subject to the EU's policy package with the Taxonomy Regulation (often referred to as the EU Taxonomy) (EU Regulation, 2020/852), the Corporate Sustainability Reporting Directive (CSRD) (EU Directive, 2022/2464) and the developed EU Sustainability Reporting Standards (ESRS) (EFRAG, 2022). If this is the case, financial flows will not be able to be effectively guided from carbon-intensive to green investments, thus threatening to slow down the climate transition aimed at by the European Green Deal.

Companies are facing significant learning and change processes (Wals & Jickling, 2022), and in addition, there is often a lack of uniform methods and tools for measuring and reporting various sustainability aspects related to the climate and biodiversity (Bassen et al., 2025). Therefore, it is argued in this chapter that the European climate policy of the 2020s must enter phase two. For a Green Deal-led climate policy to succeed, the EU must implement policies that, together with new deals, strategies and policy instruments, promote and support capacity-building within industry, and provide companies with guidance and clear frameworks for measuring and reporting sustainability performance.

The chapter begins by presenting the background to the EU's growing ambitions in the areas of climate and biodiversity, and then explains the meaning of the twin crises. Thereafter, the purpose and content of the EU's key policy initiatives are discussed with a specific focus on biodiversity. In the following section, research on the industry transition towards achieving climate goals and reducing biodiversity loss is presented. Finally, several research-based policy recommendations aimed at facilitating industry transition towards mitigating climate change and biodiversity loss are presented.

THE EU'S GROWING AMBITIONS IN THE FIELD OF CLIMATE AND BIODIVERSITY

In order to better understand the EU's climate policy and strong efforts on climate and biodiversity, it is important to review how the Union's policy has developed to be at the international forefront in the mid-2020s. After a rather slow start, there has been a significant increase in the pace of EU climate policy. A shift that has been praised because climate change requires rapid action but also criticised for moving too fast without allowing sufficient time for learning and change processes (see Andersson & Arvidsson, 2023a).

We turn to the developments during 2014–2019, when Jean-Claude Juncker was President of the European Commission. During his term of office, there was relatively little focus on climate and environmental challenges. Instead, the focus was mainly on foreign policy, migration, cyber security and creating a united union. From several quarters, dissatisfaction was expressed against the fact that the Juncker Commission was considered to have deprioritised the climate issues (O'Halloran, 2014; European Environmental Bureau, 2018). It should be noted, however, that it was during President Juncker's term of office that the Paris Agreement on climate change was signed. In retrospect, the Paris Agreement can be seen as the starting point for the upshift of the EU's climate policy. Behind the scenes, there was increasing debate about the role the EU should play on the global playing field in solving climate change.

Although climate issues were not at the centre of the agenda, Jean-Claude Juncker highlighted in his opening speech at COP 21 in December 2015 that the climate crisis is one of the great challenges of our time. At the same time, he made several clear connections to the Brundtland Report's core message about our shared responsibility to hand over a healthy planet to future generations. He also emphasised that political will and action are needed to solve the climate crises. An increased focus on climate issues was also clear in the annual State of the Union Address in 2017. In the speech, Jean-Claude Juncker stated that he wanted the EU to take the lead in the fight against climate change and argued that his Commission should work for a forward-looking climate policy. It was highlighted that this would strengthen industrial competitiveness, create jobs and generate sustainable growth. In the speech, Juncker further emphasised that strong measures aimed at reducing the transport industry's carbon dioxide emissions would be presented. But while carbon

dioxide emissions and their reduction climbed higher on the agenda, biodiversity remained largely overlooked. At the end of the 2010s, there were no signs in EU politics that biodiversity loss would soon be recognised as one of the greatest threats to a healthy planet and human survival.

During her first term as President of the European Commission, Ursula von der Leyen worked to deliver on her promise to make the EU greener, alongside increased focus on digitalisation and justice issues. Just a week after von der Leyen took office, the European Green Deal was launched. Hereby, von der Leyen and her Commission showed a determination that the EU should not only take the lead in the fight against climate change but also set a global example for how climate change should be solved. The European Green Deal includes strong policy initiatives to promote the green transition in the EU, with the ultimate goal of achieving climate neutrality by 2050. The ambition is to develop the EU into a fair and prosperous continent with a modern and competitive economy. The increased climate ambition is highlighted as key to promoting the increased competitiveness of Europe's industry and thus creating a fair and prosperous society. The goal for the 2030s is for the EU to be characterised by a just and powerful transition where industry, the financial market, production and consumption are made greener and more sustainable.

Through regulations and directives, the Deal will create conditions and incentives for the business community to develop new business models, technologies, production processes and supply chains that lead to a growing environmentally sustainable economy. The Green Deal represents an unprecedented level of ambition, unmatched both internationally and in modern history. As Ursula von der Leyen noted when launching the initiative, it is Europe's 'man-on-the-moon moment'—a phrase that captures both the magnitude of the challenge and the transformative aspirations of its climate policies. At the launch, the Commission presented a comprehensive investment plan that would enable the ambitions of the Green Deal to be achieved. The investment plan also included a description of how to work for a just transition.

At the beginning of March 2020, the EU adopted its first European climate law (EU Regulation, [2021/1119](#)). It set Europe's goal of becoming climate neutral by 2050, as well as the target of 55 percent reduction of emissions by 2030, compared to 1990 levels. A couple of months later, in May 2020, the EU Biodiversity Strategy to 2030 (European Commission, [2020a](#)) and the EU Farm to Fork Strategy (European Commission, [2020b](#)) were presented. In short, the Commission's Farm to

Fork Strategy aims to help the EU achieve climate neutrality by 2050 by making the EU's current food system more sustainable. The biodiversity strategy includes investments in the protection and restoration of nature, as well as targets for protecting at least 30 percent of the EU's land area and 30 percent of the sea area. A key milestone of the strategy is to ensure that by 2030 Europe's biodiversity is on track to recover for the benefit of people, the planet, the climate and the economy. A year later, the EU adopted an action plan for zero pollution of air, water and soil (European Commission, 2021a) while presenting a new strategy for a sustainable blue economy (European Commission, 2021b). According to the World Bank Group, the blue economy is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of ocean ecosystems (World Bank Group, 2025).

Ursula von der Leyen's Commission placed biodiversity high on the political agenda from the outset and intentionally made the link between biodiversity conservation and a sustainable growing economy. The European Commission is assisted by the EU *Biodiversity Platform* (EUBP), an advisory group to assist in the implementation of the EU Biodiversity Strategy. The Advisory Group is composed of representatives from all EU countries, industry associations and other interest groups, including non-governmental organisations (NGO), as well as representatives from the European Investment Bank (EIB) and the European Environment Agency (EEA).

The biodiversity strategy should be seen in a larger context as it, with its focus and design, contributes to the work within the UN Convention on Biological Diversity (CBD) and the global Kunming–Montreal framework for biodiversity. The framework sets out 23 global action targets to be reached by 2030. The ambition is to ensure that the world's ecosystems have not only been restored by 2050, but that they are also resilient and adequately protected. What sufficient means is unfortunately still a matter of interpretation. The European Commission argues in the EU Biodiversity strategy for 2030 that globally there should be a commitment to the net profit principle, which means giving back more to nature than you take. At the UN Conference on Biological Diversity (COP 16) in Cali, Colombia, the countries unfortunately failed to decide on key issues such as funding mechanisms to be used and how the follow-up and global oversight of the implementation of the Kunming–Montreal framework should take place. In addition, having already resigned from the Paris Climate Agreement, much indicates that the Trump Administration will continue to withdraw

from global agreements aimed at combatting climate change and reducing biodiversity loss.

THE TWIN CRISES: BIODIVERSITY AND CLIMATE CHANGE

When politicians and industry were beginning to understand how shifts in policy and industry production could promote reduced carbon dioxide emissions, biodiversity emerged as another great threat to our planet. The focus on carbon dioxide and greenhouse gas emissions has characterised the debate both in politics and in business since the mid-2010s (Andersson & Arvidsson, 2023b; Arvidsson & Sabelfeld, 2023; Legagneux et al., 2018). With the accelerating loss of biodiversity in the first half of the 2020s, biodiversity is competing for this focus (Dasgupta, 2021). The question is what level of ambition the EU has regarding biodiversity.

Biodiversity is abstract and difficult to grasp. It is defined as the diversity of all living organisms, which includes all variation within species, between species, and habitats and ecosystems that exist on Earth (Convention of Biological Diversity, 1992). Biodiversity is a prerequisite for all life on the planet and functioning ecosystems are directly related to a global long-term food supply through rich pollination of plants, healthy marine environments and increased protection to crops. In addition, a rich variety among all living organisms provides the best protection against future pandemics, natural disasters and climate change (Groom et al., 2006).

Securing a global long-term food supply and increasing resilience to future pandemics, natural disasters and climate change are well-known areas on our politicians' agendas. However, there are significant knowledge gaps about the role biodiversity plays in securing food for the world's population and reducing the risk of damage in connection with epidemics, droughts and floods. A major challenge to even be able to start the work of reducing biodiversity loss is to create an understanding among both organisations and individuals in policy, industry and the financial system of what biodiversity is and how biodiversity and climate interact and sometimes counteract each other. Because nature loss and climate change are deeply interconnected, a failure to address one will affect the other (Weiskopf et al., 2020; IPBES, 2019; Heller & Zavaleta, 2009). This means that politicians must develop effective policy instruments fit to deal with the so-called twin crises: climate change *and* biodiversity.

Significant policy changes and investment from both public and private sources will be required. Already ahead of the Biodiversity Summit in China in 2021, influential leaders of multinational companies called for stronger policies to reduce biodiversity loss. In an open letter from CEOs to heads of state, published in *The Guardian*, 11 CEOs of multinational companies, including H&M and Unilever, stress that nature is at a so-called tipping point (The Guardian, 2021). They call on both governments and companies to take action. While the CEOs claimed to be taking decisive action to reverse nature loss by 2030, they considered the government agenda to be less ambitious. The move is unusual considering that it is mainly business leaders and not politicians that have been criticised for insufficient sustainability performance in recent decades.

A first step for EU policymakers is to accelerate the implementation of the global biodiversity framework approved under the UN Convention on Biological Diversity. In addition, they need to ensure that nature-based solutions are implemented as part of both the CBD and the United Nations Framework Convention on Climate Change (UNFCCC). If policies fail, the interplay between the effects of climate change and the loss of natural resources will not only accelerate the collapse of ecosystems but also threaten global food security and the so-called climate-vulnerable economies. In addition, the effects of natural disasters will be amplified.

The UN's Intergovernmental Panel on Climate Change (IPCC), which compiles the current state of scientific knowledge on climate change, shows continued increased temperatures, droughts and floods. Every year, this means many deaths and extensive damage to communities, infrastructure and economies. Despite the fact that there is scientific evidence showing that warming of 1.5 °C above pre-industrial levels risks resulting in irreversible and catastrophic effects, increasing criticism can be raised against the lack of sufficiently strong global commitments and efficient comprehensive actions (see King & Cassidy, 2025).

A challenge is to develop new policies that recognise that biodiversity plays an important role in reducing the effects of climate change. Nature-based solutions that protect and restore ecosystems can capture and store carbon and thus help protect individuals and communities from the effects of climate change. Policies that lead to continued overconsumption and exploitation of natural resources will impair nature's ability to provide us with these protective and restorative services. This will further increase our

sensitivity to the effects of climate change while continuing the loss of biodiversity.

In 2012, the independent Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) was established to strengthen the interface between science and policy on biodiversity and ecosystem services. Unlike the IPCC, IPBES is not a UN body, but a knowledge platform. In 2021, the IPCC and IPBES published a joint report (Pörtner et al., 2021) that drew attention to the threats of the twin crises to global sustainable development. The report presented research on synergies and the balance between biodiversity conservation and climate change adaptation and mitigation. Both the IPCC and IPBES provide policymakers with relevant research that can guide the development of new policy changes and measures.

According to the world's experts in biodiversity and ecosystems, there is no doubt that comprehensive actions are needed (WWF, 2022; IPBES, 2019). The way we live in the mid-2020s means that we are destroying something that humanity is completely dependent on. In short, our way of life means that we overexploit, pollute and displace vital nature that is needed for the survival of all living beings on the planet. Despite reliable scientific evidence of the poor state our planet is in, the development is unfortunately gloomy. The biodiversity crisis is worse than ever (Dasgupta, 2021). The rate at which we destroy nature increases instead of decreasing. Between 1970 and 2018, the population of wild vertebrates has decreased by about 70 percent (WWF, 2022). The so-called species extinction is irreversible and according to the International Union for Conservation of Nature (IUCN), one million species are at imminent risk of extinction (IPBES, 2019).

An aggravating circumstance in the fight to reverse the loss of biodiversity is that biodiversity is significantly more complex than climate change. Not only when it comes to understanding what it is and how it is connected to climate, but also that biodiversity-related actions sometimes are in conflict with actions mitigating climate change. The climate has one measurement indicator: carbon dioxide equivalents. This measurement indicator is used as a yardstick at all different levels of society, from global to local decision-making. It is also used to measure an entire industry's emission development over time, but also how a new technology affects emissions in an individual company. For biodiversity, there is no single measurement indicator. Biodiversity is multifaceted and operates in a context of spatial and temporal distributions that entail measurement

difficulties that we are not used to from working with climate change (see Harrer et al., 2024).

Biodiversity is, as mentioned above, the variety of all living things in nature: genes, species and ecosystems (Groom et al., 2006). Depending on the analytical objective, variation and its changes (i.e., increases or decreases) can be quantified using a variety of methods. While some measures are suitable for understanding species conservation, other measures are used to measure what ecosystem services nature can contribute to. An aggravating circumstance is that the variation in biodiversity between different locations and over time depends on the scale used. Sometimes the focus of the scale is the diversity of a specific place and sometimes of an entire landscape.

It is very complicated and sometimes not even possible to calculate the effect of a specific nation's, company's or industry's activities on biodiversity. This is because an activity often has many different direct and indirect effects. It becomes even more complicated if one takes into account that diversity can be measured in many different ways, which often leads to different results. Therefore, it is necessary to determine which aspect or aspects of biodiversity are to be measured (and why). In addition, diversity should be measured in several different ways to get as complete and accurate a picture as possible based on the specific purpose of the measurement. In the mid-2020s, Artificial Intelligence (AI) has increasingly begun to be used not only to monitor and better understand our impact on biodiversity but also to measure the impact of various measures aimed at reversing biodiversity loss (see, e.g., Reynolds et al., 2025).

To reverse biodiversity loss, it is high time to direct focus on developing policy instruments that can enable a comparison of the impact and dependence of nations, industries and specific companies on biodiversity. This comparison is critical to better guide decisions and financial flows towards nature-positive investments.

KEY EU POLICY INITIATIVES FOCUSING ON BIODIVERSITY

In 2010, the EU's first comprehensive biodiversity strategy was presented, which was valid until 2020 (European Commission, 2011). The legislation that followed was pervasive and had a major impact on companies. Prior to that, there were individual directives and initiatives, but there was no cohesive strategy. Since the 1970s, EU actions to reduce biodiversity

loss have been channelled through various directives and initiatives, including:

- *The Birds Directive* (first launched in 1979) aims to protect and promote the conservation of all wild birds and their habitats naturally occurring in the European territory of the Member States (Council Directive 79/409/EEC).
- *The Habitats Directive* (first launched in 1992) sets out requirements for protection and measures to improve biodiversity throughout the Union through the conservation of a wide range of rare, endangered or endemic (animals found in only one site) animal and plant species and rare habitat types (Council Directive 92/43/EEC). In addition, Member States are obliged to assess the conservation status of listed species and habitat types every six years. The Habitats Directive is often cited as the main instrument for achieving the objectives of the Convention on Biological Diversity (CBD) to promote biodiversity and protect endangered species and habitats.
- *The EU Pollinators Initiative* (launched in 2018) aims to reverse the loss of wild pollinators in the EU and promote global action to contribute to pollinator-friendly environments. In the mid-2020s, the survey phase is in place (European Commission, 2018).
- *Natura 2000* (in existence since 1992) is a network within the EU that works to protect and conserve diversity. To achieve the goals of the CBD, all EU countries must designate specific areas, so-called Natura 2000 areas, which together will form an ecologically coherent network of habitats. These areas contain species or habitat types that are particularly worthy of protection from a European perspective. The aim of the network is to ensure the long-term preservation of Europe's most valuable and endangered species and habitats (European Commission, 2022).

The 2020 strategy was replaced in the mid-2020s by the EU Biodiversity Strategy for 2030 (European Commission, 2020c). Several earlier directives are still active but in a revised form. Among other things, the EU Pollinators Initiative was revised in January 2023 and was then referred to as 'A New Deal for Pollinators' to clarify the link to the European Green Deal (European Commission, 2019). In addition, a number of new directives have been drawn up to clarify how Member States should combat the main causes of biodiversity loss.

In line with the ambition of more legally binding targets, the European Parliament voted in February 2024 for a new nature restoration law (EU Regulation, [2024/1991](#)), which has subsequently also been adopted by the Council of Ministers. The regulation requires the restoration of degraded nature in all Member States and sets binding targets for the restoration of ecosystems, habitats and species. Interim targets have been set for 2030, 2040 and 2050. How the goals are to be achieved and how measures are to be implemented are planned by each country individually. Member States have been given two years to develop a national restoration plan. Unfortunately, several important decisions, including how to structure the global biodiversity fund and design the monitoring framework, were postponed at COP 16 in Colombia, which may affect the work of developing the national plans.

Despite the adoption of several individual directives and initiatives related to biodiversity, the question remains whether the EU will succeed in its comprehensive and long-term plan to protect nature and reverse biodiversity loss. The ambition is that by 2030, Europe's biodiversity will be on the road to recovery. Unfortunately, research, presented by IPBES and the World Wildlife Fund (WWF), among others, shows that a recovery is still a long way off (WWF, [2022](#); IPBES, [2019](#)). For the EU, it is not only a matter of getting the governments of the Member States to pursue a policy that is positive for nature, but it must also succeed in persuading Europe's industry to take greater account of biodiversity and integrate the values of nature into its economic decision-making.

The two policy instruments, the EU Taxonomy and the Corporate Sustainability Reporting Directive (CSRD), are particularly central when it comes to redirecting and accelerating financial flows to companies, investments and projects that contribute positively to sustainable development and reduced biodiversity loss. Large-scale flows of both public and private funds are needed to reduce biodiversity loss. The EU Taxonomy is a classification system that establishes criteria for when an economic activity is considered environmentally sustainable. The CSRD, with the developed European Sustainability Reporting Standards (ESRS) (EFRAG, [2022](#)), on the other hand, aims to increase transparency and comparability between how investments, projects and companies perform within different sustainability dimensions. Climate and biodiversity are at focus in both policy instruments.

The EU Taxonomy is designed to help meet the UN's Sustainable Development Goals (SDGs) by directing capital flows towards

investments in sustainable activities to achieve sustainable and inclusive growth. It also addresses financial risks arising from climate change, natural disasters, environmental degradation and social problems, as well as promotes transparency and long-term financial and economic activities. With its classification system, the EU Taxonomy helps investors at different levels of society to identify and compare environmentally sustainable investments. The taxonomy includes six environmental objectives, or sub-goals, with the sixth covering biodiversity and ecosystems.

The first sub-goal focuses on climate change mitigation, for example, through increased energy efficiency and increased infrastructure that enables decarbonisation of the energy system, while the second focuses on adaptation to climate change, for example, by reducing the risk that the future climate will not result in negative impacts on people. The third sub-goal is directed towards sustainable use and protection of water and marine resources, for example, by protecting the environment from the negative effects of wastewater pollution. Transition to a circular economy is the fourth sub-goal. Here actions related to increasing the shelf life of products, repairability or reuse are needed. The fifth sub-goal is focused on pollution prevention and control, for example, by reducing and managing litter and other environmental pollutants. The last of the six sub-goals is directed towards the protection and restoration of biodiversity and ecosystems, for example, through sustainable land use and the protection of soil biodiversity.

The Taxonomy Regulation became applicable on 1 January 2022 for the two environmental objectives related to climate (climate change mitigation and adaptation). From 1 January 2023, the regulation also began to apply to the remaining environmental objectives: sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems. In order for an activity to be considered environmentally sustainable, it must meet four criteria: (1) contribute substantially to one or more of the above environmental objectives; (2) not cause significant harm to any of the other environmental objectives; (3) be carried out in accordance with certain minimum protection measures; and (4) be deemed to be in accordance with technical screening criteria.

Companies that were required to prepare a sustainability report in accordance with the Non-Financial Reporting Directive (NFRD) (EU Directive, 2014/95/EU) and those required to be compliant with the CSRD must disclose the extent to which the company's activities are

covered by and aligned with the EU Taxonomy. Financial undertakings covered by the EU’s Sustainable Finance Disclosure Regulation (SFDR) must also disclose the extent to which a financial product’s underlying investments are in economic activities that are environmentally sustainable under the Taxonomy Regulation.

The CSRD replaces the previously rather vague NFRD. By requiring detailed sustainability information in the annual report and introducing enhanced audit requirements, the CSRD aims to provide decision-makers—both inside and outside the company—with reliable, relevant and comparable sustainability information. The policy shift is referred to as *transition finance* and the purpose of these policy instruments is to help steer financial flows towards sustainable investments. Sustainability reporting will also facilitate the management of financial risks resulting from, among other things, climate change and environmental degradation.

With the support of the CSRD, the EU has developed sustainability reporting standards that companies must report on (see Fig. 9.1). The ESRS comprises a total of 12 standards where ESRS 1 sets out the general requirements and ESRS 2 provides general information on how the reporting should be designed. The other 10 thematic standards relate to

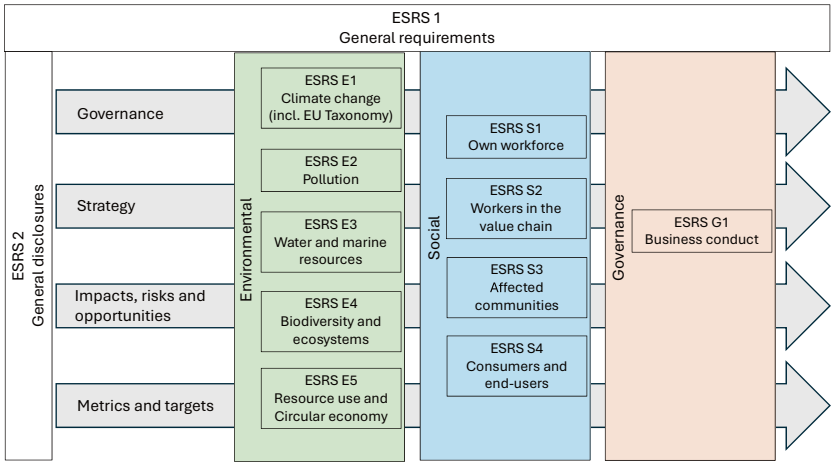


Fig. 9.1 Structure of the ESRS with overarching and thematic standards (author’s presentation)

the ESG dimensions: *Environmental* (ESRS E1-E5), *Social* (ESRS S1-S4) and *Governance* (ESRS G1).

Even if a company is required by the CSRD to comply with the ESRS, this does not guarantee that it will report on all standards. All companies mandated by the directive must, however, carry out a so-called double materiality analysis to determine which standards they must report on. The double materiality analysis is an assessment approach that considers both how sustainability issues, here the thematic areas in the ESRS, impact a company's financial performance (outside-in, financial materiality) and how the company's activities affect society and the environment (inside-out, impact materiality). A company should also report on those thematic standards that it has assessed as material.

ESRS requires companies to carry out comprehensive reporting on their work with biodiversity. As shown in Fig. 9.1, it is the ESRS E4 standard that covers biodiversity and ecosystems. It aims for companies to analyse and then report on both their impact and dependence on biodiversity, as well as what transition plans they have developed to contribute to a reduced loss of biodiversity. The background to ESRS E4 is that companies through their value chains and production play an important role in promoting a diverse nature that can adapt and is flexible. A diverse nature can often recover from various disturbances to which it is exposed in the event of, for example, droughts, floods and other extreme weather. However, when diversity decreases, adaptability is reduced. Overall research concludes that the imbalance in nature has reached a level that means that the ability to adapt rapidly deteriorates (IPBES, 2019).

The ambition of the disclosure requirements in the ESRS E4 standard is that companies in their sustainability reporting clearly inform about not only the company's impact on biodiversity and ecosystems. Companies must also report on their actions to prevent and/or mitigate adverse impacts, to protect and restore biodiversity and ecosystems and to manage risks and opportunities. The E4 also calls for information on the company's plans and capacity to adapt its strategy and business model, as well as its significant risks, dependencies and opportunities related to the company's biodiversity and ecosystems and how these are managed. Last but not least, the company needs to report on the financial impact of the material risks and opportunities, arising from its impact on, and dependency on, biodiversity and ecosystems, and how this may affect the company in the short, medium and long term. Furthermore, companies must explicitly relate to how the above is taken into account in corporate governance

and their strategies. They must also present the consequences, risks and opportunities they have identified, as well as establish clear metrics and goals in each area.

The comprehensiveness of the ESRS is vital for improving the quality of how companies report on their sustainability performance and ensuring that the information is fit for guiding financial flows towards nature-positive investments. However, these regulations have also been criticised for imposing too heavy reporting burdens on companies, especially on Small Medium Enterprises (SMEs). This critique underlies the EU's launch of the Omnibus proposal (European Commission, 2025), which includes significant simplifications not only of the CSRD/ESRS but on several of the EU's proposed sustainability regulations, such as the EU Taxonomy and the Corporate Sustainability Due Diligence Directive (CSDDD). Although the exact extent of the watering down was still unclear in the mid-2020s, it raised doubts about whether the EU still aspired to lead the fight against climate change and biodiversity loss, or whether the turbulent geopolitical context had led to a temporary or even permanent deprioritisation of its sustainability policy agenda. In November 2025, only days before the COP 30 in Brazil, and after a marathon of negotiations, the EU's climate ministers reached an agreement on a new climate target for 2040. The main goal of a 90 percent emissions reduction remains, but the deal includes several concessions that weaken the ambition and have faced strong criticism (Reuter, 2025).

INDUSTRY'S TRANSITION TOWARDS ACHIEVING CLIMATE GOALS AND REDUCED BIODIVERSITY LOSS

Effective policy instruments, with clear guidance that link financial decisions to environmental and climate-related performance and risks, are crucial if financial decisions are to contribute to the goal of achieving a low-carbon, more resource-efficient and sustainable economy. The European Green Deal (European Commission, 2019) identifies investors as a key driver of companies' transition. With the EU Taxonomy's classification system for sustainable activities and the ESRS, the European Commission expects to achieve increased transparency and comparable information on sustainability performance. This improvement of sustainability information is expected to assist in the process of redirecting and

accelerating financial flows to climate- and nature-positive investments—all in accordance with the idea behind *transition finance*.

Research findings raise doubts about whether EU's climate policy and policy instruments are sufficient to promote the industrial transition (see Arvidsson & Sabelfeld, 2023; Andersson & Arvidsson, 2023a). Globally, there is no doubt that the EU's climate policy is ambitious. However, it is a comprehensive transition that is needed for a low-carbon, more resource-efficient and sustainable economy to become a reality. It is vital that policy instruments are designed in ways that help achieve climate and biodiversity goals. Another important question is how well-prepared companies are for the new, stricter sustainability regulations. In their research, Katrin Hummel and Jobst (2024) conclude that the scope of the policy instruments risks resulting in a slow and resource-intensive implementation process at companies. Much depends on if companies are able to improve their reporting to the extent necessary for it to be used as a basis for directing public and private funds to sustainable investments. Below we turn to research examining how far companies have come by the middle of the 2020s in preparing for the EU's stricter sustainability regulations.

A country that has long been seen as a pioneer when it comes to performing well in the area of sustainability is Sweden. Swedish companies are often pointed out as role models when it comes to reporting on their sustainability performance (see, e.g., KPMG, 2022). Therefore, it is interesting to examine how well prepared the largest Swedish companies are for what is known as the impending tsunami of EU sustainability regulations. If even Swedish companies are not yet prepared to achieve the required improvements in their sustainability reporting, it is not reasonable to anticipate substantial improvements in other EU Member States. This may mean that the intended results of the regulations will take longer to achieve than the European Commission has expected.

Unfortunately, research shows that even the Swedish companies that were mandated to comply with the NFRD, the CSRD's predecessor, were not adequately prepared for the stricter requirements imposed by the EU's enhanced sustainability regulation (Arvidsson, 2024; Andersson & Arvidsson, 2023b). The research includes Swedish-listed multinational companies, all of which are characterised by a large direct and/or indirect negative climate impact and by being covered by the EU's sustainability regulations. In addition, these companies are active on the global arena. In summary, the conclusions are also relevant outside the Swedish context.

The results of the Swedish Corporate Sustainability Ranking, conducted since 2018, show that in 2022, only 2 percent of the 130 largest listed Swedish companies—all active on the global arena—mentioned *transition finance* in their reports (Arvidsson, 2023). The policy shift: transition finance is directed towards promoting a redirection and acceleration of financial flows to sustainable investments. The proportion, which increased to 5 percent by 2023, is remarkably small (Arvidsson, 2023). Not least considering the great focus in the early years of the 2020s on the need for companies to gradually carry out scenario analyses to identify physical and transition risks related to climate change. Two clear transition risks are the EU's policy shift and the increased sustainability regulations. Thus, it could be expected that companies already had identified these risks and started communicating in their external reporting on *how* these transition risks are expected to affect their operations.

Furthermore, the above ranking shows that in 2023, only 14 percent of the Swedish companies covered by the CSRD discussed how they expected the introduction of CSRD and ESRS to affect the company (Arvidsson, 2024). This low proportion is quite worrying. In subsequent surveys directed at the companies' management teams, it was studied whether the companies had initiated a process to report in accordance with CSRD and ESRS. In 2023, only 10 percent of management teams responded that their reporting was fully in line with the CSRD and ESRS. In the survey from 2024 (Arvidsson, 2024), this proportion had increased to 17 percent. There are interesting differences between industries confirmed in the ranking results. No companies in the banking and consumer goods sectors consider their reporting to be fully aligned with the CSRD and ESRS. However, 27 percent of investment companies and 23 percent of capital goods firms claim that their reporting fully meets these standards.

However, the survey study shows that companies have paid attention to the stricter sustainability regulation that the EU is rolling out (Arvidsson, 2024). A large majority of companies believe that the CSRD compared to the previous Sustainability Reporting Directive (NFRD) places significantly higher requirements on their sustainability reporting. Arvidsson and Dumay (2022) show that the NFRD did not result in any significant improvement in companies' sustainability performance, despite the improved quality of reporting. Companies' view that the CSRD sets higher requirements can be seen as positive from a policy perspective, since the directive aims to improve the quality of corporate reporting. However, the complexity of the EU's stricter sustainability regulations

risks undermining the results that the European Commission hopes to achieve in the shorter perspective (Villiers, 2022).

There is a significant risk that ambitious policy instruments such as CSRD and ESRS will not be enough to promote an effective transition (Andersson & Arvidsson, 2024; 2023b). Furthermore, the research results in these articles reveal significant differences between how Swedish companies map climate-related risks and what understanding they have of what a climate-related risk actually is. For example, many companies underestimate the importance of future transition risks by claiming that they have carried out long-term scenario analyses while merely referring to short-term forecasts (*ibid.*). Caldecott (2020) has presented research that shows the importance of improving the work of companies and financial institutions with climate-related risks. Considering the above, there is a significant risk that despite the stricter CSRD and ESRS regulation, companies' sustainability information will not result in value-relevant and comparable information that can guide financial flows from carbon-intensive to green investments and thus accelerate the climate transition. The anticipated improvements will take time. If even the Swedish companies, which are seen as role models in the area of sustainability (KPMG, 2022), are not prepared for the EU's stricter sustainability regulations, it raises concern as to how prepared companies in the other Member States are.

The high ambitions of the European Green Deal risk failing unless companies are provided with clear guidance promoting their capacity-building on how to map and assess climate-related risks (Andersson & Arvidsson, 2024; 2023b). For the ongoing transition to be successful, powerful learning and change processes need to be reached in the second half of the 2020s.

It is clear that companies have come further with their climate work than in their process of understanding their impact and dependence on biodiversity. The Swedish Corporate Sustainability Ranking (see, e.g., Arvidsson, 2024) shows that all the 130 included companies have a climate strategy that is presented in their annual report. However, only 43 percent of the companies present a strategy for biodiversity. Although the proportion is small, we see that in just a few years, more and more Swedish companies have begun to focus on biodiversity. In 2021, only 15 percent presented a strategy (Arvidsson, 2022). However, the slow increase fails to address the urgency of the situation.

In the previous section, ESRS E4 was presented, which focuses on biodiversity and ecosystems. According to the thematic standard, companies must report on both their impact and dependence on biodiversity. The Swedish Corporate Sustainability Ranking from 2023 (Arvidsson, 2024) finds that 33 percent of the included companies conducted an analysis of their impact on biodiversity. However, only 20 percent reported on the results of this analysis. Unfortunately, the figures are even more concerning when it comes to examining biodiversity dependence. Only 11 percent of the companies carry out an analysis of their dependence on biodiversity. A very small percentage (5 percent) reports on the results of this analysis. The findings clearly show that biodiversity is complex and that there is a great need for knowledge reinforcement among companies.

The private initiative called the Taskforce on Nature-related Financial Disclosures (TNFD) (TNFD, 2023) is a framework developed from the TCFD framework (TCFD, 2017). The TNFD framework guides companies and financial actors by presenting methods for measuring and reporting dependencies, impacts, risks and opportunities (DIRO) on nature. In the development of the CSRD, the corporate world and politicians have emphasised the importance of the EU's new regulations supporting the TNFD to make it easier for companies to develop a common terminology and working method for measuring their impact and dependence on biodiversity, among other things. This is to facilitate compliance with the new regulations and provide a more efficient transition process. In the public debate on the EU's sustainability regulations in the mid-2020s, the business community often questions whether policymakers are successfully aligning different policy instruments with each other and with private initiatives. The concern is that the reporting burden may become too heavy if central regulations are not in harmony with each other.

During the first half of the 2020s, established goals related to climate and biodiversity have increasingly been highlighted as a prerequisite for achieving an effective transition. A key element of ESRS E4 is that companies must present goals for their work with biodiversity. The results from the Swedish Corporate Sustainability Ranking show that 19 percent of the 130 large Swedish companies included some form of goal related to biodiversity in their annual report for 2023 (Arvidsson, 2024). In addition, 28 percent of the companies state that they are in the process of developing goals related to biodiversity. An equally large proportion, 28 percent, unfortunately state that they have not developed goals in this area.

To sum up, companies' preparedness for the EU's stricter sustainability regulations in the mid-2020s is worrying. Even the largest Swedish-listed companies, which come from a country that has long been considered a leader in sustainability investment and performance (KPMG, 2022), are far from being able to report at the level required by the CSRD and ESRS. Given the serious warnings from the IPCC and IPBES about our planet's critical state (IPBES, 2019; IPCC, 2023), it is crucial that companies take action to improve their climate and biodiversity performance. Ambitious targets and strong actions are needed to combat climate change and reverse biodiversity loss.

Companies' sustainability reporting must reach the quality required for the information to be useful as a basis for decision-making for investors at different levels of society. Otherwise, the policymakers' objective that the European Green Deal and other policy instruments should enable a redirection and acceleration of financial flows from carbon-intensive to green and nature-positive investments will not be achieved. The above research findings clearly show that in the mid-2020s much remains to be done before the objectives of relevant, credible and comparable reports on corporate sustainability performance are reached. Quality improvements of reporting will not happen overnight. Companies are facing significant learning and change processes, and in addition, there is often a lack of (uniform) methods and tools to measure various sustainability aspects. Crucial for a positive outcome is an EU policy that, together with new agendas, strategies and policy instruments, promotes and assists industry capacity-building by providing clear guidelines on how to understand and measure sustainability performance.

THE EU IS AT A CROSSROADS WHERE IT IS TIME TO CREATE THE CONDITIONS FOR THE EU'S GREEN DEAL TO BECOME A SUCCESS STORY FOR THE CLIMATE AND BIODIVERSITY

Under von Leyen's leadership, the Commission launched the Green Deal in 2019. This meant greatly increased ambitions in the climate area and a goal of becoming a climate-neutral continent by 2050. During von der Leyen's first term in office, a myriad of strategies, directives and measures have been presented. All with the aim of achieving green growth and internationally strong competitiveness. Europe has seriously taken the lead

in the global transition. Countries outside the EU are looking at how the transition is developing in the EU Member States. Attention is directed towards understanding which strategies, directives and measures are successful and which do not achieve the intended results. In international comparison, it is agreed that the EU's sustainability regulation is stricter than elsewhere. In the middle of the 2020s, US President Donald Trump shows no interest in challenging the EU in terms of shouldering the global environmental and climate leadership. An open question remains whether the EU's climate policy will be successful in promoting an effective and inclusive transition in the Member States and industry. In the middle of the 2020s, we were expected to start to see results from the EU's climate policy and to be able to assess whether the flagship Green Deal would be a political success story for the climate and biodiversity. With the EU Commission's launch of the Omnibus proposal (European Commission, 2025) including significant simplifications not only related to the CSRD/ESRS but also the EU Taxonomy and the CSDDD, it is less clear whether the EU is still aiming at taking on the leadership role for combating climate change and biodiversity loss. In the autumn of 2025, it is unclear if and how the Omnibus proposal will change EU's previous ambition of taking the lead in the combating of climate change and biodiversity loss.

Regardless of how the Omnibus will change the policy landscape, it stands clear that financial actors such as asset managers, lenders and insurers will continue to require data of high quality to assess companies' impact on climate and biodiversity. Research presented in this chapter clearly shows that a large proportion of the companies covered by the EU's new, stricter sustainability regulations lack the prerequisites for regulatory compliance. This implies that they also risk having problems with providing financial actors with required performance data related to climate and biodiversity. It is relevant to reflect on the level of preparedness in companies in other Member States when research shows that Swedish companies, which are seen as role models in the area of sustainability (see, e.g., KPMG, 2022), are not prepared for the EU's stricter sustainability regulation. Research presented in this chapter is mainly based on large listed companies that are active on the global arena, which makes the conclusions generalisable even outside their national residence. Overall, research shows that there is a risk that the expected outcomes of the EU's sustainability regulations will not be reached. Extensive capacity-building on all levels of society is needed along with consistent methodologies and tools fit to

produce relevant, credible and comparable data and information useful for efficient financial decision-making related to sustainability performance.

The EU is facing a crossroads where it has a unique opportunity to focus on assisting Member States and their companies in the extensive learning and change processes required to transform the EU into a climate-neutral and nature-positive continent during von der Leyen's second term. By mid-2025, most strategies and policy instruments were launched or about to be launched. Then the Omnibus proposal (European Commission, 2025) entered the scene and with that came increased policy uncertainty leaving the corporate world in limbo. Regardless of the outcome of the Omnibus, purposeful simplification of regulations or deregulation, climate and biodiversity risks are financial risks and as such they need to be managed in a financial market context. So, let the second phase of the Green Deal be focused on creating better, or even the best, conditions for Europe's industry to achieve an effective transition and also the creation of long-term green growth and increased international competitiveness. Draghi's report (2024) also stresses that measures aimed at combating climate change and biodiversity loss are important for strengthening Europe's competitiveness if unnecessary regulatory burden is avoided. Not least, innovations in the climate area are argued to have the potential of positively impacting the ongoing transition.

COMPLEMENT POLICY INSTRUMENTS WITH CLEARER GUIDELINES, INVESTMENTS AND TARGETED SUPPORT MEASURES

To conclude, this chapter offers a few research-based recommendations with the aim of advancing the EU's sustainability agenda. In particular, the Commission should complement policy instruments with clear sector-specific guidelines supporting companies in mapping, reporting and assessing sustainability performance. This will further ensure that companies' sustainability reporting provides relevant and comparable sustainability information for financial and political decision-making. It is also important that the Commission supports the development of coherent, and possibly sector-specific, methodologies and tools to ensure reliable and comparable measurement of progress along different sustainability dimensions related to both environmental and social sustainability. Capacity-building and efficient learning processes are vital in a transition.

Here, policy needs to ensure that companies' management teams, boards and employees are encouraged or even required to develop skills in risk assessment and risk management processes related to climate change and biodiversity. Companies are key players in implementing measures that can mitigate climate change and reverse biodiversity loss. Increased knowledge and understanding of the risks associated with the twin crises are central if companies are to succeed with implementing relevant measures promoting transformative actions. The Commission should also focus on assisting industry in developing internationally uniform procedures and processes to measure the indirect and direct effects of different corporate activities on biodiversity over time and along the value chain. Access to complete, reliable and comparable data is central to steer actions and financial flows in directions fit to halt and reverse biodiversity loss. Further EU investments in research on climate change and biodiversity loss are needed along the development of effective procedures and processes for integrating research findings both in the design of new policy instruments and in the vital review of existing regulations.

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The EU's Renewed Interest in Resource Use: Geopolitical Aspects of Security and the Environment

Åsa Romson

INTRODUCTION

Trade in goods is central to Europe, as the continent, viewed globally, consists of a collection of countries with a small landmass and limited natural resources. Control over raw materials is important for the states in their efforts to develop their industries. The pursuit of open and stable global trade has thus always been a core concern for the European Union (EU). This pursuit has also been successful in the sense that the world has moved towards deregulating trade during much of the Union's existence. But now, in the mid-2020s, other political winds are blowing. We are seeing, among several of the world's great powers, growing protectionism and higher trade barriers. This geopolitical shift causes the EU to devote increasing political energy to secure critical raw materials and to secure old and set up new value chains to meet the Union's needs for critical raw material.

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At the same time, global climate and environmental impacts have cast the pursuit of raw materials in a new light. Much suggests that the over-consumption of materials by the world's wealthy people poses a threat to the future, also in reference to security. A geopolitical dimension of environmental and climate policy is emerging, in connection with the extraction of resources, the use of products and the handling of used products and waste. So far, the geopolitical focus in climate and environmental policy has resulted in few regulations. However, the EU's reform agenda for a circular economy has begun to address issues of resource extraction, product use, and waste management—partly due to a growing awareness of the planet's limited resources.

Both the growing protectionism and the security threat posed by climate and environmental change have led the EU's institutions and its Member States to acknowledge the need for common rules for resources and resource management. EU stewardship of the waste value chain in reference to reuse, material recycling, and the enhancement of energy efficiency can be seen as a way for the Union to resolve both the challenges connected with increasing trade barriers and the dilemma arising from the threat to the well-being of the planet posed by current levels of resource consumption. In the energy sector, energy efficiency has long formed a part of political governance, among other things, for geopolitical reasons. In response to Russia's full-scale invasion of Ukraine in 2022, for example, far-reaching measures have been taken to reduce the dependence of EU countries on Russian oil and gas. Efforts to increase energy efficiency have also been justified by reference to climate considerations and the need to counteract global warming for the sake of security (UN Security Council, 2021).

During the 2020s political interest has grown in promoting resource efficiency in a broader sense also outside the area of energy. In the EU, several reforms are under way in order to increase reuse and material recycling within several different material flows and these reforms are increasingly politically motivated by geopolitical concerns, *inter alia*, in reaction both to rising protectionism and to concerns about the security of the EU and the planet. During the 2019–2024 term, within the scope of the European Green Deal (European Commission, 2019), the European Commission put together a number of significant reform packages with measures for enhancing resource stewardship, arguing that the measures would both protect the environment and increase security for the Union. However, the key question is how well these reforms will succeed in

directing developments towards reduced resource use to counter EU environmental and trade security concerns. The reform packages also highlight the difficulties that arise in reference to governance and regulation when reuse and recycling are to be made the new norm, due to the challenges they pose to incumbent production-focused industries, with business strategies based on the unlimited use of primary resources. It is therefore of interest to examine how well the new regulations will force the reduction of resource use, as well as whether they will decrease the Union's geopolitical vulnerability.

In light of the above, this chapter concerns those parts of the European Green Deal that relate to resource efficiency. Its focus is therefore on EU regulation of products and waste within the agenda for a circular economy, on reforms for implementing the Union's plastics strategy, and on strategies and regulations for strategic and critical raw materials. It places these reforms in a geopolitical context, in connection with both ecological security and dependence on external resources. The chapter's opening section addresses the issue of global resource use as a geopolitical risk. The next section discusses how the EU's Circular Economy Action Plan (CEAP) (European Commission, 2020a) reflects these geopolitical considerations. The three sections thereafter examine efforts to implement the CEAP in relation to products and waste materials, plastics, and strategic and critical raw materials, respectively. The concluding section returns to the question of whether resource stewardship can point to a way out of Europe's geopolitical dilemmas, and it offers several recommendations for integrating the different areas more closely.

EUROPE'S USE OF RESOURCES: A GEOPOLITICAL RISK IN ITSELF

In an altered geopolitical world, the vulnerability reflected in society's dependence on trade in resources and goods is readily apparent. But it is not just the reliance on a functioning trade system that can be geopolitically sensitive—the increasing exploitation of primary resources in itself can be seen as a global security risk. Major environmental risks and damage are linked to the sharply rising global use of resources. The International Resource Panel at the United Nations Environment Programme (UNEP) projects a 60 percent increase in such use by 2060, as compared to 2020 (UNEP, 2024). Climate change, the pollution of soil and water, and the

depletion of biodiversity with resulting ecosystem instability constitute a threefold threat with significant repercussions for society and the economy. The high level of resource consumption is thus, in itself, a future threat to global security—including for Europe.

Resource consumption in Europe has increased with each step of economic development. For a long time, increased resource use in society was seen only as something positive—a sign of growing prosperity. This view has changed. One early warning about the potential global threat posed by increasing resource use was *The Limits to Growth*, published by the Club of Rome, which sparked considerable debate (Meadows et al., 1972). In 1987, the concept of sustainable development was launched in a UN report produced under the leadership of Gro Harlem Brundtland (UN, 1987). Since then, the planet's carrying capacity has been a central focus for the United Nations (UN), which for more than 30 years has encouraged discussions among states, firms, and the general public regarding sustainable patterns of consumption and production. These policy discussions are being carried forward within the framework of the UN's Sustainable Development Goals, among which Goal 12 is focused on ensuring sustainable consumption and production patterns (UN General Assembly, 2015).

Various economic theories and models through the years have addressed the dilemma of global consumption that depletes the planet's resources and ultimately threatens its well-being. One key idea has been to de-couple economic growth from increased resource use. De-coupling has proved to be difficult other than in relative terms, but it is also much debated (Damania et al., 2025). Kate Raworth (2012) has developed the so-called *Doughnut Model* to illustrate a society that is safe and sustainable over the long term. The outer ring of the doughnut represents the ecological limits set by the Earth; the inner ring shows the resources humans need to live a good life (Raworth, 2012). The doughnut thus depicts a space of resource use within which society must keep itself in order to achieve a safe type of prosperity. The idea of an outer limit for the planet's well-being is based on a branch of geoscience in which the focus is on planetary boundaries (Rockström et al., 2009).

To measure total resource use in our societies, scholars in the early 1990s developed the concept of the *Ecological Footprint* (Wackernagel & Rees, 2019). This model identifies a sustainable level of resource use by comparing the biocapacity of the Earth with the ecological footprint of our societies. The footprint represents the demands put by a population

on an ecosystem's supply of resources, in the form of among other things food, fibres, and forests that absorb carbon dioxide. To illustrate the significance of our ecological footprint, the date in a given year when humanity's use of natural resources exceeds what the Earth can regenerate in that year—the so-called *Overshoot Day*—is calculated (Wackernagel & Lin, 2023). Where Europe is concerned, Overshoot Day falls in the first half of the year. This means Europe not only lives beyond its means; it also means that if everyone live as the Europeans, humanity would require more resources than Earth can provide.

Global security risks from rising use of primary resources are an additional geopolitical dimension alongside the international environmental and climate element. However, international regulations on resource use are limited. While the management of biological resources is covered to some extent by multilateral environmental agreements—like those on forests, oceans, and freshwater—control over the Earth's non-biological resources, such as metals and minerals, falls almost wholly within the remit of national governments. The international rules that do exist regarding metals and minerals relate largely to working conditions and the risk of pollution to local environments. The question of who has the right to extract resources is a contentious one, often tied to territorial claims. International legal principles stress the need to protect the rights of indigenous peoples and the right of local populations to influence decisions and to receive support for orderly relocation. However, there are no international rules or agreements regarding the quantity of resources which a state—or the planet as a whole—may extract and consume. Regarding metals, sand, or minerals the German Federal Environment Agency has noted there is a lack of clear provisions in international law regulating resource use and resource efficiency (Bodle et al., 2021). When, in 2021, the UN Climate Change Conference in Glasgow issued a statement on accelerating efforts towards the phasedown of unabated coal power (UNFCCC, 2021, para. 20), this was seen as far-reaching (Reuters, 2021, pp. 11–15). Up until then, the climate regime had only addressed emissions from the use of resources, not the resource use itself.

Reducing the risks associated with society's rising resource use requires action on resource extraction, product use, and waste management. Although at present there are no international rules setting limits on use of primary resources, there are an increasing number of regulations in Europe on resource management, which the EU frames in terms of the global security risks connected with the unsustainable exploitation of resources.

THE CIRCULAR ECONOMY: A REFORM FOR REDUCED USE OF PRIMARY RESOURCES?

One policy tool for reducing society's use of primary resources is the circular economy. This refers to a system of production and consumption in which products and materials remain in circulation and do not result in waste. Researchers have sought to clarify the meaning of the circular economy and to identify the measures it involves. According to one such definition, it refers to a system where waste, emission, and energy leakage are minimised by 'slowing, closing and narrowing material and energy loops' (Geissdoerfer et al., 2017, p. 759). This includes, for instance, design for long-life and actions to repair, reuse, and recycle.

The idea that pressure on the planet's resources can be reduced through a circular economy has gained many adherents, and it has been embraced at the UN level through the work of the UNEP. Many analysts see in the concept of the circular economy several interesting solutions—both technological and behavioural—with a potential to enhance resource stewardship (see, e.g., The Ellen MacArthur Foundation website). Circular economy is a developing research field (Kirchherr et al., 2023). Within this field geopolitical matters take some place, but it is argued that it merits closer scrutiny as a possible crisis measure (Hartley et al., 2024). As an indication of themes for such scrutiny, studies of geopolitical consequences through the lens of the circular economy have identified security risks in areas of food, materials, energy, and water (Petelin, 2024).

There are also critical voices arguing that the concept of the circular economy is vague and can encompass many different things. This vagueness means that measures promoted as circular may ultimately result in increased resource consumption, by triggering additional uses. It is therefore important, critics contend, not to view the circular economy as an overarching paradigm capable of solving all environmental and social problems relating to resource management (Corvellec et al., 2022).

The Treaty on the Functioning of the European Union (TFEU) proclaims that a prudent and rational use of natural resources is one of the goals of EU environmental policy (Article 191(1)). This provides a basis for the Union to pursue resource efficiency and resource policy as part of its environmental policy. However, a distinct and developed regulatory framework for resources is lacking. The EU adopted its first Circular Economy Action Plan in 2015 (European Commission, 2015), and its second in 2020 (European Commission, 2020a). The rationale stated for

these plans relates to society's need to keep the level of resource use within the boundaries set by the planet. This connects the need for resource efficiency with the idea of a safe operating space for society's economic development. A key concept of the circular economy in the European context is the life-cycle perspective, which means considering the environmental impact of a product or service throughout its physical 'life'. This perspective is expressed in the concept of a waste hierarchy, which sets out methods for ensuring that products are long-lasting and that the materials from which they are made remain suitable for reuse or recycling numerous times. The life-cycle perspective is being incorporated more and more into EU regulatory frameworks, for example in estimating energy consumptions by products, and it has great potential for promoting resource efficiency within a legal framework. However, applying this perspective in regulatory practice involves integrating complex methods of measurement from the ecology and technology field with regulatory frameworks, such as via legal standards. As a result, the stage of implementation can be experienced as complicated (Dalhammar, 2015). In an effort to integrate the circular economy into EU regulations more clearly, researchers have proposed that resource management be developed as a distinct policy and legislative area alongside that for the environment, and that the life-cycle perspective be designated as a principle of environmental and resource legislation similar to how the precautionary principle has been (de Römph & Cramer, 2020). While the life-cycle perspective is not formally enshrined in EU law, it clearly underpins several EU reforms. At the same time, the life-cycle analysis methodology has developed over time providing a better basis for decision-making at various levels. An advantage of applying a life-cycle perspective in policy development is, for instance, that policy reforms can be evaluated against an expanded waste hierarchy, showing to what degree they contribute to a more efficient use of primary resources

RESOURCE MANAGEMENT IN THE REGULATION OF PRODUCTS AND WASTE MATERIALS

A cornerstone of the CEAP is the Sustainable Products Initiative (European Commission, 2022). The goal of this initiative is a product market with sustainable products that support more efficient resource use while reducing the need for primary materials in new production. This approach, focused on circular resource flows, is to form the basis for all future

product legislation. The initiative involves far-reaching legislative efforts to strengthen sustainability requirements for products. Products are to be made more durable and reusable, and all products on the market should be recyclable in an efficient way.

One of the most far-reaching reforms is the replacement of the Ecodesign Directive (EU Directive, [2009/125/EC](#)), which has regulated product safety and energy efficiency for energy-related product groups, with the Ecodesign Requirements for Sustainable Products (ESPR) (EU Regulation, [2024a/1781](#)). In addition to performance requirements, ESPR will impose broader environmental requirements on virtually all products except food, feed, pharmaceuticals, and living plants and animals. The so-called ecodesign requirements for products under the Regulation account for a product's environmental impact across its entire life cycle, from its manufacture through its use to the management of its waste. According to these requirements, some products, in order to be placed on the internal market, for example, need to be repairable to extend their life and for ease in recycling their materials.

The ecodesign regulation for certain energy-related products entered into force already in 2021. For example, screen displays and televisions must meet demands both for energy efficiency and for documentation requirements that facilitate repair; and free software updates must be made available for at least eight years after the product is placed on the market. Regulations for batteries and packaging also subject these product groups to ecodesign requirements (EU Regulation, [2023/1542](#); EU Directive, [2025/1892](#)). Textiles, furniture, and home furnishings have been identified as the next priority areas for ecodesign regulation (European Commission, [2025](#)). Ecodesign regulation links together three policy instruments in order to promote a more resource-efficient product market: mandatory rules on product information throughout the life-cycle—known as digital-product passports; expanded producer responsibility for the handling of waste; and product requirements for reparability and recyclability, as well as mandatory quotas for recycled content. These three policy instruments can be briefly described as follows.

The first relates to digital-product passports. The aim of EU regulations on digital-product passports is to increase transparency and product information as key elements in enabling circular business chains and in applying a life-cycle perspective for assessing product quality and environmental impact. Rules for how these passports should be designed are set out in the ESPR. Product passports secure information throughout the

business chain, which is essential for linking product design and production with reuse and recycling. These passports, which may take the form of a QR code on the product, accompany the product through its life cycle and provide access to information about its contents, about how it was manufactured, and about its environmental performance. Actors who wish to introduce or sell a product in the EU are responsible for the product passport. This means that not just manufacturers, but also importers, distributors, retailers, and e-commerce platforms will, to varying degrees, be subject to product-passport regulations. The physical infrastructure for product passports that follow with goods—individually or in groups—will be developed as product requirements are laid down by follow-up legislation in coming years. Digital-product passports are a clear example of how the digital transition is being linked to the environmental and climate transition. This is referred to in the EU as a ‘twin transition’ (Muench et al., 2022).

The second instrument concerns producer responsibility. With so-called Extended Producer Responsibility (EPR), the Union sets out rather detailed rules for how its Member States are to ensure that producers bear clear cost responsibility for their products throughout the life cycle—that is, that they cover the costs of collecting and managing end-of-life products. Producer responsibility has been applied in EU countries since the 1990s. It has evolved from being a policy tool developed by individual Member States for specific product types—where EU regulations merely coordinated the process with the internal market—into one that is increasingly harmonised across a wide variety of products. However, since producer responsibility is rooted in legislation on waste, many rules still apply only minimum standards that allow Member States to adapt the methods used to their own national waste-management system, as well as to introduce more ambitious environmental goals. The EU has long required producer responsibility for electronics, automobile tyres, and end-of-life vehicles. More recently, an increasing number of product groups have been added: packaging, cigarette filters, balloons, wet wipes, certain kinds of fishing gear, and several types of batteries. Mandatory producer responsibility for various textiles must be introduced in Member States by 2028 (EU Directive, 2025/1892).

The purpose of the producer responsibility is to give manufacturers incentives to make products resource-efficient and suitable for reuse and recycling. On the one hand, as this policy tool has been applied within the EU, it is hard to see any clear effects on product design (OECD, 2021).

On the other hand, the cost of waste management is being borne by manufacturers to a greater extent, and recycling capacities are being expanded (OECD, 2024). Member States can use EPR to link their recycling targets with requirements placed on manufacturers' Producer Responsibility Organisations (PROs). EU countries need to substantially increase their recycling capacities as a large proportion of recyclable waste continues to be landfilled or incinerated (with the latter at best yielding energy) (European Environment Agency, 2020).

The third instrument concerns ecodesign requirements. Among other things, these require that products be repairable and recyclable, and also that they include a minimum proportion of recycled material. Ensuring that a product can be easily repaired is essential for extending its lifespan, and for enabling consumers to avoid discarding it and purchasing a new one. In addition to the ESPR, moreover, the EU has adopted a consumer right to repair (EU Directive, 2024a/1799), which requires sellers to offer repairs both during and after the liability period. As mentioned above, some electronic products already face ecodesign requirements for easy disassembly, and for manuals and spare parts to be kept available. Requirements for recyclability are largely a matter of ensuring that products are easy to sort and are free from hazardous chemicals. For shorter-lived products like packaging, ESPR provisions going forward will require that they be recyclable at scale. In other words, actual systems must exist that can recycle the materials so they can be used in packaging again. Until now, it has been allowed to place large quantities of products on the market for which material recycling is in practice unavailable.

Taken together, the three policy instruments (information requirements, producer responsibility, and ecodesign regulation) facilitate more circular business models, making enhanced efficiency in the use of materials possible. However, the main focus of the product regulations remains on material recycling rather than on reuse—this despite the fact that increased reuse would more effectively conserve resources, while also reducing the need for waste management. Statistics also show that the EU has not yet succeeded in reducing total resource use, as the so-called material footprint has only been reduced marginally (European Environment Agency, 2024).

Although there has been an increase in sorting for material recycling, industries are in many sectors slow to replace primary materials with recycled ones. Established production processes, with well-developed

supply chains and standards based on primary materials persist because there are insufficient incentives for change (Geissdoerfer et al., 2023). If recycled materials are not in demand—and thus have low market value—the risk is high that they will not be used to any meaningful extent in new products. To promote markets for secondary materials, the EU has started imposing recycling quotas: that is, requirements for a given proportion of recycled content in certain product types, for example for certain plastic packages. Quotas increase the demand for secondary materials, and they are judged a key factor for achieving higher-quality recycling—the aim of the legislator being they will serve to reduce the use of primary materials.

The goal of a more circular and resource-efficient economy has also led to reforms for better utilising residual streams, such as nutrients and energy in wastewater. The Urban Wastewater Treatment Directive (EU Directive, 2024b/3019) relates to the concept of the waste hierarchy, with requirements for minimising waste generation, promoting reuse, and enabling resource recovery. However, a wide array of regulations at both the Union and the Member State level can make it hard to implement the concept of the waste hierarchy in practice. For example, sludge from sewage treatment plants may also be regulated under the Sewage Sludge Directive (Council Directive 86/278/EEC) and the Fertilising Products Regulation (EU Regulation, 2019/1009). Where residual streams are concerned, the critical question is whether they are defined as by-products or as waste that has undergone a recycling process and thus cease to be classified as waste. It is often difficult for actors to define this with any certainty, making the process highly uncertain as to how to proceed. This impedes the use of residual materials. There are many examples of producers who want to use residual streams of various kinds, but who encounter problems due to a lack of clear guidance or decisions in support of those working with by-products and recycled materials. Standards and norms for assessment often reflect the use of primary resources, putting the use of residual materials at a disadvantage, despite its considerable potential for enhancing resource efficiency (Pikaar et al., 2022). For this reason, much work remains for the Union to establish a fully functional regulatory framework promoting the increased use of residual products.

REFORMS FOR SUSTAINABLE PLASTIC USE AND REDUCED WASTE

Few materials epitomise modern consumer society so well as plastic. After World War II, when plastic began to be produced from oil and natural gas, it established itself as a cheap and flexible material with a wide variety of applications. As of the mid-2020s, many different types of plastic have been developed, and it has proved possible in certain areas to replace heavier and more resource-intensive metals with plastic. However, plastic is also associated with several serious problems, among them widespread global littering and plastic pollution, a wider spread of endocrine-disrupting and carcinogenic substances, and significant climate emissions in both the production and waste phases (National Geographic, 2025). The substantial increase in plastic production has not been matched by adequate systems for waste management in either high- or low-income countries. This is a major contributing factor to global plastic pollution and has drawn attention to the extensive export of plastic waste from, among others, the EU Member States. Several Asian nations have imposed import bans on plastic waste, and in 2021, moreover, the Basel Convention introduced new rules for the export of plastic waste, requiring prior approval from both the exporting and the importing country (European Topic Centre, 2023).

The severe global environmental problems associated with the increased use of plastic have also led to negotiations on the first international agreement on a specific consumption material. The EU has been a driving force for getting negotiations underway within the framework of the UNEP. In 2022, international discussions began on a plastics treaty, including proposals for global standards on ecodesign requirements as well as a global ban on single-use plastics and a cap on global plastic production. Researchers following the negotiations stress that the rapidly increasing global volume of plastic production must be addressed (Cowan et al., 2024). It is still too early to say what form the agreement will take. The petrochemical industry has a strong interest in a continued increase in plastic production, as plastic accounts for a growing share of oil consumption when fossil fuels are phased out (Tilsted & Bauer, 2024).

For the EU, the issue of trade in plastic waste has long been contentious. Plastic waste from EU countries had previously been exported in large volumes to Asian countries, where, instead of being recycled, it had

ended up in landfills or been dispersed into nature and the ocean (European Topic Centre, 2023). Managing recycling flows in a global market requires extensive oversight, of which there has been too little. As a result, however, of the latest revision of the Waste Shipment Regulation 2024/1157, rules ban export to countries outside the OECD and require prior approval from authorities of importing OECD countries (EU Regulation, 2024b/1157).

Since 2018, the EU has pursued a special plastics strategy aimed at increasing the recycling of plastic packaging and reducing the use of single-use plastic and of microplastic. Within the framework of this strategy, a wide array of policy instruments has been developed at the EU level. The aim is in various ways to promote the sustainable use of consumer goods through reuse, reduced use, and material recycling. For example, the Single-Use Plastics Directive (Directive, 2019/904) bans several single-use items, among them plastic cutlery, plates, and straws. Member States must also make measurable reductions in the consumption of other single-use products, such as plastic cups, carrier bags, and food containers. Many countries are now implementing national bans or taking other measures. Sweden, for instance, has banned plastic confetti, while Spain has imposed a special tax on single-use plastic items. The Directive also requires that customers are offered reusable food containers, and that they are able to use their own containers for takeaway meals. Some of these measures target plastic specifically while leaving the door open to continued single use of cardboard products. Disposable paper cups, for example, are permitted, even as disposable plastic cups are banned. This merely shifts consumption from one material to another, with neither circularity nor any significant reduction in resource use being achieved.

These direct regulatory controls of how products are allowed to be used are complemented by ecodesign requirements under the Packaging and Packaging Waste Regulation (EU Regulation, 2025/40), which requires all packaging to be recyclable at scale. Since packaging constitutes the lion's share of plastic waste in the EU, recycling rates can be boosted significantly. The Regulation also mandates that, as of 2030, content quotas of 10–35 percent recycled materials are introduced for plastic packaging and beverage bottles. The goal is to increase demands for recycled plastic and to induce manufacturers to design and manufacture packaging from recycled materials. As noted earlier, the EU's previous approach—merely setting minimum national targets for recycling—has proven

insufficient for driving a meaningful transformation in industry. Hence, an increased demand for recycled plastic in packages through the Regulation's content quotas is a way to push for the transformation.

The EU has also devised several economic instruments for making the recycling of plastic packaging work. One such tool is the system of differentiated producer-responsibility fees imposed under EPR. The idea is for producers of plastic packaging to pay waste-management fees scaled in a way that favours reusable packaging, packaging made from recycled plastic, and packaging made from plastic materials which are easy to recycle. However, this tool must operate across multiple levels of governance. While the Member States are charged with setting up the producer-responsibility system, the actual fees are collected by private subjects in the form of producer-responsibility organisations, as the EU lacks the authority to impose harmonised fee levels in this area (Romson et al., 2025). Another innovative economic instrument for calling forth a workable system for recycling plastic packaging is the plastics levy which the Union has imposed on the Member States as part of its multiannual budget framework for 2021–2027. Member States are to pay €0.80 per kilogram of non-recycled plastic-packaging waste annually, based on their reporting to Eurostat (the EU's statistical office). However, as most countries fold this charge into their EU membership fee, it is unclear how much incentive it creates for stronger recycling efforts. Nevertheless, some states have responded by introducing a national plastics tax: Spain, for example, charges €0.45 per kilogram of single-use packaging (Boix, 2023).

In sum, the EU's push for a more sustainable use of plastic—alongside its efforts to reduce plastic littering and plastic waste—has resulted in a wide array of policy initiatives: international rules and regulations; negotiations for a global plastics treaty; a ban on many disposable plastic products; and a mix of regulations and economic incentives to boost material recycling. Even so, the rise in plastics production and consumption continues, and the EU still lacks the capacity to recycle all the plastic it uses. The Union remains dependent on the oil used in plastics production, as well as on waste management and material recycling in other countries. With shifting geopolitical conditions, moreover, this vulnerability may worsen.

RECYCLING TO ACHIEVE GREATER INDEPENDENCE IN CONNECTION WITH CRITICAL RAW MATERIALS

It is evident, as noted at the outset, that Europe's dependence on foreign trade for many raw materials poses risks from a geopolitical standpoint. The situation is all the more precarious in that certain materials are strategic for the climate transition that the Union seeks to accomplish in order to reduce climate risks. In 2020, the European Commission pointed out the need for action to increase the Union's independence with regard to critical raw materials (CRMs) (European Commission, 2020b). CRMs are metals and materials that are essential for the green transition and for development in the defence and aerospace industries. They are often used in relatively small quantities in long-lived products: for example, solar panels, magnets in wind turbines, and batteries for electric vehicles. Examples include graphite, cobalt, lithium, dysprosium, neodymium, nickel, manganese, and silicon. Many of these are deemed innovation critical. With the projected expansion of electric vehicles and of wind and solar power, demand for these materials is expected to surge. Relying on imports from a small number of countries, whether in central Africa or the Caucasus, is seen as risky from both a security and an environmental point of view.

In 2024, the EU adopted the Critical Raw Materials Act (CRMA) (EU Regulation, 2024c/1252). It contains two lists: one of materials considered critical, the other of materials seen as strategic. The list is updated regularly. CRMA establishes several benchmarks. One relates to increasing the EU's capacity to extract critical and strategic raw materials, to cover at least 10 percent of its consumption. Another benchmark is that the refining of these materials covers at least 40 percent of the Union's consumption. It is particularly worthy of note here, however, that the Act also sets a benchmark for the capacity to recycle CRMs: taken together, the Member States must be able to recycle at least 25 percent of the EU's consumption. The Act justifies its focus on recycling on the grounds that it will improve the security and sustainability of the Union's access to raw materials.

An increase in the number of products requiring CRMs is expected as a consequence of electrification and an increased use of wind and solar power (Baldassarre, 2025). Production today relies in large measure on primary CRMs. However, the Commission points to a strong need for regulation to ensure these coveted metals and materials can be recycled when the products currently being produced reach their end of life (European Commission, 2020b). In line with the Ecodesign

requirements, mandatory quotas are also being devised to promote the recycling of CRMs. The recycling requirements have not been criticised by, for example, civil-society organisations, in the same way that the CRMA's rules for increasing extraction within Europe have. These organisations have expressed concern that social and environmental safeguards may be weakened when processing times for permits are to be shortened, leading, for example, to forced relocation of local populations and indigenous peoples (European Environmental Bureau, 2023).

Material recycling for these product groups has already been the subject of regulation, in part under the Waste Electrical and Electronic Equipment directive (WEEE) (EU Directive, 2012/19) and the End-of-Life Vehicles directive (ELV) (EU Directive, 2000/53/EC). However, recycling targets in these cases are mostly based on volume or on weight; as a result, CRMs which are only present in small amounts are typically unaffected by the rules. Furthermore, there are significant problems with reporting which lead to uncertainties in statistics on both end-of-life vehicles and the treatment of electronic waste (Merkisz-Guranowska & Wrona, 2022).

The EU Battery Regulation (EU Regulation, 2023/1542) aims to make batteries sustainable from a life-cycle perspective, with rules covering all steps from extraction through refinement, use, and waste management. The Regulation sets quotas for strategic metals and requirements for reparability, the ability to replace batteries, and for digital information throughout the value chain. The purpose is to ensure that the batteries necessary for the green transition in the EU can be produced and recycled within the Union. The CRMA and the Battery Regulation clearly show that material recycling should not just be seen as an environmental measure. It is also central for security policy. However, the geopolitical effects may be harder to achieve than these policies suggest. Ensuring a high proportion of recycled materials in batteries may take time and strategies for solving transportation needs in ways that do not increase the demand for batteries to the same extent need to be considered (Månberger, 2023).

CHALLENGES IN REGULATING REDUCED RESOURCE USE

Although interest in regulating resource use has increased within the Union in recent years, progress in the legislative area remains limited. Resource regulation falls under the general environmental article of the TFEU, according to which the Union's environmental policy shall contribute to the 'prudent and rational utilisation of natural resources' (Article

191(1)). Thus, a policy for restricting resource use forms a designated integral part of the EU's environmental approach, even if it is less developed than climate policy.

The vision the EU holds for the environmental field, through its eighth Environment Action Programme (EU Decision, 2022/591), is a Union that in 2050 is living well, but within the limits of the means of the planet. This ambition furnishes a broad framework for work on resource use, concretised through the CEAP and through a framework at Eurostat for monitoring the total material consumption and waste generated. As for more specific goals, the legislation sets out targets for material recycling of packaging and for reduction of food waste. However, there is as of yet no target for reduced overall material consumption within the EU. It may accordingly be said that the focus of current efforts to establish a circular economy is on waste management.

Attempts to enhance resource efficiency interact strongly with efforts in other important policy areas, such as to reduce climate emissions, to address geopolitical concerns, and to formulate industrial policies for digitalisation and the climate transition. It is in the interplay with these areas that resource efficiency is given a prominent role. This may explain why so few reforms centre around minimising the use of resources. Rather than an absolute reduction in resource use, the focus is on a relative increase in resource efficiency. It is conceivable that material recycling, which engages industrial actors in new activities, plays better with industrial policy and business models than does reuse, which risks inhibiting competition and mainly involves weaker parts of the service sector in the form of repair industries. When recycling targets are set for reducing the use of primary CRMs, they are justified by reference to geopolitical considerations in the form of control over value chains. At the same time, reforms encourage efforts to increase material extraction, in order to increase the availability of products deemed to accelerate the climate transition. The EU discussion has so far not touched upon the trade-offs.

Beyond this overarching view of how resource issues are understood at the level of principle, it is interesting to see how a partly new approach to resource stewardship is making its way into previously established regulatory structures. Proclaiming reuse and material recycling to be core principles challenges established systems of production and consumption, and it requires far-reaching regulation to succeed. As discussed above, the EU's agenda for a circular economy has also led to a large number of legislative interventions in a relatively short time. It is difficult at this point to

detect how well the reforms are succeeding in reducing the use of primary resources. In the judgement of the EU's environmental agency, the reforms go beyond pure waste management, necessitating new business models (European Environment Agency, 2023). However, the fact that many reforms are being implemented may give rise to governance difficulties, especially in view of the multi-level governance on which the EU is based (Dalhammar et al., 2020).

The research field around product regulation regarding the environment cuts across several areas and highlights a range of governance instruments, among them producer responsibility, ecodesign requirements, ecolabelling, and public procurement. Coordinating regulatory instruments and governance tools with economic incentives is necessary, on both the supply and demand sides (Maitre-Ekern et al., 2018). The life-cycle perspective needs to be used more broadly and applied in policymaking to assess which reforms have the desired long-term effect. Moreover, when regulations contradict each other, the conflicts need to be resolved. This includes among other things the conflict between chemical regulation and recycling (Dalhammar, 2015). Strict chemical requirements for new products are often identified as a barrier to circular business models, since older products on the market need to be assessed before they can be recycled. Oversight agencies may need to give special guidance so that actors can use recycled materials safely without it becoming so complicated as not to be worth the effort.

EU reforms for resource efficiency and waste minimisation have often been introduced with considerable flexibility for individual Member States. This has resulted in a broad range of governance tools in different Member States, among them a plastics tax in Spain and requirements for refillable beverage bottles in France. In this way, the Member States act as an innovation space for policy implementation, developing solutions and methods of governance that are adapted to different countries. Difficulties remain, however, because different Member States implement reforms at different speeds, and regulatory frameworks can overlap with each other. For example, Member States are required to introduce differentiated producer-responsibility fees in order to facilitate material recycling, but the Commission is to set a harmonised standard for what constitutes harder and easier recycling for different products. Such harmonised standards will, however, be delayed due to other regulatory reforms on the Commission's table. Thus, measures at the national level are designed differently. These challenges of multi-level governance will need to be

addressed if the EU is to take further steps towards a resource-efficient economy.

As shown in the sections above, reforms for a circular economy also raise the question of the needs and risks associated with trade in waste for recycling. Regarding the recycling of CRMs, there is a dilemma arising from the fact that a rapidly developing recycling industry depends on open trade routes, even as the EU is signalling that recycling should take place within the Union itself for the sake of greater security (Månberger, 2023). Similar dilemmas have been noted in connection with plastics (Romson et al., 2024). There are both environmental and economic reasons for the EU to adopt a more restrictive trade policy. As noted earlier, it is environmentally unacceptable for Europe's consumers to contribute to global plastic pollution—with significant risks for ecosystems both today and tomorrow—by exporting waste. Moreover, while there is a need to develop the recycling industry within the EU, this can also cause difficulties. Several developing countries have invested heavily in processing the plastic waste generated by the EU into secondary materials (rather than handling their own domestic waste, which is less sorted and where the plastic is of lower quality). At the same time, the basic logic of economies of scale and of competitive technological development speaks in favour of open trade in waste recycling. The EU has not settled on a clear path here, and it is also influenced by developments in the rest of the world. An approach can be discerned for both CRMs and plastics whereby the Union tries more consciously to select partners abroad in connection with trade in waste recycling and recycled materials.

Where recycling is concerned, a crucial question is who owns the resources—the secondary materials—at the end of the product's use, and whether sufficient incentives exist for these owners to recycle the product. Access to the materials is strategically important and can influence how business models develop. For example, it can be more attractive to rent out products in order to secure access to materials on a sufficiently large scale. Actors who want to build new businesses using secondary materials may face problems concerning the quality of the material. If the waste flows are geared to lower-grade material recycling, through the large-scale collection of mixed waste, maintaining a high value of material in this waste is difficult. Actors trying to access secondary resources before they enter mixed waste systems may find it difficult to negotiate direct access to products immediately after the use phase. This is because the users may be very dispersed, and they are often unaware that the product still has value

after it has been used. In other words, the transaction costs for agreements are high. A consumer using many different products may also be indisposed to return used products at various locations. Returning used and tattered items to the stores that sell them new is not always a workable model. Current waste legislation has the effect of tilting development towards large-scale systems where material flows are mixed at first and then sorted. Large flows are needed to make such arrangements economically feasible, but smaller and more specific flows can preserve a higher quality of secondary materials or products that can be reused. It is thus less than ideal that waste regulation has focused mainly on material recycling and has paid less attention to reuse.

RESOURCE STEWARDSHIP AND EUROPE'S GEOPOLITICAL VULNERABILITY

Returning to the initial question of how resource regulation in the EU aims to reduce resource use, we can conclude that the current rules do not constitute a comprehensive regulatory framework; rather, they have been developed in a piecemeal fashion. The EU aims for a situation in which all products placed on the internal market are sustainable and compatible with standards of circular economy, presumably leading to a minimum use of primary resources. The efforts made in pursuit of this objective show that the concept of sustainability and the free movement of goods have reinforced each other. This shows that the longstanding tension in the EU between environmental concerns and the free movement of goods—as opposing interests—can be reconciled through integration (de Sadeleer, 2018). At the same time, multi-level governance in the EU will continue to prevail in several respects regarding resource use, and the approaches applied in different Member States will sometimes need to look different.

Developing the life-cycle perspective further and using it as a yardstick when designing new and reformed legislation is a way of creating a stronger role for resource regulation. New reforms will then be measured against how well they support the principle that the utility and value of products or materials must be preserved to the greatest extent possible—that they have a long usable life and that they be recycled many times.

It is clear, furthermore, that reforms concerning resource use are linked to the geopolitical situation. Vulnerabilities arise both from trade barriers and from the negative impact of resource use on the planet's well-being.

Europe has declared itself prepared to take some responsibility, in view of the geopolitical threat posed by resource consumption. There is still a long way to go, however, before the Union has created an economy which operates wholly within the limits of the planetary boundaries. Reforms have made a start at developing policies for a reduced use of primary resources. The concept of the circular economy has many ambiguities, but there are both environmental and security reasons for the EU to reduce the use of primary resources. With the geopolitical changes in the mid-2020s, security issues linked to control over materials and value chains are increasingly coming to the fore in relation to resource regulation. Thus, the EU would benefit from making the connections between resource use and geopolitical assessments more explicit. The discussion of de-coupling economic growth from increased resource use could also imply de-coupling and de-risking EU dependencies of critical resources from China and other geopolitical security-sensitive states.

Policy-oriented research on the geopolitical implications of global resource use also needs to be strengthened. Europe and the EU represent an important base for the development of innovative policies for a transition to a less resource-intensive economy. Continued studies on how such policies can be deepened and linked to changing geopolitical conditions will also be of great value.

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Avoiding Pitfalls and Solving Dilemmas: The EU Chartering Its Course in a Geopolitical World

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and Lars Oxelheim*

THE EU AND THE FALLOUT OF GEOPOLITICS: NAVIGATING SHIFTING ALLIANCES, GREAT POWER RIVALRY, AND INSECURITY

The previous chapters in this book have outlined the geopolitical challenges faced by the European Union (EU) in a number of policy areas: international trade, global health, the greening of the economy, climate

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change mitigation, industrial policy, and the rearmament of Europe. As described in detail by the authors, the EU has undertaken a series of concrete measures in response to mounting economic, environmental, political, and security challenges. The long-term implications of these actions remain uncertain and are in the mid-2020s yet to be fully assessed. Even so, in this final chapter, we will draw together the different strands of development in order to trace the EU's trajectory in the uncharted waters of the evolving geopolitical world order and reflect on whether the EU possesses the capacity to stay the course it has set for itself.

The Realisation of a Shifting World Order

Concerns among the EU's institutions about the consequences of the geopolitical shift in world politics arose in earnest during Jean-Claude Juncker's presidency of the European Commission in 2014–2019. The security threats posed by Russia following the annexation of Crimea in 2014 and illegal occupation of Donetsk and Luhansk in Eastern Ukraine were acutely felt in the states neighbouring to Russia, primarily the Baltic states and Poland, but also further afield. European political leaders, meeting in the Normandy format, led by Germany and France and involving the warring parties, Russia and Ukraine, set out to find a solution to the hostilities, focusing on securing a ceasefire. The diplomatic efforts resulted in the Minsk agreements concluded between Ukraine and Russia in 2014 and 2015, whose provisions were repeatedly violated by Russia. Despite the attempts to find a diplomatic solution, the EU and its Member States reacted rather half-heartedly to the aggression, chiefly by imposing sanctions on Russia in the hope that President Vladimir Putin's statements about restoring Russia's natural sphere of interest in Eastern Europe and reinstating the borders of the Soviet Union would turn out to be empty threats.

In his 2017 State of the Union Address, Commission President Juncker emphasised that in addition to the security threats stemming from Russia's actions in Eastern Europe, the EU was also facing a set of geoeconomic challenges. His concerns were prompted by actions taken by the US and China. To this effect, he called on the Member States to respond to these challenges by speaking with one voice because 'Europe must always defend its strategic interests' (Juncker, 2017). To equip the EU to face geoeconomic risks, he announced an initiative to enhance the screening of foreign investments with the aim of signalling that the EU Member States were not 'naïve free traders' and could stand up to defend their interests. Accordingly, in his 2018 State of the Union Address, Juncker announced

that the Commission had successfully stood up to the US's strong-arm tactics in the area of trade precisely because the EU had jointly condemned its punitive tariffs on steel imports from Europe. At the same time, he regretted that the EU had not been able to condemn China's human rights violations in the UN Human Rights Council, saying: '[W]e must improve our ability to speak with one voice when it comes to our foreign policy' (Juncker, 2018). With these remarks, the Commission president signalled that a lack of unity among the EU Member States prevented the EU to act with force and push back against states that promoted an alternative understanding of human rights and by so doing undermined the mandate of the UN Human Rights Council (Dukalskis, 2023; Foot, 2020).

By the end of the 2010s, the EU had become more acutely aware of the breadth of the geopolitical challenges, which besides Russia's aggression against Ukraine, emanated primarily from China and the US during the first Trump administration. Regarding EU-China relations, the initially optimistic tone of the 2003 strategic partnership gradually eroded, and was replaced by growing scepticism and mistrust on the EU's part which increasingly saw itself put in a position of the lesser partner (Michalski & Pan, 2017a, 2017b). The growing antagonism was noticeable in a White Paper on China in 2006 which recognised that 'EU's expectations—which have increased in line with the quality of our partnership—are increasingly not being met' (European Commission, 2006, 4). Towards the end of the 2010s, the EU, with the EU institutions at the forefront, had changed its perception of China, evidenced in the 2019 Joint Communication 'EU-China—A Strategic Outlook' in which China was described as 'a negotiating partner with whom the EU needs to find a balance of interests, an economic competitor in the pursuit of technological leadership, and a systemic rival promoting alternative models of governance' (European Commission & High Representative, 2019). In her first State of the Union Address as Commission president in 2020, Ursula von der Leyen reiterated the three-pronged description of China as a negotiating partner, economic competitor, and systemic rival, acknowledging the relationship between the EU and China as being 'simultaneously one of the most strategically important and one of the most challenging we have' (von der Leyen, 2020).

There are multiple reasons for this steady deterioration in relations. One important reason is the EU's frustration that after over twenty years as a member of the World Trade Organisation (WTO) China has still not complied to the rules and principles of a full member, insisting that it

should be classified as a developing country despite its position as the world's main exporter and second-largest economy. China has instead pursued partial compliance in ways that benefit the Chinese economy and companies by continued government subsidies, forced technology transfers, and violations of the rules on patents and intellectual property rights for goods (Olson, 2019). Another important reason is China's strategic acquisitions in Europe in the wake of the sovereign debt crisis in the early 2010s linked to China's Belt and Road Initiative—an enormous infrastructure investment programme launched in 2013. These acquisitions were seen as increasingly problematic for national and European security. In particular, the China-sponsored diplomatic forum initially known as 16+1, but currently under the name 14+1 after the withdrawal of the Baltic states in 2021 and 2022, became emblematic of China's attempts to undermine cohesion between the EU Member States by taking advantage of their need for investments, primarily in infrastructure (Godement & Vasselier, 2017; Kaczynski, 2022; Garlick & Qin, 2023). This diplomatic forum, composed of nine Central and Eastern European EU Member States, five Western Balkan countries and China, was originally set up in 2012 to bring together China with East and Southeast European countries that were benefiting from Chinese investments under the umbrella of the Belt and Road Initiative. It was seen as an open challenge to European cohesion and the EU's capacity to influence the countries on the Western Balkans negotiating with the EU over the terms of membership. Yet another reason is that China has on multiple occasions penalised individual, often smaller, EU Member States and European companies that have taken measures that the Chinese government has disapproved of and in retaliation for a perceived political slight. Examples abound: Lithuania's decision to allow Taiwan to open a representative office in Vilnius in 2021, the Danish prime minister's meeting with Dalai Lama in 2009, and numerous European companies which have been boycotted on the Chinese market (Andrijauskas & Boruta, 2025; Boman & Pärup, 2022; Michalski, 2013). China's practice of coercive diplomacy, alongside those of other great powers, lies behind the EU adopting an Anti-Coercive Instrument in 2023 (EU Regulation, 2023c/2675).

Relations between China and the EU deteriorated further during the COVID-19 pandemic in 2020–2021, when China choked the supply of certain raw materials and broke value chains. China's refusal to cooperate with the World Health Organisation in tracing the origins of COVID-19 was also seen as a norm-violating behaviour by the EU (Lien & Kortsch,

2020). China's efforts to securitise economic policies from the mid-2010s onwards by enhancing its toolbox of trade defence instruments and blending them with increasingly strict national security laws were taken with the aim of ensuring national security and reducing a perceived encirclement (Drinhausen & Legarda, 2022). To this effect, China set about to break its dependency on Western technologies through the *Made in China 2025* industrial strategy and ensure dominance in the extraction and production of strategic raw materials and rare earth metals (de Soyres & Moore, 2024; Seaman, 2025; Wübbcke et al., 2016). By 2023, China dominated the production of the majority of critical raw materials, including rare earth metals and other materials essential for industrial production, rendering the EU Member States heavily dependent on China for the supply of critical raw materials (European Commission, 2023). China's aim to subordinate economic policies to national security interests signals a willingness to take advantage of the vulnerabilities and dependencies of partners for influence and dominance. In this context, the EU Member States' dependency on Chinese critical raw materials and China's use of offensive trade defence instruments, economic coercion, and discriminatory measures towards foreign companies on its domestic market further deteriorated economic relations between the EU and China in the first half of the 2020s.

Equally disruptive, but undoubtedly more unexpected in the EU Member States' worldview, was the negative experience during Donald Trump's first term in office as US president, 2017–2021 (Kribbe, 2023). Trump's contempt for the EU as an organisation, his lack of respect for the North Atlantic Treaty Organization's (NATO) principle of collective defence, and reluctance to endorse US security guarantees, along with his indifference to international norms and the role of international organisations in world politics, were deeply concerning for the US European allies (see, for instance, Blanc, 2024; Jones, 2025). Trump's actions sent shock waves across Europe, not least when he called the EU 'one of his greatest enemies' in 2018 just hours before a summit with Vladimir Putin, or when he appeared to question NATO's Article 5 on collective defence. The prevailing view at the time was that, despite his startling statements and personal style, Trump should not be seen as a one-off peculiarity but as a manifestation of a deeper change in the US. Uncertainty about the US's strategic intentions in relation to Europe led to calls for strengthening the strategic autonomy of the EU, a call often voiced by French President Emmanuel Macron (Juncos & Vanhoonacker, 2024). However, proposals to strengthen the EU's strategic autonomy were met with mixed reactions

from other Member States, some fearing that the EU so explicitly going its own way would lead to a definitive US withdrawal from NATO, while others felt that it was premature to draw any definitive conclusions on the future direction of US foreign and security policy (Juncos & Vanhoonacker, 2024).

In 2025, upon his return to the White House, Donald Trump has affirmed the radical shift in American foreign policy by turning away from long-standing European allies, embracing autocratic leaders, most conspicuously Vladimir Putin of Russia, and adopting a protectionist trade policy under the banner *America First*, imposing tariffs and extracting pledges of investment in the US from countries around the world (Spatafora, 2025; Demarais & Newman, 2025). The twists and turns of President Trump's transactional approach towards traditional allies in Europe and beyond have engendered a great deal of uncertainty. European leaders have, on the one hand, tried to persuade President Trump to lower tariffs on European goods and extend security guarantees to Ukraine in the event of a ceasefire (Kuleba, 2025). On the other, European states have maintained their strong support for Ukraine and formed a coalition of the willing, including the UK and Canada, to draw up plans for security guarantees to Ukraine principally based on European resources and capabilities. Autonomous strategic resources have thus become a necessity for Europe as a result of the US lukewarm endorsement of security guarantees for Ukraine in the event of a ceasefire and plans for military capabilities have been hastily drawn up. However, as discussed at length elsewhere in this volume, European countries started the rearmament process rather late and in parallel to their efforts to bolster Ukraine's defence capabilities, chiefly through the EUR 50 billion Ukraine facility and numerous bilateral aid initiatives (European Commission, 2025a). These efforts have taken two parallel paths: the first is directed at the EU Member States' defence industries to step up the manufacturing of ammunition and weapons by channelling funds to research and development and joint production, along with streamlining and increasing the effectiveness of the procurement of armament and weapon systems. Notable initiatives include the Permanent Structured Cooperation (PESCO) and the 800 billion defence package ReArm Europe announced on 4 March 2025 (PESCO, 2025; European Commission, 2025b; European Parliament, 2025). The second concerns the intensifying cooperation between the EU and NATO in terms of planning and preparing the European arm of NATO for future deployment on the continent under a European command in the event of

an attack on a Member State. President Trump's demand that European NATO members increase national defence spending to 5 percent of GDP was not unforeseen although the increase was higher than expected. Nevertheless, it may well be a necessary investment in military resources if Europe is to achieve strategic autonomy in the area of security and defence. In this vein, the German coalition government under Chancellor Friedrich Merz pledged in 2025 to borrow 500 billion euros to spend on enhancing the military capabilities of the *Bundeswehr* and upgrading Germany's infrastructure after decades of underinvestment.

In 2026, the cumulative effect of the geopolitical challenges on the international system is still diffuse and wide-ranging. A multipolar system surmises a regrouping of international power relations in which the dominance of Western powers is weakened and novel constellations of power emerge. The world's reactions to the war in Ukraine show that such a shift in power relations has already occurred, as many states in the Global South, along with India, Brazil, and South Africa, have remained neutral or only tentatively condemned Russia's actions (Dąbrowska, 2023). China's position of feigned neutrality in regard to the war in Ukraine is a case in point as its growing trade with Russia since 2022 is not only in opposition to the sanctions placed on Russia but has, in effect, prolonged the war (Düben & Wang-Kaeding, 2024). Iran also supports Russia's war efforts by providing it with Shahed drones used to attack Ukrainian cities, armed forces, and infrastructure. From the perspective of these states, Russia's war in Ukraine is inscribed in a broader context as part of a struggle against the West, in particular the US, whereby supporting Russia, economically, strategically, and diplomatically, they can join forces to shape a multipolar world order. A concrete example is the Shanghai Cooperation Organization whose summit in Tianjin in September 2025 turned out as a show of force of autocratic rulers which had before the summit been dubbed an 'axis of upheaval' in the Western media (Kendall-Taylor & Fontaine, 2024). Although the summit agreed on few concrete measures, it was a striking display, whether true or feigned, of unity and an extraordinary restitution of the international status of Russia and its leader, Vladimir Putin.

For the EU, the shift towards a multipolar system with geopolitical overtones primarily affects how the Union will continue to operate within international organisations and in global arenas, how it will seek to build partnerships and promote international cooperation, and how it will navigate the rivalry between the US and China. The EU's ability to lead on

issues where Europe has traditionally had a high profile, for example in international climate policy and in the promotion of human rights and democracy, is being questioned more and more by states that have long considered the EU's attitude towards them to be disparaging and that now see China as an alternative partner. More recently, Western alliances have suffered under the actions of the US President, be it NATO, AUKUS (Australia, UK, and the US), the Five Eyes (Australia, Canada, New Zealand, the UK, and the US), or the Quad (Australia, India, Japan, and the US). Likewise in the case of long-standing formal bilateral alliances between the US and Japan, South Korea and the Philippines, but also Taiwan which has long counted on an informal, albeit ambiguous, diplomatic, and military support of the US, the situation has become fluid and uncertain. The vagaries of American foreign policy have put the EU, along with other traditional allies, in a difficult position to balance pressures and threats of great powers seeking to leverage their relative strengths in a geopolitical world.

ADDRESSING THE GEOPOLITICAL DILEMMA: REDUCING VULNERABILITIES AND BUILDING RELATIONS THROUGH PRAGMATIC PLURILATERALISM

Since the beginning of the 2020s, most of the EU's new measures have been launched in the area of economic policy in the shape of instruments to be deployed to mitigate geoeconomic risks. As described in the chapters by Johannes Jarlebring and Hannes Lenk in this book, the EU's toolbox has been extended with a number of new instruments, most of which are yet to be tested. It is therefore important to inquire what the likely effects of these instruments might be. An international system characterised by geoeconomics entails that economic instruments can be used offensively to produce influence, loyalty, and material benefit, or defensively to counter a state's vulnerabilities and preserve its resources. Positive instruments related to trade include various measures to facilitate economic exchange, such as tariff reductions and export subsidies, while related to capital, they include various measures to provide strategic support for domestic industry to favour industrial production, further advance technology, and deepen the domestic market; while if directed to external actors they refer to various development aid schemes and outward investment. Negative instruments deployed domestically aim to protect the market and

economic capabilities, including investments in proprietary technology, manufacturing, and the mining of raw materials to elude choke points and vulnerabilities. Negative instruments deployed abroad include sanctions, such as export controls and export prohibitions (boycotts and export bans), as well as customs duties (tariffs) and import quotas (see, for instance Baldwin, 1985; Helwig & Wigell, 2022). In real life, however, this ideal-type categorisation does not prevent states from combining these instruments in their actual policies in ways they believe will safeguard their national interests most effectively.

The Draghi report (2024), ‘The Future of European Competitiveness’, highlighted the EU’s dependencies on the import of critical raw materials and advanced technologies. The EU is to approximately 40 percent dependent on such imports, of which half are with countries with which the EU is not politically or economically aligned. The EU’s dependency on critical raw materials has become a problem in regard to China, which is dominant not only in the extraction and production of critical raw materials but also in the supply of technologies and machinery necessary for the EU’s green conversion, an area in which the EU used to have a technological advance in certain sectors, but has now fallen behind (Draghi, 2024, 54–56). The Draghi report also signalled that the EU’s dependency on critical raw materials risked engendering price volatility, which could hamper investment decisions in Europe, for instance in regard to the opening of new mines, lead to low resilience to weather price hikes due to the lack of strategic reserves, and the weaponisation of dependencies in critical raw materials, including battery materials. For this reason, the Draghi report urged European decision-makers to develop a genuine foreign economic policy, which would combine a targeted use of its trade defence instruments against states that distort global markets through industrial subsidies with a drive to secure independent supply chains in technology and critical raw materials, and to establish industrial partnerships with third countries.

In a 2024 study, Sarah Bauerle Danzman and Sophie Meunier (2024) argued that the primary purpose of the economic security instruments deployed by the EU is to defend the single market through sanctions against foreign actors. These instruments include regulations on the screening of Foreign Direct Investments (FDI) in the EU (EU Regulation, 2019/452), on export controls (EU Regulation, 2021/821), and on foreign subsidies (EU Regulation, 2022b/2560), as well as the Carbon Border Adjustment Mechanism (EU Regulation, 2023a/956) and the

Anti-Coercion Instrument (EU Regulation, [2023c/2675](#)). According to the authors, the EU has implemented measures to stimulate resilience in European companies and other economic actors in the internal market through the Green Deal and the industrial policy initiatives for semiconductors and batteries. However, the EU has implemented fewer offensive coercive measures, which primarily fall under the outbound investment mechanisms (European Commission, [2025c](#)) and the International Public Procurement Instrument (EU Regulation, [2022a/1031](#)). Nonetheless, the International Public Procurement Instrument gives the Commission the power to investigate whether European companies are being excluded from public procurement processes in third countries, and if so, to impose sanctions on that country's economic operators when they participate in public procurement processes in the European market. The aim is to achieve a level playing field for European companies in foreign markets and prevent foreign companies operating in the EU's single market to yield returns from undue advantages.

These new instruments notwithstanding, the European Commission has in its concrete actions hitherto mainly resorted to traditional trade defence measures, notably in the dispute with China concerning the dumping of electrical vehicles on the European market. On 4 October 2023, the Commission launched an anti-subsidy investigation into electric vehicles made in China. This was the first step in a process of investigating unfair practices in the production of electric vehicles in China, subsequently sold at under-market price in Europe (Boullenois et al., [2023](#)). Despite disagreement among the EU Member States, the Commission's proposal to impose definitive countervailing duties on imports of electric vehicles produced in China was finally adopted in October 2024. China responded immediately with tariffs on goods from the EU, targeting in particular French cognac as France was seen as one of the EU Member States lending the strongest support to the Commission's actions against Chinese electric vehicles. As the tariffs were finally imposed, China demanded the EU to resolve 'the trade issue over its anti-subsidy case with Chinese electric vehicles, as such an approach aligns with the bloc's interests' and give up on 'a misguided trade protectionist measure hurting many but benefiting no one' (Yu & Nan, [2024](#), no page number). However, the Chinese government was surprised that despite a lack of consensus among the EU Member States on the imposition of tariffs the decision was adopted. The reason is that external trade is an area where the EU has exclusive competence. This implies that the European Commission

has extensive competences to conduct the inquiry and subsequent negotiations with the interested parties and that the final decision is adopted by simple majority (10 Member States voted in favour of the measure, 5 voted against, and the remaining 12 abstained) (Demarais, 2024).

In addition, the EU has taken a number of measures to diversify the supply of critical and strategic raw materials. In April 2024, the EU adopted the European Critical Raw Materials Act (EU Regulation, 2024/1252). The act aims to reduce the risks associated with overreliance on external suppliers, primarily China, by strengthening domestic supply and making the European economy and society more resilient to external raw material shocks. It sets a number of objectives for EU action, which, apart from establishing an inventory on the deposits and current production of critical raw materials within the EU, formulates a number of objectives for increasing domestic supply by 2030. In addition, the EU revised its battery regulation in 2023 with the aim of improving the sustainability and safety of the use of batteries and the recycling of batteries (EU Regulation, 2023b/1542). Already in 2017, the then-Commission Vice President Šefčovič set up the European Battery Alliance as an initiative to strengthen the EU's capacity in battery production, with the aim of promoting cooperation among stakeholders in industry, research institutions, and the financial sector to advance the conditions for domestic battery production in Europe deemed essential from a green transition, resilience, and de-risking perspective.

A recurrent theme of the EU's strategy to reduce vulnerabilities has been to diversify the supply of critical raw materials and secure robust economic relations and trade with friendly third countries. The European Commission made the external dimension of economic security a centrepiece of the European Economic Security Strategy in 2023, which at the time was directed at breaking the unbalanced trading relationship with China. Since 2025 and the inevitability of US tariffs being imposed on European imports, the European Commission has redoubled its efforts to diversify the EU's trading relations to other markets. In the mid-2020s, the EU has secured or is close to concluding trade and association agreements with a number of countries around the world, some of which are long-standing partners, such as Canada, Japan, South Korea, and Australia, while others are more recent, such as Vietnam, Indonesia, and India. A special feat for the Commission is the signing of a political agreement on a free trade agreement with Mercosur (Argentina, Bolivia, Brazil, Paraguay, and Uruguay) after many years of negotiations and various agreements with the ten South Asian states of

ASEAN. Next in sight is an agreement with the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which is one of the world's largest free trade areas. This approach, which from the EU's perspective is second best to a global free trade agreement under the framework of the WTO, is believed to be the more realistic option in an international environment marked by geopolitics. The approach has been coined pragmatic plurilateralism—an epithet that captures what can be achieved in a geopolitical world order as an alternative to the system of open and rules-based international free trade of the past.

THE QUEST FOR EUROPEAN UNITY: THE EU INSTITUTIONS AND EU MEMBER STATES

In the mid-2020s, it is important to highlight the political challenges and choices facing the EU on the one hand equipped with a more powerful economic security strategy, but on the other needing to handle the 2024 punitive import duties on Chinese electric vehicles, a continued war in Ukraine, and the difficult dilemma posed by the re-election of Donald Trump as President of the US. There are expectations directed at the EU, and in particular the EU institutions, to vigorously respond to the multitude of geopolitical challenges discussed in this chapter, but is the EU capable of responding to them?

At the time of her re-appointment in July 2024, von der Leyen launched political guidelines for the European Commission for 2024–2029, which were conveyed in terms of a number of choices that Europe must address (von der Leyen, 2024). Von der Leyen made it clear that it is crucial that the EU countries respond in unison to an uncertain international environment, because the threats and challenges they face are too great to handle on their own. Compared to her first term of office when a 'geopolitical Commission' was her motto, the second von der Leyen-Commission pledged to restore Europe's competitiveness, guarantee its security, implement the green transition, and safeguard the European social model and the values on which it is based. According to von der Leyen the EU's security would be bolstered through the realisation of the European Defence Union, and a newly established Defence Commissioner would be tasked with speeding up the coordination of the Member States' military capabilities and production of military equipment. The enlargement of the EU, in particular the accession of Ukraine, was presented as a geopolitical necessity and a question of

Europe's security. Von der Leyen made it clear that the Commission mandate was built on a belief that Europe has entered an 'age of geostrategic rivalries' and that '[T]he more aggressive posture and unfair economic competition from China, its "no-limits" friendship with Russia [...] reflect a transition from cooperation to competition' (von der Leyen, 2024). A centrepiece of the Commission strategic direction is a new economic foreign policy based on economic security, trade, and investment in partnerships, which will be implemented through economic diplomacy.

On 1 December 2024, the new leaders of the EU institutions took office. The decision to appoint Ursula von der Leyen as President of the European Commission for a second term is a sign that the EU Member States are being careful to maintain stability in the EU's leadership. Since returning to the office, von der Leyen has established good working relations with the President of the European Council, António Costas, but somewhat less so with the High Representative of the European Union for Foreign Affairs and Security Policy and Vice President of the European Commission, Kaja Kallas. In the mid-2020s, the Commission's view on the state of the world has already been tested and will undoubtedly be tested again in the context of the continued trade conflicts with China and the US, and the increasing hostilities and intensified war effort of Russia. An escalating trade war with China risks undermining the Commission's objective of promoting competitiveness in Europe at a time when Europe should also be implementing the green transition and the fallout of the 15 percent tariffs across the board on European goods imposed by the US will pose additional strain on economic growth in Europe. The EU's woes with the Trump administration have also been extended to European efforts to develop and enforce new regulatory frameworks linked to the green economy, digital services, and Artificial Intelligence (AI). President Trump has repeatedly warned the EU that regulatory milestones such as the Digital Markets Act and the Digital Service Act are nothing more than protectionist measures equivalent to tariffs directed at American digital platform companies and will therefore be punished. Moreover, the interface between the Digital Service Act and free speech became a hot geopolitical topic, when US Vice President JD Vance at his appearance at the security conference in Munich 14 February 2025 accused European leaders of suppressing free speech and promoting censorship. The biggest security threat facing Europe was not Russia or China, he said, but the 'threat from within' (Vance, 2025).

External threats and pressures notwithstanding, the most difficult challenge facing the EU is the struggle to forge unity, act in unison, and prevent internal tensions and disagreements from obstructing and delaying critical decisions. Unity has never been easy among the EU Member States, but the political developments in Europe since the beginning of the 2000s have resulted in a growing number of right-wing populist parties with a Eurosceptic agenda. As many of these parties have gained positions of direct or indirect power, by the mid-2020s some EU countries, most conspicuously Hungary and Slovakia, are ruled by pro-Russian, right-wing parties with anti-democratic tendencies which routinely impede the EU's decision-making in the area of foreign and security policy, particularly on issues linked to the war in Ukraine or China. However, right-wing populist movements are not just strong in Eastern Europe; they are playing an increasingly key role in coalition governments in a number of the established nations of the EU, such as Austria and the Netherlands, and are challenging the established parties for ultimate power even in France and Germany. In her political guidelines, von der Leyen highlighted the internal threat to the rule of law by underscoring the importance of strengthening Europe's democracy and economic model, which 'relies on the rule of law'. For this reason, the Commission pledged to protect the rule of law by making respect for the rule of law a must for EU funds and building a closer link between financial support from the EU and observance of the rule of law in the EU. Until the mid-2020s, however, EU Member States that violate its rules and erode its core values have faced minimal consequences despite repeated warnings from academics and practitioners about the corrosive effect of the contestation of the EU's fundamental values and principles for its functioning (see, for instance, Södersten, 2023). The lack of unity is glaring when some Member State representatives repeatedly threaten to block the adoption of additional sanctions on Russia or prioritise their relations with China over the unity of the EU. The Commission has signalled that it is prepared to upgrade the possibilities to use the leverage of the EU budget to safeguard the rule of law, including making use of the general conditionality regime apply to all EU funds.

CHARTING A STEADY COURSE IN STORMY WATERS: FACING THE CHALLENGES OF A GEOPOLITICAL WORLD

In a world of power politics and great power competition, the EU faces considerable challenges in defending its interests and securing the rules-based international system in line with its values and ambitions. Free trade has long been regarded as the DNA of the EU. As several authors have argued in this volume, the EU was not created to sustain power politics, rather the opposite. But the world of global free trade is now gone and the shift towards mercantilism and political transactionalism has forced the EU to adopt a number of policy choices that would have been unthinkable just a few years ago.

As this volume has emphasised, the Union has implemented a range of initiatives to address the challenges posed by an increasingly volatile international landscape. The European Commission has brought initiatives together under the umbrella of the European Economic Security Strategy (European Commission & EEAS, 2023), which aims, firstly, to break Europe's vulnerabilities in areas connected to strategic raw materials and seek the support of like-minded states to bolster the strategic supply chains and the rules-based international system through regional association and free trade agreements; and, secondly, to bolster the EU's economic security while maintaining openness in trade and welcoming investment and innovation to support Europe's economic competitiveness (European Commission & EEAS, 2023).

Despite these efforts, continued external pressure, in combination with growing challenges to the Union's internal unity, means that there is limited hope for better times ahead, at least in the immediate future. To navigate these shifting alliances and continued great power rivalry, the EU must adopt a course that limits their negative impacts. For this to become reality, the EU Member States need to act in unison and solidarity to transform the Union from a free trade union to a union that also ensures security and resistance against the worst excesses of geopolitics.

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INDEX¹

A

Act in Support of Ammunition
Production (ASAP), 137
Ammunition and shell
manufacturing, 160
Anti-Coercion Instrument (ACI), 27,
35, 36, 64, 66, 69
Artificial Intelligence Act (AI Act),
27, 38, 43

B

Biodiversity loss, 203–205,
207, 209, 212–214,
218–226
Biodiversity Strategy 2030, 207,
208, 213
Brussels Effect, 28, 29,
33, 35, 40

C

Capacity-building, 205, 221, 223–225
Carbon Border Adjustment
Mechanism (CBAM), 27, 37, 38,
43, 60, 65, 66, 68, 70
China, 49, 54–60, 62, 63, 68, 70, 71,
260–263, 265–269, 271, 272
Chips Act, 65, 66, 68, 69
Climate change, 203–207, 209–212,
215, 216, 218, 220, 223–226
Climate neutrality, 204, 207, 208
Common commercial policy (CCP),
52–54, 65, 67–69
Competitiveness, 1–3, 8, 10, 11, 16,
18, 270, 271, 273
Corporate Sustainability Reporting
Directive (CSRD), 205, 214–223
Crisis integration, 132, 135
Critical Medicines Act, 180, 196

¹ Note: Page numbers followed by ‘n’ refer to notes.

Critical raw materials, [233](#),
[235](#), [247–248](#)

Critical Raw Materials Act (CRMA),
[65](#), [68](#), [69](#)

Cybersecurity, [188](#)

D

Defence, [263–265](#), [268](#)

Defence industry, [10](#), [11](#), [14–16](#), [135](#),
[136](#), [138–141](#), [144](#), [152](#), [153](#),
[155](#), [156](#), [158](#), [162](#), [163](#), [165](#),
[166](#), [168](#)

Defensive and offensive trade
instruments, [63](#), [70](#)

De-risking, [67–69](#)

Development strategy, [92](#)

Digital Markets Act, [271](#)

Directorate-General for Defence
Industry and Space (DG
DEFIS), [135](#)

Directorate-General for Health
Emergency Preparedness and
Response Authority (DG HERA),
[180](#), [184](#), [185](#)

Disinformation, [179](#), [185](#), [189](#)

Draghi report, [26](#), [36](#), [267](#)

Dynamic capabilities, [152](#), [154–156](#),
[165](#), [167–169](#), [172](#)

E

Ecological footprint, [236](#), [237](#)

Economic coercion, [60](#), [61](#), [64](#), [67](#), [69](#)

Economic security, [49](#), [61](#), [67–69](#)

Economic statecraft, [26](#), [28](#), [30–33](#),
[35–37](#), [39](#), [42](#), [57](#), [62](#)

Eighth Environment Action
Programme, [249](#)

Emissions trading system (ETS),
[119](#), [122](#)

Energiewende, [121](#)

EU Circular Economy Action Plan,
[235](#), [238](#)

EU climate policy, [204](#), [206](#)

EU external action, [179–198](#)

EU regulation, [28](#), [29](#), [37–39](#)

European Commission, [3](#), [5](#), [8](#), [10](#),
[12–14](#), [132–139](#), [141](#), [144](#), [260](#),
[261](#), [263](#), [264](#), [268–271](#), [273](#)

European defence, [3](#)

European Defence Fund (EDF), [134](#),
[135](#), [143](#)

European Defence Industry
Reinforcement Procurement Act
(EDIRPA), [137](#)

European Economic Security Strategy,
[8](#), [269](#), [273](#)

European Green Deal, [102–105](#), [111](#),
[113](#), [116](#), [117](#), [121–122](#), [204](#),
[205](#), [207](#), [213](#), [218](#), [221](#), [223](#),
[234](#), [235](#)

European Health Union, [185](#),
[188](#), [190](#)

European integration, [1–18](#), [132](#), [144](#)

European Investment Bank (EIB),
[103](#), [112](#)

European Union (EU), [1–18](#),
[49–71](#), [259–273](#)

EU strategic autonomy, [153](#),
[162](#), [169–171](#)

EU Sustainability Reporting Standards
(ESRS), [205](#), [214](#),
[216–218](#), [220–224](#)

EU Taxonomy, [205](#), [214–216](#),
[218](#), [224](#)

Externalisation, [28](#), [31](#), [33](#), [35](#),
[37–40](#), [42](#), [43](#)

G

Geoeconomic order, [49–71](#)

Geoeconomics, [2](#), [5](#), [12](#), [49–54](#), [57](#),
[58](#), [60](#), [61](#), [63–71](#)

Geopolitical pivot, 26, 27, 31–34, 36
 Geopolitics, 2, 4–6, 259–266, 270, 273
 Geopolitisation, 31, 34
 Global Gateway, 190–192, 194
 Global Health Strategy, 181, 185,
 189–192, 194, 195, 197
 Global order, 59
 Global supply chains, 55, 60
 Green Deal Industrial Plan, 65, 66, 69
 Green industrial policy, 101–122
 Green transition, 1, 10, 11, 14, 104,
 116, 117n3, 120n5, 121, 122

H

Health security, 182, 183, 185, 187,
 190, 193, 194, 197
 H2 Green Steel / Stegra, 112
 HYBRIT project, 111, 112

I

Industrial policy, 51, 52, 56, 77–97
 Inflation Reduction Act (IRA), 9, 116
 Innovation policy
 first-generation, 115
 second generation, 115
 third-generation, 115
 Internal market, 25, 26, 29, 30, 32,
 39, 40, 43

J

Juncker, Jean-Claude, 260, 261

L

Letta report, 26, 40
 Life-cycle perspective, 239, 240, 248,
 250, 252
 Lobbying and rent-seeking, 108, 121

M

Market power, 25–43
 Mazzucato, Mariana, 102, 110
 Messianic legitimisation, 83,
 92, 95
 Mission-oriented innovation policy,
 102, 107
 Moral hazard, 102, 110, 118
 Multilateralism, 49, 63, 67, 71,
 187, 194
 Multi-level governance, 250, 252

N

NATO, 4, 7, 10, 15,
 139–141, 143–145
 Nature restoration law, 214
 Neofunctionalism, 182,
 183, 197
 Net-Zero Industry Act
 (NZIA), 116
 Northvolt, 102, 112

O

One-Health, 190
 Open strategic autonomy (OSA),
 34–35, 50, 67–70
 Organisation for Economic
 Co-operation and Development
 (OECD), 109

P

Pandemic preparedness, 183, 183n1,
 185, 188, 193, 195
 Pharmaceuticals, 184, 197
 Policy instruments, 204, 205, 209,
 212, 214, 216, 218, 219,
 221–223, 225
 Political capitalism, 109, 122

R

ReArm Europe Plan, 138
 Recycling, 234, 235,
 239–243, 245–252
 Regime vetting, 30, 38
 Regulatory compliance, 224
 Regulatory regimes, 28, 29, 35,
 37, 39, 40
 Resource stewardship, 234, 238,
 249, 252–253
 Russia, 132, 135, 136, 139–142, 145,
 260, 261, 264, 265, 271, 272

S

Sanctions and incentives, 63, 66, 70
 Securitisation theory, 183, 184
 Security, 1–3, 5, 6, 8–14, 16, 18
 Single-use plastics, 244, 245
 State aid, 104, 105, 113, 117,
 119, 121
 Strategic autonomy, 11, 12, 15,
 16, 50, 65, 67, 68, 180,
 181, 187–188, 190,
 196, 197
 Strategic Compass, 136
 Strategic competition, 66
 Strategic partnerships, 189,
 191–193, 197
 Supply-chain resilience, 66, 160
 Sustainability reporting, 205, 216,
 217, 219, 220, 223, 225
 Sustainable Products Initiative, 239

T

Team Europe, 189, 193–194, 198
 Technological sovereignty, 61, 62,
 66, 68, 70
 Temporary Crisis and Transition
 Framework (TCTF), 104, 104n2,
 112, 116
 Trade agreements, 269, 270, 273
 Trump, Donald, 3, 7, 9
 Twin crises, 203–205, 209–212, 226

U

Ukraine, 3, 5–7, 10, 14–16,
 132, 136–144
 Ukraine war, 154, 158, 168, 172
 UN Sustainable Development
 Goals, 236
 United States (US), 50–52, 54–57,
 71, 260, 261, 263–266, 269–271

V

Vaccine diplomacy, 189, 192
 von der Leyen, Ursula, 8, 207, 208,
 223, 225, 261, 270–272

W

Waste, 234, 235, 238, 239,
 244–246, 248–252
 World Trade Organization (WTO),
 261, 270