Report

Europe in the Era of Geoeconomics

Rebalancing Trade, Boosting Innovation

WRR

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Europe in the Era of Geoeconomics: Rebalancing Trade, Boosting Innovation is a government advisory document prepared on behalf of the full Netherlands Scientific Council for Government Policy (Wetenschappelijke Raad voor het Regeringsbeleid, WRR).

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THE NETHERLANDS SCIENTIFIC COUNCIL FOR GOVERNMENT POLICY

This publication is a translation of WRR Report 115 *Strategisch handelen: Beleid voor een geopolitieke economie*. The Council presented this report to the Dutch government on 27 August 2026.

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Preface

This publication is a translation of the Dutch report 'Strategisch handelen: Beleid voor een geopolitieke economie', published by the Netherlands Scientific Council for Government Policy (WRR). The report was written by a project group led by Ab Klink (Council Member). The project group also comprised Maarten Lindeboom (Council Member), Josta de Hoog (project coordinator), Bart Stellinga (research fellow) and Haroon Sheikh (research fellow). At an earlier stage, the project group also included Sander Gerritsen (research fellow), as well as Emma Ravenhorst, Thijmen Vernède and Thom Scheltema (interns). Maurits van IJsendoorn, Mitra Javanmardi and Magda de Wit provided valuable support.

The report was prompted by a motion adopted by the Dutch House of Representatives, which called for the WRR to advise on the relationship between government, society and the market in the light of a number of major societal transitions.[1] This motion led to an official request for advice by the Dutch Minister of Economic Affairs.[2] The WRR opted to focus on the geopoliticisation of economic relations, as this development has called into question many aspects of our approach to the market, the state and society and raises highly pressing questions for both Europe and the Netherlands.

Many people have been willing to share their knowledge and insights with us, to whom we are very grateful. Their names are listed in the appendix to this report. In the final phase of the project, a draft version of the report was reviewed by Sander Tordoir (Centre for European Reform) and Stephan Raes (OECD). We would like to thank them for their comments and valuable suggestions.

[1] Parliamentary Paper (*Kamerstuk*) 29 023, no. 471.
[2] Appendix to Parliamentary Paper (*Kamerstuk*) 29 023, no. 523.

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Summary

We live in an era of geoeconomics – we are witnessing a geopoliticisation of economic relations. Where mutual economic dependencies were previously seen mainly in a positive light, they are now more often deployed for geopolitical leverage. The European Union is particularly vulnerable in this situation. Europe is dependent on the US and China in many key areas, but there are fewer vital dependencies the other way around. While the urgency of this issue is widely felt, Europe's dependencies are not actually diminishing. This is the result of two underlying dynamics: (1) the global innovation race and (2) growing imbalances in international trade.

The global innovation race

A global innovation race is underway, which is seeing not only companies compete with each other, but also countries and their innovation systems. This is especially the case for critical technologies that are of vital importance to society, such as in the fields of digital services and energy. For many of these technologies, the economies of scale are immense due to high R&D costs, high start-up costs and the required knowledge and skills. This means that once a lead has been established, it is not easy for others to catch up. Companies and countries therefore have a strong interest in reaching and remaining at the forefront.

For a long time, the US was the clear frontrunner in technology, but it has since been overtaken by China in several areas. Both countries have robust innovation systems, with many differences of course, but they also share a number of key features. Firstly, there is the combination of direction and orchestrated competition, whereby the government continually challenges companies to innovate. Secondly, there is a focus on the entire value chain – from suppliers to end markets – and the surrounding ecosystem. This includes raw materials, energy and infrastructure. Finally, these countries can be highly strategic vis-à-vis foreign companies.

Growing imbalances in international trade

We are also confronted with major imbalances in international trade. The US runs a huge trade deficit, while China has a massive surplus in goods exports. This enormous surplus is no coincidence; it is the result of an economic strategy that relies heavily on exports. There are three underlying factors that help explain the surplus:

– Low domestic demand: This is partly due to low wages and partly due to the fact that households save a relatively large share of their incomes, given limited public provisions for healthcare and pensions.
– High state subsidies: The OECD estimates that Chinese companies receive on average three to eight times more industrial subsidies than companies in OECD countries. The organisation itself describes this as a conservative figure. These state subsidies account for a large share of the growth in global market share of Chinese companies.
– The undervalued yuan: China's currency – the yuan – is estimated to be undervalued by between 12% and more than 30%, which gives the country a significant competitive advantage. The exchange rate is actively managed by the Chinese central bank and major state-owned banks.

Consequently, a great deal of Europe's industrial sector has come under pressure, with studies showing that Chinese companies offer products that are more than 30% cheaper than European products. This makes it almost impossible for European companies to compete with Chinese ones, with economic dependencies likely to increase even further as a result.

The challenge for Europe

Europe is faced with a major challenge. The two largest economies in the world – the US and China – are increasingly deploying economic dependencies as an instrument of geopolitical power. Europe is vulnerable owing to the vital dependencies it has on these two countries. Although our awareness of the situation is growing, our dependencies are not decreasing; if anything, they are growing even further. Consequently, a robust response is required.

That is no easy task; in fact, it is a challenge at four different levels.

– At the level of assumptions: we need to look at the global economy through a different lens than the one we have used in recent decades. If we stick to the previously dominant liberal world view, we will fail to tackle the challenges that lie before us.
– At the level of institutions: we need institutions capable of greater direction and control, while remaining responsive to a changing environment.
– At the level of international cooperation: how do we choose our partners in this fragmenting world order and how do we deal with a multilateral trade order that is becoming less and less effective?

– At the level of instruments: we do not have the policy instruments needed to deal effectively with this situation – not at the international level, nor at the European or national level.

Key takeaways

Because the geopoliticisation of economic relations is an issue that challenges so many of our fundamental assumptions – both in our thinking and in our institutions – there is no immediately obvious answer. Our response will have to be developed step by step, in close cooperation with other countries. In the report's final chapter we discuss potential ways forward and the key considerations behind them. Four main messages emerge from this.

1. **Industrial policy is important, but by itself not enough to tackle strategic dependencies. Formulate a strategy that addresses both trade imbalances and innovation.**

In European policy debates, the global innovation race is often front of mind – and with good reason. However, focusing only on industrial policy and competitiveness in an effort to keep pace in the global innovation race, without addressing the dynamics of growing trade imbalances, has major shortcomings. Europe risks spending large sums of public money and jeopardising key European values and ambitions in areas such as privacy, working conditions and climate policy, without actually reducing its critical dependencies. Certainly, a strong industrial policy is crucial. China and the United States are advancing rapidly in technology, supported by powerful innovation systems. In today's increasingly geopolitical world, in which economic dependencies are more often deployed as instruments of geopolitical power, it is important to strengthen our position in critical technologies. The first key takeaway from this report is that both are needed: a response to trade imbalances and a commitment to a strong European innovation system.

2. **Doing nothing also comes at a high price. Therefore, to address trade imbalances, all options need to be on the table, even if they are painful.**

Large parts of the European industry are under pressure. In Germany, we have already seen this result in large-scale job losses. Under the current circumstances, doing

nothing also comes at a high price. If we do not act, our dependencies will only worsen, and we will be hit hard economically. A strong response would also come at a price: government support will be needed, trading partners may retaliate and prices could rise. These drawbacks have, thus far, discouraged the EU and its Member States from formulating a robust response. But the costs must be weighed against the potential damage of geoeconomic coercion, trade shocks and long-term economic costs. All policy options must therefore be seriously considered, even if they are painful.

3. **Europe is lagging behind when it comes to applying and scaling up technological innovations. Commit to a coherent European innovation system.**

Limiting our high-risk dependencies requires a strong European innovation system. While China and the US have coherent innovation systems, the European system is still fragmented and lags behind in scaling up and bringing technological innovations to the market. We need a consistent policy across the different stages of the innovation cycle – from breakthrough innovations to market introduction. At the moment, the European Union and its Member States find themselves caught in a mutual constraint. Member States are limited in the scale they have, the financial support they can provide and the conditions they can impose. But the European Union is also limited in its budget and powers, which means that a fully fledged European industrial policy fails to get off the ground. It is critical that we break this deadlock.

4. **The world as we knew it no longer exists. Dare to think outside existing frameworks.**

Europe has benefited greatly from a world of free trade governed by international agreements. However, the pillars of this post-war multilateral trading order are crumbling. This changing reality is not something that we can afford to ignore. Now that the world has fundamentally changed, it is important to reconsider entrenched perspectives on trade policy, industrial policy, government intervention and competition. If we fail to do so, do too little or wait too long, we run significant risks. Only by daring to think beyond conventional approaches can we build a prosperous future for Europe.

1. Introduction

In 2019, the United States successfully pressured the Dutch government not to allow ASML to export certain advanced chip-making machines to China. In 2023, restrictions were expanded to less advanced machines, again reflecting American requests. In September 2025, the Dutch government invoked a law from the 1950s to intervene in chip manufacturer Nexperia – a company that had been under Chinese control since 2019 and whose CEO's actions raised concerns about the security of supply of chips in Europe. This created enormous tension with the Chinese government, which retaliated with export restrictions that subsequently severely affected other European (especially German) producers. In spring 2026, Solvinity – a cloud company that hosts citizen identity data for key government services (DigiD) and data for the criminal justice system – was about to be acquired by an American company, which could have resulted in the data becoming accessible to the US government. The Dutch government's Investment Screening Bureau (*Bureau Toetsing Investeringen*, BTI) recommended that the takeover be blocked, a recommendation subsequently adopted by the Ministry of Economic Affairs. In June 2026, the US government prohibited the use of the latest AI models outside the United States.

These are a few examples of a new reality: the geopoliticisation of economic relations. Whereas mutual economic dependencies were previously seen mainly in a positive light, they are now more often deployed for geopolitical leverage. Economic relations have thus become part of the geopolitical arena. The European Union is particularly vulnerable, because Europe is dependent on the US and China in key areas, while reverse dependencies are significantly lower. This puts Europe in danger of having its critical dependencies weaponised against it and making it a pawn in a more geopolitical global economy.

It is this theme that the Netherlands Scientific Council for Government Policy (WRR) highlights in this report: the geopoliticisation of economic dependencies and what it implies for EU policies. This is often discussed under different headings, including strategic autonomy, sovereignty, economic security, supply chain resilience, de-risking

and dual circulation.[3] Rather than taking any one of these as our focal point, the report takes the geopoliticisation of economic dependencies as its core theme.[4]

There is growing awareness of how pressing this issue is becoming, but the response is slow to materialise: Europe's critical dependencies have not diminished, and may have even increased.[5] Addressing this problem requires understanding of two underlying dynamics: (1) the global innovation race and (2) growing imbalances in international trade. These issues are often discussed separately, but devising an adequate response requires us to understand how interconnected they are.

In policy debates in Europe, the global innovation race is often front of mind – and with good reason.[6] However, focusing solely on industrial policy and competitiveness in an effort to keep pace in the global innovation race, without addressing the dynamics of growing trade imbalances, has major shortcomings. European governments not only risk spending vast amounts of money, but also jeopardising key European values and ambitions in areas such as privacy, working conditions and climate policy – without actually reducing our critical dependencies. Of course, a solid industrial policy must be part of the solution; otherwise, Europe is in danger of falling irreversibly behind in key technologies, with far-reaching consequences for its strategic autonomy.[7] But the key takeaway from this report is that neither industrial policy nor a response to trade imbalances will suffice on their own – rather, both are needed.

This report is structured as follows. Chapter 2 discusses the geopoliticisation of economic dependencies and Europe's vulnerability within this context. Chapter 3 covers the global innovation race, while Chapter 4 describes the international trade imbalances. In Chapter 5, we examine just how fundamental these developments really are and why they are so difficult to address. Finally, Chapter 6 concludes this report by offering suggestions on how to address global trade imbalances and how to develop an effective industrial policy.

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[3] The latter is central to China's strategy, as we will see later.
[4] This report addresses only the geopoliticisation of economic relations. Issues related to strategic military autonomy are not within the scope of this report.
[5] See Spohr 2026; Chimits 2024.
[6] See Draghi report 2024; Wennink report 2025. There is growing recognition of the imbalances in global trade. See Lombardelli & Cesa-Bianchi 2026; Cesa-Bianchi et al. 2026a; IMF 2026a; Rey et al. 2026; Jochheim 2026.
[7] See Hagelüken 2026.

2. The geopoliticisation of dependencies and Europe's vulnerability

Global production chains and the mutual economic dependencies they create have long been viewed primarily in a positive light. They contribute significantly to our economic prosperity, as they enable countries to specialise in economic activities. And, for a long time, the idea was that they also contribute to our security, since countries that are economically interdependent are less likely to engage in conflict. Recent years have shown, however, that these economic dependencies can also be deployed as a geopolitical weapon.[8]

This is not just an imaginary scenario or theoretical risk. The Chinese government has already used its raw materials exports as a geopolitical instrument on a number of occasions, such as in 2010 following an incident with Japan concerning the East China Sea and, more recently, in 2025 in response to the tariffs announced by US President Trump. The motivations for exploiting economic dependencies can also lie at the intersection of geopolitics and economics, as illustrated by the case of Northvolt and the export of graphite to Sweden (see Box 2.1). This case also shows how foreign governments can use the dependencies that have emerged to hamper European efforts to achieve greater independence.

Box 2.1 Northvolt and graphite exports to Sweden

In 2015, Northvolt was set up in Sweden with the aim of developing a strong position in the field of lithium-ion batteries. A factory was built in Skellefteå, a city in northern Sweden with ample hydroelectric power available. Soon the company was seen by several governments as a potential challenger of Chinese companies (notably CATL and BYD) that dominated the lithium-ion battery market.[9] Several governments provided financial support to Northvolt.

[8] Farrell and Newman (2019) referred to this development as 'the weaponisation of interdependencies' in an influential article. See also Mampuys et al. 2025 for more detail. For earlier perspectives on the global economy as an interstate power struggle, see Gilpin 1987; Luttwak 1990; Mastanduno 1998.
[9] Ragonnaud 2025.

At the same time, however, Northvolt relied heavily on Chinese expertise, technology and materials[10], as Europe lacked the skills for large-scale battery manufacturing.[11] This meant that there was a strong reliance on foreign labour, with hundreds of Chinese workers working in the Skellefteå factory to install and operate a substantial part of the machinery.[12] Moreover, the company was also highly dependent on China for raw materials. In 2020, China restricted exports of graphite – a crucial raw material – to Sweden. Initially, this export restriction was linked to China's dissatisfaction with a prize being awarded by PEN Sweden, an organisation that champions freedom of expression, to Gui Minhai, a publisher and dissident who is imprisoned in China. Later, it was suspected that it was a more geoeconomically motivated measure intended to hamper European battery production.[13] Although support for European battery production was partly driven by a desire to become less dependent on Chinese producers, the dependency in certain areas – Chinese expertise, technology and materials –was already such that it hampered European production.

Northvolt ultimately faced multiple problems: production delays, poor-quality batteries, high costs and reduced demand for EV batteries. In November 2024, the company filed for bankruptcy.

It is certainly not just the Chinese government that uses economic dependency as a weapon in the geopolitical arena. The US government has repeatedly put the Dutch government under a significant amount of pressure to restrict the export of certain advanced ASML machines to Chinese companies. Moreover, the US Congress is currently working on a bill that would restrict the maintenance of ASML machines already operating in China.[14] Significant dependencies from the US exist in the field of digital services, which have already been used. Microsoft blocked email access for Chief Prosecutor Karim Khan of the International Criminal Court (ICC) in The Hague, which was seen as a wake-up call for many organisations.[15] Several ICC judges had access to their credit cards and other international payment systems frozen due to US sanctions, because the US government disagreed with decisions made by the court.[16] In December 2025, the US government threatened to impose sanctions against the entire ICC unless

[10] Ragonnaud 2025 also mentions dependence on South Korean workers and technology.
[11] Bellandi et al. 2025.
[12] Researcher Christian Sandström claims that the Chinese technology used was inadequate and even suggests that there was a certain degree of 'industrial sabotage'. See Sandström 2026.
[13] The Economist 2023.
[14] This concerns the Multilateral Alignment of Technology Controls on Hardware (MATCH) Act. See Van Gerven 2026.
[15] Hartholt 2025.
[16] Van Straaten 2026; US Department of State 2025a.

Trump and his top officials were given immunity from criminal prosecution. The sanctions would prohibit US companies from supplying to the ICC, which largely relies on IT equipment and services from American companies. This prompted the Court to print out files and pay employees' salaries several months in advance as a precaution.[17]

The use of economic dependencies as a geopolitical weapon has therefore become a real risk.[18] It can have a variety of harmful consequences. It can lead to a disruption of access to goods, services and infrastructure that are crucial for the functioning of the economy and society. This is accompanied by wider economic risks, such as production delays and downtime. In addition, there is the possibility of policy influence and coercion, given that economic dependencies can be leveraged by foreign governments to make strategic demands. Additionally, the governments and companies on which we depend can have very different views on individual freedoms and democracy – and some openly advocate curbing or dismantling democracy. Certain tech leaders in Silicon Valley believe that man must be tamed and controlled.[19] In short, the fact that countries and corporations are increasingly exploiting global economic dependencies as a geopolitical weapon entails considerable economic, political and social risks for Europe.

What makes the situation different from the geopolitical tensions during the Cold War is that the economic links between geopolitical rivals are currently much greater. The nature of trade has also changed: whereas global trade in goods was once dominated by final products, intermediate goods now represent a major part of trade. Global production chains have developed in many areas. We should note, however, that the different stages of many chains are often concentrated in a few countries or in a region rather than being truly global.[20] For the production of advanced semiconductors, for example, dozens of countries play an important role, but ultimately a small number of companies in Taiwan and South Korea form the indispensable link. The situation is similar when it comes to the most advanced chip machines: while an enormous number of companies are involved in producing these machines, it is ultimately the Dutch giant ASML that plays a pivotal role.[21] Global and complex production chains therefore go hand in hand with a dependency on a number of indispensable links, often called control points or choke points. If anything goes wrong at one of these points, or if one of

[17] Van Straaten 2025.
[18] See also Netherlands Scientific Council for Government Policy 2013.
[19] Sheikh 2026.
[20] The WRR describes this development in more detail in its report *Naar een lerende economie* (Towards a learning economy) (Netherlands Scientific Council for Government Policy 2013). See also Cattaneo et al. 2010 and Krugman 1991 & 2011.
[21] Miller 2022; Hijink 2024.

these links is geopolitically exploited, the consequences for the whole chain are enormous. Such indispensable links are ubiquitous in today's global economic structures. As the influential economist Paul Krugman said, ' (…) there are potential choke points everywhere you look'.[22]

Of course, not all dependencies – not even all choke points – are a problem; the concerns mainly revolve around strategic dependencies. To determine whether a dependency is a strategic dependency, four criteria are commonly used: (1) How significant the import is to society: it must concern vital goods and services, or components thereof, whose limited access would cause significant economic or social damage. (2) How great the dependency is: is the import procured from a limited number of countries or indispensable suppliers? (3) How large the risk of disruption is: in which countries are the suppliers based and is there a real prospect that the dependency will be geopolitically exploited? (4) Whether a disruption can be promptly resolved, for example through available reserves or substitution.

The geopoliticisation of global economic dependencies affects almost every country – Europe included, and particularly so. Analyses of the situation in the EU uncover major critical dependencies in energy, critical raw materials, and digital products and services.[23] For example, more than half of fossil-fuel energy is being imported from outside the EU.[24] As for clean tech – solar panels, wind turbines and lithium-ion batteries, which are crucial for electric cars and energy storage – the EU is highly dependent on China. Over the last decade, global solar panel production has shifted from Europe, Japan and the US to China, which now has a global market share of over 80%.[25] There are also major import dependencies with regard to critical raw materials. Chinese companies dominate the market for extracting and processing many raw materials that are indispensable for the production of clean tech and digital products. When it comes to digital services, there are major dependencies in software and cloud services, with the largest suppliers being based in the US. For cloud services, European households, businesses and governments are almost entirely dependent on three major US technology companies: Amazon, Google and Microsoft.[26]

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[22] Krugman 2026a.
[23] See Arjona et al. 2023; García-Herrero et al. 2023; DenkWerk 2026; Berg & Meyers 2025; Ferreira Gomes et al. 2026.
[24] ECB 2023: 45-46.
[25] International Energy Agency 2022.
[26] Sheikh 2024.

Europe has a number of significant choke points itself. The best-known examples are chip machine manufacturer ASML and German company ZEISS, which makes the lenses and mirrors for those machines. Europe also has a strong position vis-à-vis China and the US in certain pharmaceutical products.[27] Moreover, access to the European market may be considered a major strategic weapon. At the same time, China is less dependent on vital goods and services from the EU than the other way around.[28] Moreover, dependencies on China are still increasing sharply in the short term.[29] Europe also depends on the United States more than the other way around.[30]

The new strategic interdependencies in this geopolitical world often involve high-tech products and high-tech production chains. These products can comprise hundreds of components, manufactured in long global production chains and subject to profound concentration at certain stages. This means that gaining and maintaining an upper hand over these products have become a matter of economic security. When it comes to these critical technologies, it is therefore no longer just a matter of competition between companies, but also competition between states. This is why states are engaging so prominently in the international innovation race.

In essence, international economic dependencies have become geopoliticised. Europe is particularly vulnerable in this regard. Despite the growing awareness of this problem, Europe's dependencies are not diminishing. To understand this, it is important to grasp the two underlying dynamics, which are (1) the global innovation race and (2) the growing imbalances in international trade. We will discuss these in the following two chapters.

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[27] See Sultan & Mattes 2025; Sigl-Glöckner et al. 2026; Geostrategic Europe Taskforce 2026; Teer et al. 2025.
[28] Lefebvre & Wibaux 2024; ECB 2025: 85.
[29] ECB 2025.
[30] Meijerink et al. 2024.

3. The global innovation race

A global innovation race is underway, which is seeing not only companies compete with each other, but also countries and their innovation systems. The two largest economies in the world, the US and China, are at the forefront of technological developments, and it is these two countries on which the EU is most dependent.[31] Both countries, moreover, have already shown that they are willing to weaponise these dependencies. This is why this chapter focuses specifically on their innovation systems.

3.1 The Chinese innovation system

China has seen spectacular economic development in recent decades; never before has such a large country experienced such high economic growth for so long. The country has managed to steer its economy from cheap manufacturing towards high-quality production and innovation, becoming a frontrunner in many technologies such as batteries, electric vehicles, solar panels and 5G telecom networks. To some extent, China's economic development can be considered catch-up growth, but on top of that, China has developed a very powerful innovation system.[32] This system is characterised by several key features: (1) a combination of direction and competition; (2) a focus on the entire value chain, from suppliers to end markets; and (3) selective access for foreign companies.[33]

Combination of direction and competition

Some in the West still view China as having a centrally controlled economy akin to that of a traditional communist regime. Conversely, others believe that it has developed into a capitalist market economy very similar to that of the US or countries in the EU. However, both of these assumptions are incorrect. In fact, China has its own system that combines state direction with a strong emphasis on competition, a system which is not always immediately recognisable to Western observers.[34] One core aspect of this strategic direction is China's major development plans. The penultimate five-year plan from 2020 introduced the concept of dual circulation. This means that China is moving fully away from foreign dependencies in vital sectors of the economy (internal circulation), while at the same time seeking to secure a crucial position in vital global

[31] Ülgen 2026.
[32] Of course, the elements of this have also evolved and changed over time (see Naughton 2021).
[33] The description of the Chinese innovation system is based on Ang 2026; Boullenois et al. 2026; Breznitz & Murphree 2011; García Herrero & Schindowski 2024; Heilmann 2008; Heilmann 2018; Lan 2024; Tsai & Lin 2022; US-China Economic and Security Review Commission 2025; Xu 2011; Yang & Li 2026; Zenglein & Gunter 2023.
[34] Heilmann (2008) refers to this as *experimentation under hierarchy*.

value chains (external circulation).[35] The recently published 15th five-year plan also places great emphasis on technological innovation, reducing dependence on foreign technology, greening and industrial self-sufficiency.[36] The influential *Made in China 2025* document published in 2015 identified 10 sectors (such as telecommunications, semiconductors and satellite technology) in which China was to become a leading producer.

These plans may suggest a purely top-down approach, but that would be a misconception. They set out the overall objectives, but the concrete details of these objectives and the steps to achieve them are deliberately left open.[37] This leads to competition at various levels to achieve these goals: between companies (public and private), but also between municipalities and between provinces. Local authorities compete to gain national hub status, which comes with access to additional capital.

Regions and their industries actively drive industrialisation and innovation. When the innovations and capabilities envisaged in a given sector are well developed, a form of consolidation takes place. This is an iterative process that involves setting goals and stimulating and consolidating innovation, but it does bring with it the downsides of overproduction. This is why the central government seeks to gain more control of the process and now increasingly organises competition as a method for gaining access to specific, innovation-focused government budgets, with gradually escalating product requirements – in order to drive innovation forward.[38]

Another aspect of state direction is the steering provided through large-scale financing, in the form of subsidies and loans. This funding not only comes from the Chinese state; Chinese banks and other capital providers also follow the central government's policies. China also steers its economic development through direct involvement in businesses. There are still many state-owned companies, while private companies often have party members on the board. Companies that diverge too far from national policy may even face punitive measures.[39] In addition, policymakers are closely involved in the dynamics of a specific market: rules that hinder innovation and upscaling are quickly identified

[35] Allen 2023.
[36] Grünberg & Davey 2026.
[37] This is known as slogan politics: Beijing develops vague slogans such as 'Belt and Road Initiative' or 'harmonious society' whose meaning is unclear, leaving their interpretation to companies and local authorities (Zeng 2020).
[38] However, these specific production requirements may also have unintended consequences. By way of example, an increase in the energy density of batteries under China's NEV grant scheme led to an increase in reported battery failures (Chen & Chen 2025).
[39] Von Carnap & Tan 2021. This happened with the CEO of Alibaba, Jack Ma, who criticised the financial supervision in the country. He was subsequently banned from making public appearances for a while and his companies (such as Ant Financial) were also subject to restrictions at the time.

and adjusted.[40] This responsiveness is enhanced further by competition between local authorities.[41]

Focus on the entire value chain, from suppliers to end markets

A second feature of China's innovation policy is that it takes into account the whole value chain – from production inputs to market demand – and the pre-conditions required for it, such as proper infrastructure. The policy focuses not only on the companies in prioritised sectors, but also on the surrounding activities needed to make a given sector a success.

For example, the Chinese government invests heavily in infrastructure, so that the roads or energy grids are in place. In addition, it invests in locations where ecosystems of technology and companies can emerge. Another part of the strategy is ensuring that sufficient talent is available, educated both domestically and overseas.[42] There is also a strong focus on knowledge development and diffusion, including through the targeted allocation of funding for relevant university research and – more controversially – through forced technology transfers: a practice whereby market access for foreign companies that want to operate in China is conditional on sharing technology, know-how or intellectual property with Chinese partners. As we have seen above, the country is now itself a leader in many technological fields. Historically, however, it drew in a great deal of foreign knowledge in this way for the development of, for instance, motor vehicles and high-speed rail (see also Box 3.1).

This comprehensive industrial policy also consciously seeks to produce spillover effects between industries: by gaining a dominant position in one area, China can then gain a similar dominance in related domains. Developing a strong steel industry, for example, made it easier to build up a position in shipbuilding or wind turbines. A large steel industry, in turn, creates opportunities for the development of green hydrogen, as steel plants are a key potential customer for this. This could be crucial for the energy transition.[43]

Under the Chinese innovation system, the government is also consciously developing the end market – one example of note being the effort to stimulate the market for

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[40] It is clear that this can also have a major impact on individual rights. For example, a residential area might need to quickly make way for a new highway or technology hub.
[41] See Ang 2016.
[42] Hannas & Tatlow 2020.
[43] Gunter et al. 2025; see also OECD 2025.

electric vehicles. Initially, government bodies were required to purchase electric vehicles. Later, policy shifted to leveraging the vehicle registration system: at one point, in many cities, new registration plates were issued primarily for electric vehicles, while new petrol and diesel cars were no longer eligible for registration. From 2035, all new cars must be powered by 'new energy'. Such policies ensure the development of demand alongside supply.[44]

Selective access for foreign companies

China's industrial policy also includes a deliberate and selective approach to foreign companies. Foreign companies are often deliberately attracted to allow China to acquire certain knowledge, with market access often only being granted if the company sets up a local branch under a joint venture with a Chinese company.[45] Foreign companies are also often required to share their technological knowledge with their Chinese partner (see Box 3.1 on the rise of high-speed railways in China).

Box 3.1 The rise of high-speed railways in China

Just before the 2008 Olympic Games, the first high-speed Chinese railway was unveiled, linking Beijing and Tianjin. By 2025, China's high-speed network was larger than that of all the other countries combined and 10 times larger than the next two largest networks, Spain and Japan.[46] High-speed trains are one of the 10 technologies identified in the Made in China 2025 strategy. Over several steps, China has evolved from customer to the largest producer.

Initially, efforts were focused on developing domestic technology, but Chinese prototypes had multiple shortcomings. In 2003, the government changed course: foreign companies could now access the Chinese market if they were willing to share their technology with Chinese companies and set up a joint venture with a Chinese partner; only then could they tender for public contracts.[47] The contracts for these tenders provided for maximum knowledge transfer, with trains being assembled in China and Chinese parties having insight into both design and production. As a direct result of joint ventures with Siemens, Bombardier, Alstom and Kawasaki, there was a massive influx of foreign technology between 2004 and 2008.[48]

[44] Yu et al. 2026.
[45] Velliet 2024.
[46] Wang 2025: 29.
[47] Lin et al. 2021.
[48] Lin et al. 2021.

This was followed by efforts to develop a broad, comprehensive Chinese ecosystem, consisting of research institutes, state laboratories and universities, together with the two leading state-owned companies (CSR and CNR) and their subsidiaries. From 2008 to 2010, China sponsored 55 related R&D projects, 33 of which specifically focused on learning from imported technologies and developing new technologies.[49] With a team of 500 professors and more than 10,000 engineers and technicians, China worked to develop its own high-speed trains.[50] Then came consolidation: in 2015, CSR and CNR (which together comprised more than 80 subsidiaries) were merged into one powerful player, CRRC. Whereas CSR and CNR previously competed with Kawasaki, Bombardier, Alstom and Siemens, from 2015 it became 'CRRC versus the rest'. CRRC received public support through subsidies, preferential loans and tax breaks. As many of the railway lines built by CRRC in China are not profitable, CRRC is expected to remain dependent on state aid for a long time to come.[51] Once the company became competitive enough, it moved to capture a share in the global market, for example through high-speed technology exports as part of the Belt and Road Initiative (BRI).[52]

Whereas foreign companies entered the Chinese market in the mid-2000s on the condition that they shared technology with Chinese companies, China's CRRC has now, almost 20 years later, become the largest player in the global railway industry. In 2019, Alstom and Siemens competed for the production of 35 high-speed trains; CRRC produced 230.[53]

When the capabilities of state companies in a given sector are well developed, consolidation takes place. Chinese companies are then supported by removing competition from foreign companies. Foreign companies that were initially attracted to China to share their expertise are now faced with increasingly demanding requirements and regulations, leading them to slowly disappear from the market.[54]

It is crucial to understand the macroeconomic context for this Chinese innovation system: exports are stimulated by huge state subsidies, undervaluation of the Chinese currency (the yuan) and low wages. These exports generate money that can then be

[49] Cory 2021: 20.
[50] Lawrence et al. 2019: 18.
[51] Cory 2021.
[52] Kynge et al. 2017.
[53] Cohen 2019.
[54] Hillman 2022.

reinvested.[55] We will return to this context in the next chapter. It is important to note here that the success of China's innovation system also depends on this macroeconomic strategy. It is notoriously difficult to estimate how much of the success of China's innovation system can be specifically attributed to the design of its industrial policies – with aspects that can also be recognised in the literature on 'developmental states' and on 'new industrial policy' – and how much can be attributed to these macroeconomic factors. What is unmistakable, however, is that the Chinese government purposefully combines its industrial policy with macroeconomic policy.[56]

There is much to criticise in the Chinese model, not least the suffering it causes through the suppression of wages, the expropriation of land and its undemocratic nature.[57] It can also come at the cost of considerable waste. In the short term, it can lead to an excessive number of projects, overfinancing, overproduction, speculation, an intensive and deflationary race to the bottom, the purposeful misrepresentation of data by companies or local governments to impress central government, and inefficiency.[58] At the same time, this model has helped China establish a leading position in a wide range of technologies that it has identified as strategic priorities. The Chinese government sees redundancy as an indispensable element of its approach.[59] In the long term, therefore, the model can be efficient.[60] Furthermore, we misunderstand the Chinese model if we judge it purely on efficiency: it also aims to provide economic security by expanding domestic production and building an indispensable position in global value chains, leading to a stronger influence on the world stage.[61] China has undeniably been extremely successful in this.

3.2 The American innovation system

China's technological advancement has spurred the US to strengthen its own industrial policy. Despite the major differences in approach, key features discussed in the previous section can also be seen in the American approach: (1) a combination of direction and

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[55] This also applies, of course, to money generated from domestic sales. The foreign currency earned through exports is channelled in part through state-owned banks into strategic investments in foreign companies (Setser 2023).
[56] See García-Herrero 2026a. See also this quote from Michael Pettis of the Guanghua School of Management in Beijing: 'Analysts often confuse the global competitiveness of Chinese manufacturing with manufacturing efficiency, but these are two very different things (…) China's manufacturing competitiveness depends on an undervalued exchange rate, very cheap financing and very low wages relative to productivity.' Published in McMorrow et al. 2026 (Financial Times).
[57] Dan Wang (2025) associates the focus on innovation and manufacturing industry with the undemocratic character of the country in characterising China as an 'engineering state' that can achieve great successes, but can also cause immense suffering. Chinese historian Qin Hui speaks of the 'comparative advantage of lower human rights' (cited in Klein & Pettis 2020, among others).
[58] Gunter et al. 2025
[59] Xie 2025.
[60] Wang & Kroeber 2025.
[61] Gunter et al. 2025.

competition; (2) a focus on the entire value chain, from suppliers to end markets; and (3) selective access for foreign companies.

Combination of direction and competition

Although the US is often regarded as the prototypical 'free market economy', industrial policy has a long history in the country. The 1791 publication of 'Report on Manufactures' by Alexander Hamilton, one of the US founding fathers, is often seen as the start of this.[62] Although, in the public debate, industrial policy was for a while seen as outdated, in reality there were many forms of industrial policy, and the government played an underestimated steering role in the economy.[63] Some commentators have dubbed it a 'hidden' developmental state.[64]

Of course, the US does not work in the same way as China: Washington does not publish five-year plans. However, industrial policy and economic governance at a more decentralised level do exist. Silicon Valley is today best known as an example of American entrepreneurship and the power of the free market, but historically this innovative region has developed largely thanks to the US government, especially the Department of Defense. The US government continues to play an important part in fostering innovation in Silicon Valley, as a major customer of AI models, satellites and IT infrastructure. This has been crucial to the success of companies such as SpaceX.[65] In addition, there has been a revival of 'visible' industrial policy in recent years.[66] The US government is stimulating the development of all kinds of technologies with the Inflation Reduction Act (clean tech), the CHIPS and Science Act (semiconductors), Operation Warp Speed (COVID-19 vaccines) and Project Genesis (AI). Through the AI Acceleration Strategy, the War Department invests heavily in the Large Language Models (LLMs) of OpenAI, xAI and until recently Anthropic and in security companies like Palantir.

One prominent institution through which the US government shapes and directs innovation is the Defense Advanced Research Projects Agency (DARPA).[67] This approach dates back to the late 1950s, when the United States founded the Advanced Research Projects Agency (ARPA) in response to the successful launch of Sputnik 1 by the Soviet

[62] Hamilton 1791.
[63] Reynolds 2024.
[64] Block 2008.
[65] Slobodian & Tarnoff 2026.
[66] Maggor 2026.
[67] This description of DARPA is based on Azoulay et al. 2019; Bonvillian 2018; Swiss Science Council 2023; Weinberger 2018.

Union. The organisation was later renamed DARPA and has since contributed to technological breakthroughs such as GPS, microwave ovens and the internet. Although the ARPA approach has certainly evolved over the years, it has gained such a reputation that other agencies have also been named after this method, such as the energy-focused ARPA-E and IARPA for intelligence agencies. The methodology is designed to give a boost to technologies that show great potential but have not yet been developed.

Elements of this approach include formulating a clear mission, with well-defined goals and sub-goals. These goals are made as concrete as possible, and only companies that are successful in meeting the goals are eligible for funding in the next round. The considerable freedom given to talented programme managers is also regarded as a reason for its success. These experts with relevant technical knowledge are recruited for between three and five years from technical positions in science, industry and the government itself. The acceptance of failure is seen as essential: to ultimately achieve real success, it must be accepted that many projects will fail in the process. Box 3.2 provides a further illustration of the current DARPA programme regarding quantum technology.

Box 3.2 DARPA quantum programme

The current DARPA programme on quantum technology – the Quantum Benchmarking Initiative (QBI) – illustrates how the model works.[68] This programme aims to determine whether it is possible to build an industrially-useful quantum computer by 2033. It is designed to verify and validate whether any quantum computing approach can achieve utility-scale operation. The programme is divided into a number of phases, each with its own sub-goals. For each stage, the participating organisations are required to demonstrate to a panel of experts how they will meet the objectives.

- Phase A: "Describe a utility-scale quantum computer concept that has a plausible path to realization in the near term."
- Phase B: "Describe a Research and Development Plan capable of realising the utility-scale quantum computer, the risks associated with that plan and the planned risk mitigation steps, and the prototypes needed to burn down these risks."
- Phase C: "Work with the government to verify and validate that their utility-scale quantum computer concept can be constructed as designed and operated as intended."

[68] DARPA 2026.

Focus on the entire value chain, from suppliers to end markets

As a global power, the US has always been concerned with ensuring security of supply for a wide range of products. The country's large-scale industrial production – the motor industry, in particular – was vulnerable to disruptions to oil supplies, so to address this, the country developed an extensive policy towards countries in the Middle East. More recently, the shale gas revolution has turned the US into the world's largest energy producer, significantly reducing its vulnerability to energy supply disruptions.[69]

The competition with China has put certain goods and production chains higher on the agenda. The US is dependent on China for critical minerals. The Chinese government has been accused of exploiting this dependency to put pressure on the US. In response, the Trump administration has been highly assertive when making deals involving those minerals, leveraging Ukraine's dependence on SpaceX to make it agree to a deal.[70] Partnerships have been announced with countries such as Australia and Japan, while Washington's role in peace negotiations between the Democratic Republic of the Congo (DRC) and Rwanda has also been linked to raw material agreements.[71]

A key aspect of US industrial policy since 2021 is the emphasis on what policymakers and economists refer to as 'supply chain resilience' over the entire value chain: the CHIPS and Science Act (2022) not only subsidises production capacity, but also focuses on upstream investments in semiconductor materials and downstream sales guarantees through public purchasing obligations. The Infrastructure Investment and Jobs Act (IIJA) provides for a broad infrastructure development; this includes investments in roads, bridges, railways, ports and airports, as well as in clean energy infrastructure and broadband internet. As for digital technology such as AI, government policy focuses on underlying infrastructure by stimulating the development of computing power through large data centre projects.[72]

Selective access for foreign companies

As a global leader in several technology fields, the US government is actively pursuing policies that restrict the export of technologies to rivals, especially China. In his first term, President Trump already imposed restrictions on the export of chips from Intel and Nvidia to Chinese companies. ASML was also restricted in the machines it could export to China because of pressure from the US on the Dutch government, with US

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[69] Meierding 2021.
[70] Shalal & Roulette 2025.
[71] Australian Government 2025; The White House 2025a; US Department of State 2025b.
[72] The White House 2025b.

leverage partly resulting from the fact that ASML machines contain products from American companies.[73] Ultimately, the Dutch government yielded to American pressure, and ASML was prohibited from selling its highly advanced EUV machines to Chinese companies (2019-2020). Later on, it was also banned from exporting certain (less advanced) immersion DUV machines (2023) due to pressure from the Biden government. The United States is also pushing for a scaling-back of maintenance services for chip machines already in operation at Chinese companies. Moreover, the US imposed restrictions on Taiwan's TSMC and South Korean companies Samsung and Hynix to prevent them from exporting chips to Chinese parties or their own Chinese factories. Given how advanced all these technologies are, this policy is heavily concentrated on a small number of leading companies and products. The Biden administration referred to this policy as a 'small yard, high fence': major restrictions for a limited number of technologies.

The US government also identifies foreign companies that it sees as a security risk. Tensions rose between China and the US in 2018 after Meng Wanzhou was arrested in Canada in 2018 at the request of the US. She is the daughter of the founder of Huawei, a company that was suspected of violating American sanctions against Iran.[74] The US Department of Commerce publishes the BIS Entities List, containing companies and individuals that the country considers a security risk. It is not permitted to trade with entities on this list, unless an explicit licence is granted. This allows the US government to prevent certain parties from obtaining crucial technologies. In early 2025, Wingtech, which had acquired former Dutch company Nexperia, was added to the list, meaning it could no longer trade with American businesses.

3.3 Interim conclusion

A global innovation race is underway, which is seeing not only companies compete with each other, but also countries and their innovation systems. The US and China are particularly relevant for Europe, as they are at the forefront of an array of technologies. Europe is also highly dependent on those two countries, which have already demonstrated their willingness to deploy economic dependencies for geopolitical gain.[75] Hence, in this chapter, we have focused on the innovation systems of China and the US.

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[73] Baazil & Koc 2025.
[74] Baazil & Koc 2025.
[75] Of course, countries beyond the European Union are also affected by this development. Soula (2026) argues that China presents an obstacle to emerging, industrialising economies, because of its omnipresence throughout the entire value chain.

Although these countries have very different political systems and different innovation systems, there are a number of similarities. First, there is the combination of state direction and orchestrated competition. These systems neither put the government in full control, nor leave the economy entirely at the mercy of the market and competition. It is precisely that combination of direction and competition that leads to the rapid development of new technologies. Innovation policy also focuses on the value chain as a whole. It looks not only at a specific product, but also at what is needed in the supply chain, in the end market and in the ecosystem – such as raw materials, energy and infrastructure. Finally, these countries can be highly strategic when it comes to dealing with foreign companies.

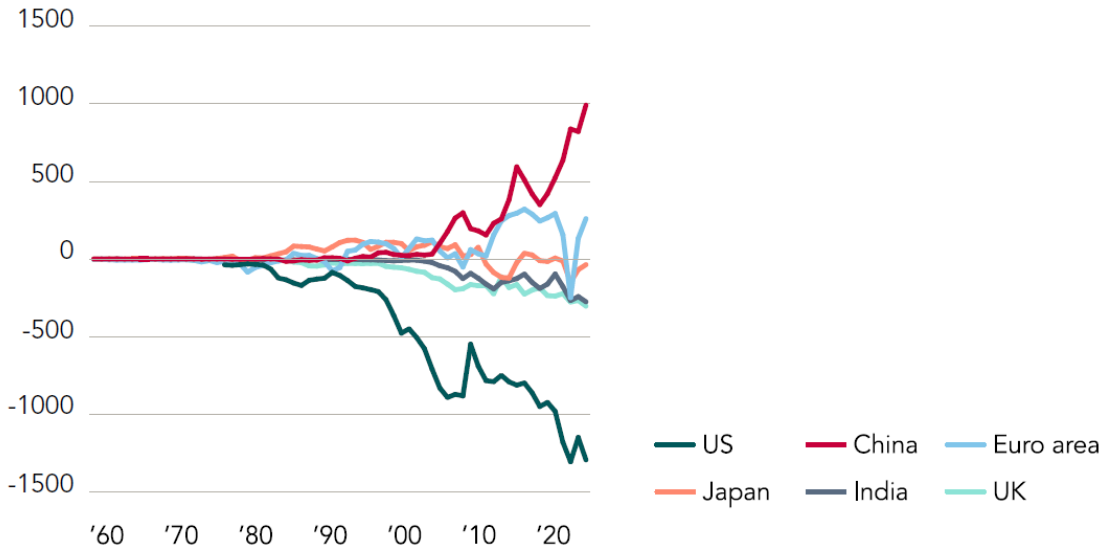
4. Growing imbalances in international trade

A second crucial dynamic is the major and growing imbalances in global trade. Several organisations have recently published on this issue.[76] The Bank of England writes: 'Global imbalances are back'.[77] Yet the obvious question – 'How large are these trade imbalances?' – is not as easy to answer as it might seem.

4.1 The extent of trade imbalances

Regarding trade in goods, the figures are relatively easy to obtain and interpret (see Figure 4.1). Several developments stand out: we can see that the eurozone has run a larger trade surplus since 2012, partly because domestic demand recovered slowly after the financial crisis, although there was a sharp dip in exports during the COVID-19 pandemic. But what stands out most are the developments in the US and China: while the deficit in the US has widened, China's export surplus has increased significantly. This surplus began to rise with China's accession to the World Trade Organisation (WTO) in 2001, accelerating further after the pandemic.

Figure 4.1 Trade balance in goods – 1960-2024



Source: World Bank, merchandise exports – imports in USD billion, current prices.

[76] IMF (2025; 2026a), economists commissioned by the G7 (C.-E. Bai et al. 2026); the Centre for Economic Policy research report on rebalancing (Rey et al. 2026), a working paper and an insight from the Bank of England (Cesa-Bianchi et al. 2026a; Lombardelli & Cesa-Bianchi 2026) and the European Parliamentary Research Service (Jochheim 2026).

[77] Lombardelli & Cesa-Bianchi 2026.

However, when looking only at the trade balance in goods, a number of things are excluded from the picture: trade in services and international transactions related to work, income from financial assets and other transfers. Economists therefore often look at the current account, which includes both trade in goods and these other components.[78] The current account is particularly relevant for assessing, for example, the financial sustainability of international trade relationships. Large and persistent current account deficits may indicate that a country could face difficulties in servicing its external debt in the future. At the same time, the trade balance in goods is more informative about the impact of trade imbalances on industry and the risk of industrial decline. Therefore, there has been a shift of focus: although economic analysis has focused for decades on current account deficits, due to concerns about their financing, current international political tensions stem primarily from persistent *surpluses* in goods trade and their industrial impact.[79]

In many cases, it might not matter which of the two balances are assessed, but in the case of China, it makes a considerable difference. The Chinese current account trade surplus is $657 billion, while the trade surplus based on the balance in goods alone is $976 billion (according to China's own balance of payments) or as much as $1143 billion (according to customs data).[80] Moreover, there are doubts as to whether China's own figures provide an accurate representation of the situation. In 2022, China unilaterally modified its methodology, so that goods produced in China by foreign-owned companies are now counted as imports, thereby artificially reducing the reported trade surplus.[81] A report by the Centre for Economic Policy Research (CEPR) estimates that China's actual current account surplus in 2024 could be up to twice as large as the official estimate of 2.3% of GDP. This official figure has since risen to 3.5%.[82]

For the purpose of this report's central theme – the geopoliticisation of economic relations – China's trade balance in goods is the most relevant. Manufacturing is important from a geopolitical perspective[83]. Many manufactured products are critical to the wider economy and society and have few good substitutes, which makes them well suited for use as leverage in geopolitical clashes. Additionally, a large part of R&D occurs

[78] This also forms the basis for IMF analyses, for example. For the EU, the figures are distorted by countries that facilitate tax avoidance (Setser 2026a).
[79] Jean 2026.
[80] Jean 2026.
[81] For a more detailed discussion on the figures, see Setser 2025; Tordoir & Setser 2026; Balakrishnan 2026; Ma & Wei 2026. There are also doubts about the negative investment income reported by China. As a result, the current account surplus appears smaller than it otherwise would (Setser 2026a).
[82] Balakrishnan 2026. This relates to Q1-Q3 2025.
[83] Manufacturing is not, of course, the only sector of geopolitical importance; digital services can also be geopolitically crucial, as discussed in the previous chapter.

in industry, meaning it has a considerable influence on global innovation and production. This makes many parts of the manufacturing industry strategic in nature.[84]

It is precisely in manufacturing that China has built up an impressive position in recent decades, and where its trade surplus has increased enormously. There is currently talk of a second 'China Shock', which refers to the country's sharply rising exports since 2020.[85] A classic economic view is based on the assumption that trade imbalances will correct themselves automatically.[86] In China's case there are no signs that its imbalances are about to disappear; if anything, its surplus continues to grow.[87] China's huge trade surplus is no temporary coincidence, but the result of a robust domestic strategy.[88]

4.2 An export surplus driven by structural policy

China explicitly pursues strategic autonomy. The Chinese government aims to minimise vulnerable dependencies on other global players, while simultaneously maximising its own strategic relevance. This strategy is known as dual circulation. Underlying this is a macroeconomic policy that is strongly oriented towards exports. This strategy combines a comprehensive industrial policy with measures that keep wages low, alongside capital controls and a managed exchange rate.[89] China's economic success is therefore certainly not attributable solely to its innovation model discussed in the previous chapter; it is also linked to these more macroeconomic factors. These factors contribute to a large and growing imbalance in world trade. China is by no means the first or only country to do this, but the scale at which it is doing so and the scale of the country itself are what make its impact on world trade so significant.[90] Three factors are of particular importance here:

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[84] Jean 2026; see also Clayton et al. 2023.

[85] See De Lucia et al. 2026; Tordoir & Setser 2026 and De Soyres et al. 2026b. De Soyres et al. (2026b) note that the latest shock presents a number of different characteristics than the first one. China's economy is now much larger, which means that the impact is even greater. At the same time, China's strategic pursuit of greater self-reliance is causing export and import growth to diverge further. Export growth is also now concentrated in capital and technology-intensive sectors, many of which overlap with industries traditionally dominated by advanced economies, thereby increasing direct competitive pressure.

[86] Jean 2026. Although there were also prominent economists who recognised that this would not happen automatically. This is why, during the Bretton Woods negotiations, Keynes proposed a mechanism that could address countries with a structural export surplus (see, for example, MacFadden 2026).

[87] Setser 2026b.

[88] Gunter et al. 2025. See also Setser 2026b.

[89] See Liu 2023.

[90] The Netherlands and Germany are examples of countries with a structural trade surplus. The European Commission has conducted multiple in-depth reviews of the Netherlands in the context of the EU Macroeconomic Imbalance Procedure. The European Commission identifies macroeconomic imbalances in the Netherlands, including its large current account surplus, and that policy measures have so far been insufficient. See European Commission 2025.

Firstly, there is relatively low domestic demand. This is due to low wages and the fact that households save a relatively large share of their income, partly because there is no adequate social safety net for healthcare and pensions. Whereas consumption for average OECD countries accounts for about 75% of GDP, in China the level is about 56%. By comparison, in Türkiye and Argentina, countries with comparable GDP per capita, these percentages are 70% and 65% respectively.[91] The fall in Chinese property prices in 2020 and the limited social provisions have led households to save even more. With the slowdown in domestic demand, the government stepped up its efforts to boost exports and keep economic growth high.[92] Low wages in China put the country at a competitive advantage when it comes to world trade. Although the latest five-year plan does mention boosting domestic demand, the effort envisaged is actually rather modest, and the focus remains on stimulating innovation and competitiveness across virtually all sectors.[93]

Secondly, there is the scale of state subsidies. Companies across the world receive state subsidies. As a percentage of company revenue, industrial subsidies amounted to 1.3% in 2024, the second highest level ever recorded.[94] China is in a league of its own in this respect. According to the OECD – in what it describes as a conservative estimate – Chinese companies receive on average three to eight times more industrial subsidies than companies in OECD countries (see Figure 4.2). The OECD estimates that in the steel sector, Chinese companies receive as much as fifteen times more subsidy.[95]

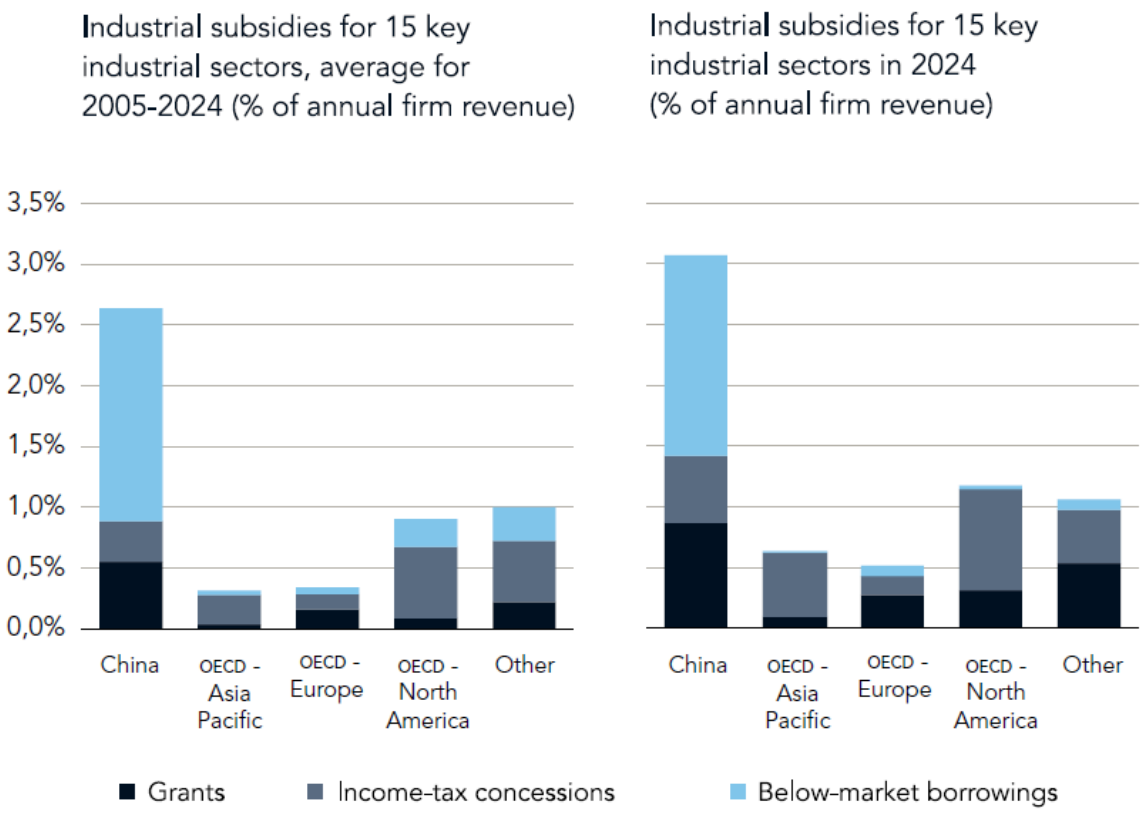
Chinese state aid is the highest in the renewable energy, semiconductor and heavy industry sectors.[96] Industrial policy has often been overlooked when analysing trade imbalances. Recently, more attention has been paid to how industrial subsidies affect global markets.[97] According to the OECD, between 2005 and 2023, 60% of the increase in the global market share gained by Chinese companies can be attributed to the subsidies they received.[98] Other analyses also show that export figures for specific

[91] Pettis 2024. Figures provided by the World Bank.
[92] Tordoir & Setser 2026.
[93] Jochheim 2026; Gunter 2026.
[94] This concerns the level of industrial policy subsidies in 15 key industrial sectors (OECD 2026a). The previous peak occurred in 2009, during the global financial crisis.
[95] OECD 2026b. 'In 2024, the median Chinese steel firms received 15 times more in subsidies, relative to their asset size, than the median producer elsewhere.'
[96] OECD 2026a.
[97] See Cesa-Bianchi et al. 2026b; Tordoir & Setser 2025; OECD 2026a; Jean 2026; Cesa-Bianchi et al. 2026a. Authors from the IMF have also written about this topic (Gourinchas et al 2024).
[98] OECD 2026a. An analysis by Jean (2026) also shows that export figures depend very heavily on state subsidies.

sectors in China are tied to industrial subsidies. As a result, other countries are being forced to adapt economically to China's policy priorities.[99]

Thirdly, there is the undervaluation of the Chinese currency – the yuan. For a country running large trade surpluses, we would typically expect its currency to appreciate. In China, however, the exchange rate is actively managed. China's central bank and state-owned banks (presumably also at the direction of the central bank) buy large amounts of dollars and euros to counteract appreciation of the currency.[100] The extent of the undervaluation of the Chinese currency is estimated to be between 12% and more than 30%.[101] China achieves this through a system of strict capital controls and the accumulation of foreign exchange reserves.

Figure 4.2 Industrial subsidies



Source: OECD.

[99] See Jean 2026; De Soyres et al. 2026a.
[100] Tordoir & Setser 2026.
[101] See Brooks 2025; Goldman Sachs 2025, quoted in Sivabalan 2025: Matthes 2025; IMF (2026b): *Haut-commissariat à la Stratégie et au Plan* 2026; Setser 2026c; Setser & Sobel 2025.

This undervaluation of the yuan, combined with low wages and the enormous direct and indirect industrial subsidies makes it almost impossible for European or American companies to compete with Chinese exports. The revenue that China generates from exports is reinvested in its industry. This creates a self-reinforcing cycle that makes it extremely difficult for the US and the EU to compete.[102]

4.3 The impact on Europe

The United States had already experienced a 'China shock', following China's accession to the WTO in 2001. The US itself had actively advocated for China's membership, with the expectation that trade liberalisation would be primarily beneficial for the US. The now-classic study by Autor, Dorn and Hanson documented how US regions facing direct competition from Chinese imports suffered significant job losses, declining wages and persistent economic damage. Almost a decade after the import shock, employment and incomes in the regions affected were still lagging behind.[103] Another article by Autor et al. illustrates that increased exposure to intense competition from China also led to a decrease in R&D spending and patent applications filed by US companies.[104]

It is against this backdrop that President Trump's tariff policy – however erratic its implementation may at times have been – must be understood. Moreover, the underlying political consensus transcends party lines: the Biden administration also maintained the Chinese tariffs imposed during President Trump's first term. The United States' decision to no longer act as the guardian of the multilateral trading system is not an aberration, but a structural change in course.

What are the implications of this for Europe? Europe was less affected by the first China Shock because it occurred in fields where Europe was less in direct competition. In recent years, however, the consequences of China's huge export surplus are being felt in Europe too.[105] This is not a conventional case of Schumpeterian creative destruction, where less competitive sectors are restructured in certain countries worldwide and replaced by other economic activities in areas where those countries hold the greatest comparative advantage.

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[102] Economists such as Setser also write about how China's control over its exchange rate involves buying up dollar bonds, which drives the dollar up against other currencies, further strengthening China's competitive position over the United States.
[103] Autor et al. 2013; Autor et al. 2021.
[104] Autor et al. 2020.
[105] For a recent description, see Soula 2026.

For one thing, that is not how the Chinese government approaches trade. It does not seek mutual trade, but rather its own autonomy and a strategic position in global trade chains. It therefore has no intention of importing significant goods from other countries. This led European Commission President Von der Leyen, following a meeting with a Chinese delegation, to state: '(as) we said to the Chinese leadership, for trade to remain mutually beneficial, it must become more balanced'.[106]

Secondly, a very large share of the European industry has come under pressure. This relates to the discussed distortions in world trade, which mean that fair competition is undermined.[107] An analysis by the French *Haut-Commissariat à la Stratégie et au Plan* shows that the cost difference between European and Chinese industrial production is, across the board, 30-40%.[108] A German survey shows the same pattern: Chinese companies enter the market with prices that are more than 30% lower.[109] These are price differences – partly explained by the aforementioned low wages, enormous state subsidies and undervaluation of the yuan – that are difficult to compete with.

The Mercator Institute for China Studies (MERICS) distinguishes between three waves of this process of industrial expansion and market penetration. The first wave was focused on traditional bulk goods: steel, aluminium, cement and glass. This hardly raised concerns in Europe, as these were highly polluting sectors and a relatively limited number of jobs were at stake. The second wave is currently underway and relates to electric cars, batteries, semiconductors and renewable energy technologies. This wave is affecting legacy semiconductors (basic chips), low to mid-range industrial machinery and components, IT equipment, low to mid-range medical devices, and pharmaceutical products. In the longer term, the third wave will see effects on electrolysers (machines that split water molecules in hydrogen and oxygen), advanced medical technology, advanced industrial machines and components, and new materials.[110]

Thirdly, this can all happen at an enormous pace. With such price differentials and such high levels of exports from China, specific industries can disappear from Europe within a very short period. Europe has already experienced this in the case of solar panels and

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[106] Bureau of the European Parliament's China Delegation 2025.
[107] Mayr et al. 2026.
[108] *Haut-commissariat à la Stratégie et au Plan* 2026. In addition to the structurally undervalued yuan, direct and indirect subsidies, investments and low wages, China's competitiveness is also underpinned by highly integrated value chains and significant economies of scale.
[109] Matthes 2024.
[110] Gunter et al. 2025. See also *Haut-commissariat à la Stratégie et au Plan* 2026.

batteries, and a similar development is now unfolding in the case of wind turbines and electric vehicles.

Once vital high-tech industries have been relocated, they are not easily brought back.[111] By that time, the economies of scale have shifted elsewhere. These translate not only into potentially lower prices but also into product innovations, which are often developed in the production process – known as learning in production.[112] The industries that are lost can bring additional risky and strategic dependencies.

Finally, new high value-added economic activity will not simply spring up to replace lost industries.[113] In contrast, new industry often develops on the back of existing knowledge and capital infrastructure in an established industry. ASML, for instance, has benefited greatly from the presence of infrastructure developed by Philips – the company from which it originated. The capabilities of that ecosystem paved the way for the emergence of a new leading producer of advanced chip machines.[114]

Trade imbalances have a wide range of economic consequences.[115] But they also have implications for the theme central to this publication. With such asymmetries in global trade, it becomes very difficult to prevent our economic dependencies from increasing, let alone decrease them. This is because Chinese companies' dominant position directly harms European producers, as well as inhibits European efforts to diversify: China's euro-denominated prices have fallen more rapidly than those of competing suppliers.[116] A key prerequisite for managing the geopoliticisation of economic dependencies is therefore to develop an effective response to these distortions in global trade. In doing so, the EU should be aware that also in the longer term, the US will not be the pillar of the world trade system it used to be. It must also recognise that China is highly creative and inventive in its exploitation of loopholes in the multilateral trade system – such as the lack of corrective mechanisms for countries running a surplus, unclear rules governing state subsidies and state-owned enterprises, and long and cumbersome infringement procedures. China's sheer scale alone implies that this has global

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[111] Krugman 2026b.
[112] Chang & Andreoni 2020.
[113] In such a situation, where European companies lack competitiveness on trading goods, investments can only be made in the non-tradable sector: goods and services that cannot be traded internationally. However, the non-tradable sector is marked by lower productivity growth and less innovation, meaning it does not provide the best economic foundation in the long term. See Cesa-Bianchi et al. 2026b.
[114] Tordoir & Setser 2026.
[115] See also Tordoir & Setser 2025; *Haut-commissariat à la Stratégie et au Plan* 2026. The German Economic Institute (IW) recently estimated that Germany lost around 400,000 industrial jobs between 2019 and 2025 that were attributable solely to China's trade policy (Hofmann et al. 2026).
[116] Boullenois et al. 2025.

consequences. Passively clinging to what remains of the multilateral trading system, without confronting this broader strategic challenge, is a course of action that will be costly for Europe.

5. A challenge at four levels

There is clearly a lot at stake for Europe. Initially, Europe reacted cautiously to this geoeconomic shift, since it stood in stark contrast with the liberal economic principles and institutions on which the EU was built. The issue has since received greater attention, and the EU has taken a range of measures in response. These include giving Member States more flexibility to provide state aid in support of EU policy objectives, strengthening existing trade defence instruments and introducing new ones, and developing its own industrial policy. Recent examples of policy initiatives are the recently revised framework for screening foreign direct investment, as well as the proposed Industrial Accelerator Act and the European Technological Sovereignty Package, which includes the European Chips Act 2.0 and the Cloud and AI Development Act. At the same time, this is a response that risks fragmentation and ad hoc policymaking, ultimately undermining its effectiveness.

It should be acknowledged, however, that addressing the geoeconomic shift is a complex challenge. In fact, it comprises a challenge at four different levels: the underlying assumptions, institutional frameworks, international cooperation and policy instruments. We explore these four levels in detail below.

5.1 Underlying assumptions

Before we can attempt to find a solution to the challenge before us, it is important to look through a different lens from the one we have used in recent decades. In its report Navigating a Fragmenting World Order, the WRR discussed this issue in terms of world views. World views offer people a prism that they can use to shed light on international developments. For decades, the Netherlands has looked at the world through the lens of a liberal world order, which emphasised the benefits of global trade, a strong role for market mechanisms and a limited economic role of the government. Of course, other world views existed, but the Netherlands could also afford embracing this perspective because the United States provided the institutional foundations that sustained it.

While this perspective remained dominant, global markets as well as the actors that operated within them changed significantly. World trade was no longer just understood through the lens of comparative advantage; self-sufficiency and economic security also came into the picture. Low prices, viewed from the perspective of consumer prices and

classical market mechanisms, are not readily seen as a problem. In practice, however, this often amounted to predatory pricing: deliberately keeping prices low until competitors had been driven out of the market. This was a clear strategy in digital markets. It is also a method that Chinese companies leverage to gain dominance in certain markets. The dominant conceptual framework makes it difficult to respond to this development, as the immediate effect appears to be beneficial to consumers. They gain access – at least in the short term – to cheap cars, machinery, solar panels and low prices in digital marketplaces.

More broadly, the Western economic lens can quickly shape perceptions of developments in China, which can produce a distorted picture. For a long time, it was assumed that China would either gradually converge towards the Western model or that it was a state-led, centrally planned communist system that would eventually prove unviable. From that perspective it is difficult to see that a powerful country is developing with a fundamentally different understanding of the global order and the economy. The classical lens also clouds the picture with respect to the US. It can prevent European policymakers from recognising that the US can no longer be relied upon as a dependable pillar of the international economic system. The tariffs and trade restrictions imposed by the current US administration are not a temporary aberration, but responses to greater underlying changes.

A recent example of the limitations of the classical view can be seen, for instance, in recent discussions surrounding foreign direct investment (FDI) from China. At first sight, these investments can bring knowledge transfer and employment. In practice, though, Chinese acquisitions of existing companies appear to be driven mostly by an interest in technology transfer. Studies show that the profitability of companies often declines following a Chinese takeover, while the number of patent applications in the relevant field subsequently increases in China. Conversely, Chinese companies seem reluctant to share technology with European companies.

It can be uncomfortable to break free from our perceptions. The WRR has previously described the ‘normalcy bias’: people assume that everything will stay the same, even when there are very clear signs that this is not the case. This is also at play here. It is tempting to assume that Europe simply faces a problem of competitiveness – one that can be addressed through the familiar conventional policy responses, with additional

investment in R&D, some reforms, the removal of regulatory barriers and greater injections of capital. But there is a deeper issue at stake here.

While some have let go of the old assumptions and now see a fundamentally different world, others still look through the more traditional lens. This can make it difficult to establish the common ground needed to begin a conversation at all. Whereas one person sees an existential threat to Europe that demands unconventional measures, the other sees it as business as usual that can be solved with greater competitiveness, hard work and decisive action.

5.2 Institutional frameworks

The geopoliticisation of economic relations calls for greater government direction. This is necessary both to steer innovation and to be able to respond quickly and appropriately to the geopolitical dynamics. This also means there is a challenge at the level of institutions: these need to be agile, possess strong expertise and operate in a proactive and responsive manner.

Geoeconomic threats require the ability to respond in a swift, decisive and unambiguous manner. This often requires a response at the level of the European Union. However, policy competences are often fragmented, with, for example, the relevant powers regarding the actual deployment of control points spread across both the European level and the level of the Member States. Europe's lack of effective competences – and the resulting credibility deficit – has led governments and businesses alike to assume that Europe will ultimately shy away from geoeconomic confrontation, hence the adage 'Europe always chickens out'. There is now an anti-coercion instrument at European level to counter situations in which third countries pressure the EU or Member States into action by applying, or threatening to apply, harmful measures affecting trade or investment. However, due to political sensitivities, the bar to trigger this instrument is set high. In practice, the instrument has not yet been activated, despite clear examples of economic coercion from the US and China.

An adequate response to the geoeconomic shift also requires in-depth knowledge of markets and technologies. It requires knowing which sectors, products or technologies are of genuine strategic importance, what is suitable for the national and European context, where the main bottlenecks and opportunities in the value chains are and what other countries are planning. This expertise differs from the capabilities needed for the

more generic innovation policies of the past and, therefore, still needs to be developed within public administrations.

The current situation also requires a proactive and responsive way of working from governments. It requires the right connections between public and private-sector players, often termed 'embeddedness' or 'embedded autonomy'. A close mutual relationship between public and private parties has, for good reason, been approached with scepticism for a long time, given the risks of capture and of blurring the boundary between public and private interests. However, the private sector has crucial knowledge of industries and innovative opportunities, so close public-private cooperation is needed. The government would do well to closely monitor and boost the progress of technological developments, for example by using regulatory sandboxes: a strategy that allows room for experimentation with innovative products and services by temporarily exempting them from applicable legislation and regulations. This will help to bridge information gaps and, through the knowledge gained, will help public organisations to promote innovation in a more targeted manner, for example through regulation, subsidies or requirements in public procurement.

5.3 International cooperation

The third level of the challenge concerns international cooperation. For many years, the EU could rely on American economic, technological and military hegemony. This hegemony also underpinned the liberal trade order. Now that world order is fragmenting. The global stage today is increasingly marked, also in the economic domain, by a combination of conflict, competition and cooperation. This is happening even as we operate within a global trading system built on deep interdependencies. The EU and Member States must also navigate this reality and reassess how – and with whom – they cooperate on economic matters.

Will the EU continue to shelter under the American umbrella? How should it position itself in relation to China? Should the European Union focus primarily on strengthening itself? Or should it primarily seek to work with other like-minded countries and form new multilateral economic partnerships? Canadian Prime Minister Carney, for example, has called for cooperation with the middle powers. Finnish President Stubb believes that Canada and Europe should cooperate more closely with the Global South. Others believe that this will not work, because the great powers will try to obstruct any serious cooperation that does not involve them. And in an increasingly geopolitical world, is

symbolic cooperation or cooperation based on soft power still sufficient? Or does effective cooperation require shared visions and common frameworks governing technology, security and strategic autonomy?

The debate over the 'Buy European' clause in the Industrial Accelerator Act (IAA) demonstrates just how complex these issues of international cooperation have become in an increasingly geopolitical world. In October 2025, European Commission President Von der Leyen indicated that 'Made in Europe' criteria would be introduced for public procurement in certain strategic sectors. However, this was considered undesirable by certain Member States, areas of industry and European trading partners. While French President Emmanuel Macron stressed the importance of a 'Buy European' clause, German Chancellor Friedrich Merz favoured a 'Made with Europe' approach instead. In response, a 'Union origin or equivalent' principle was introduced, which implied that companies from countries with a free trade agreement with the EU or that operate in accordance with WTO rules would also qualify. In addition, the number of strategic sectors to which the rules would apply was limited; the original plan to include AI and advanced semiconductors was dropped, for example. As a result, fewer products fall under the 'Buy European' clause and fewer countries are excluded, although applicability seems to vary across different parts of the IAA and countries may also be excluded at a later stage. It is still unclear how many partner countries will eventually be eligible: some speak of eighty, but EU Commissioner Stéphane Séjourné expects the figure to be closer to twenty. This case illustrates how complex matters can be surrounding new frameworks for international cooperation.

5.4 Policy instruments

The fourth challenge that the EU faces is on the level of policy instruments. In numerous areas, the EU does not have the policy tools to deal with the geopoliticisation of economic relations. Trade defence measures appear insufficient to address the current challenges; these measures are often targeted at individual products and are accompanied by lengthy investigation processes in which many parties can raise objections. More macroeconomic instruments for addressing global trade imbalances have not been embedded in existing institutional arrangements and fall outside existing frameworks.

Traditionally, EU policy instruments have been associated with the internal market. They are strongly focused on protecting and strengthening the four freedoms: the free

movement of goods, capital, services and persons. There have, of course, long been instruments that restrict these freedoms, such as export controls for dual-use goods (goods that can be used for both civilian and military applications). In 2019, a European framework for screening foreign investments was added, which is now being revised to ensure that all Member States effectively apply the rules with comparable rigour. Export controls primarily target the export of goods, software and technology, with a view to potential military applications (dual use). Some authors believe that investments abroad should also be better screened – not only because of military considerations, but also because of broader economic security considerations, in order to prevent asymmetric dependencies. Under these new geopolitical circumstances, EU instruments must also extend, in other ways, beyond safeguarding the internal market. This also calls for a more robust EU industrial policy. We return to this in the next chapter.

6. A strategic response: pathways and pointers

In this report, we have discussed how a geopoliticisation of economic relations is occurring worldwide. Europe is particularly vulnerable in this situation, because it has many vital dependencies on the US and China, while the critical dependencies of these countries on Europe are more limited. This entails economic, political and social risks. Although awareness of this issue has been growing for a number of years, Europe's actual dependencies are not diminishing. This has to do with two underlying global dynamics: the international innovation race and the growing imbalances in international trade.

While new policies have certainly been developed in many areas, determining an adequate response is not straightforward, given the complexity of the challenge. In fact, it is a challenge on four levels. Firstly, at the level of our assumptions: we need to adapt our view of the world. Secondly, at the level of institutions: we need institutions that are capable of greater direction and control, while remaining responsive to a changing environment. Thirdly, there is the challenge at the level of international cooperation: how do we choose our partners in this fragmenting world order and how do we deal with a multilateral trade order that is becoming less and less effective? Fourthly, at the level of policy instruments: we do not have the policy instruments needed to deal with this situation properly – at the international level, but also at the European and national levels.

It is therefore a complex challenge to which the answers are not straightforward. Moreover, we are also dealing with a moving target, as developments are heavily shaped by the actions of other actors. The scope for action is limited for Member States, and even for the EU as a whole. Effective action requires a thorough understanding of the strategies pursued by other countries, as well as a comprehensive view of the broader landscape and its evolving dynamics.

In this final chapter, we will outline the potential pathways and pointers for a strategic response to the problem and discuss the difficult aspects that these entail. The premise is that it is crucial to consider the developments in the global innovation race and international trade imbalances in conjunction with one another. A response focused solely on the global innovation race without understanding and addressing the

dynamics of the growing imbalances in trade is a losing battle. With Chinese companies offering their products at prices more than 30% lower than European companies, it is not simply a case of increasing productivity. If we only focus on industrial policy and competitiveness to compete in the innovation race, we run several risks at the same time. If the playing field remains uneven, there is a danger that we will spend an enormous amount of money, without actually succeeding in reducing our dependencies, and that we will even lose a significant part of our industry. Moreover, there is a risk that, in the competitive struggle with China and the US, we will also end up undermining key European values and aspirations – including privacy, environmental protection, working conditions and social benefits.[117] Thus, we will also need to find an answer to the large and growing trade imbalances.

This does not alter the fact that a coherent industrial policy remains essential for our prosperity and future success. China has developed into a technological leader in many areas and we are also lagging behind the US in this respect. The reports by Draghi (on the EU) and Wennink (on the Netherlands) rightly sound the alarm over slowing economic and technological progress in the EU.[118] Industrial policy, too, raises complex questions, and its success depends on giving careful thought to the 'how' of industrial policy. In section 6.1, we will discuss the pathways to rebalancing global trade and in section 6.2, we will cover pointers for industrial policy, before concluding in section 6.3 with a number of key takeaways.

6.1 Pathways to rebalancing global trade

A number of pathways can be envisaged for addressing trade imbalances, each raising its own set of questions and dilemmas: (1) international coordination, (2) strategic symmetry and (3) stronger trade defence mechanisms. These pathways are not mutually exclusive and can, to some extent, be pursued in parallel. This is, of course, an issue that extends beyond the European Union and individual Member States: it concerns a great many countries. It is therefore no surprise that organisations such as the G7, the IMF and the Bank of England are devoting attention to this issue.[119]

International coordination

The path favoured by economists and also proposed by the IMF amongst others would be for countries with excessive surpluses or deficits to work on macroeconomic

[117] One example is the European Commission's Digital Omnibus package, aimed at reducing the pressure brought by digital regulations in order to boost innovation or reducing sustainability targets to support European industry.
[118] Draghi report 2024; Wennink report 2025. These reports touch on both 'generic' and 'specific' industrial policy.
[119] IMF 2026a; C.-E. Bai et al. 2026; Cesa-Bianchi et al. 2026a.

adjustments themselves.[120] Symmetrical and gradual adjustments would reduce the risk of an adjustment being made in one economy simply shifting imbalances elsewhere or destabilising or restraining the global economy.[121] The US would then, for example, work on curbing government debt, while China would reorient its economy more towards domestic consumption.[122] Although there is considerable agreement among economists that this would be the preferred route, there is also a widespread assessment that the likelihood of this route actually being followed is very small.[123] The changes that China would need to make would go against its national strategy, which aims to reduce its foreign dependencies and increase its strategic relevance.[124] Moreover, there is no international structure capable of enforcing such adjustments. The IMF is the designated forum in which these matters are discussed, but the organisation cannot force countries to adjust.

With regard to the low valuation of the yuan – an issue closely intertwined with the trade balance – international coordination is also widely regarded as the preferred route. The Plaza Accord is often cited in this context: an agreement made in 1985 between the United Kingdom, France, Germany, Japan and the United States with the aim of depreciating the value of the US dollar against other currencies. Observers present this agreement as an important step in preventing the collapse of the international economic order at that time and suggest that a comparable response could address today's problems.[125] However, others assert that the Plaza Accord was a major cause of the economic problems that Japan experienced in the following decades, making China wary to conclude a similar agreement today.

Strategic symmetry

Another possibility is to strategically mirror the way in which China conducts its policy towards the European Union (strategic symmetry). This would mean Europe pursuing the same policy towards China that China pursues towards Europe, in a very consistent manner. In the past, the EU has accepted asymmetrical conditions because Chinese companies produced primarily low-value products and it expected China's economic system to develop more closely towards our own. Now that China is a competitor on

[120] This pathway is advocated by the authors of the CEPR report on rebalancing (Rey et al. 2026), by a staff paper from the Bank of England (Cesa-Bianchi et al. 2026a) and by the European Parliamentary Research Service (Jochheim 2026), as well as by the IMF (2025; 2026a) and the economists who have written on behalf of the G7 (C.-E. Bai et al. 2026).
[121] Rey et al. 2026; Cesa-Bianchi et al. 2026a.
[122] IMF 2025; Rey et al. 2026.
[123] Martin Wolf (2026) wrote in the Financial Times: 'The chances of such pre-emptive action are close to zero.' See also Rey et al. 2026. Tordoir & Setser (2026) wrote: 'The best remedy for the second China shock is also the most elusive: macroeconomic adjustment in China itself.'
[124] Hoshi 2026.
[125] Rey et al. 2026.

high-quality products and is clearly not converging with the rules and principles of the liberal economic world order, much stricter conditions for access to the European market and trade with the EU are warranted.

This should be carried out in an open, yet strongly coordinated manner. Any requirements or restrictions imposed by the Chinese government on European companies would be met with equivalent reciprocal measures. If China demands a joint venture for access to the local market, so too should Europe. If China demands that a share of the work be done by Chinese workers, then Chinese companies active in Europe must employ European workers to the same extent. If China entices European companies to move their R&D to China, the EU should encourage Chinese companies to do the same in Europe. This strategy must also work both ways: if China subsequently relaxes conditions for European companies, Europe should do so as well. Further, to ensure a level playing field, the requirements we impose on European actors should also apply to Chinese companies operating in Europe. This would include keeping state-owned companies out of certain markets, and maintaining a separation between civilian and military activities. Strict enforcement of this would impose substantial restrictions on many Chinese (state-owned) companies and on many universities that have close ties to the People's Liberation Army.

Thinking in terms of strategic symmetry also extends to the undervaluation of the yuan. In response to China's management of its exchange rate, some have argued that the eurozone should adopt policies aimed at lowering the value of the euro against other major currencies.[126] However, the EU is faced with highly complex questions here too. Such an approach would require the European Central Bank to depart from its current policy of a freely floating exchange rate.[127] Moreover, history shows the dangers of competitive devaluations escalating into currency wars. At the same time, if the EU does

[126] This is another option proposed by France's *Haut-Commissariat à la Stratégie et au Plan*. The study commissioned by the European Parliament (Mayr et al. 2026) raises this option: 'Alternatively, the European Central Bank (ECB) could intervene in the currency market, which would, however, require a change to the prevalent ECB approach of letting the EUR float against other currencies.'

[127] The ECB's central objective is price stability, operationalised as an inflation rate of around 2% over the medium term. There is no explicit exchange rate policy: the ECB allows the euro to float freely in relation to other currencies. Eurogroup Finance Ministers may conclude formal agreements on an exchange rate system or formulate general orientations for exchange rate policy (per Article 219 of the TFEU), but only on a recommendation from the European Commission and after consulting with the ECB or on a recommendation from the ECB. Such steps may also not negatively affect the primary objective of price stability. The ECB has, in fact, intervened in foreign exchange markets in the past to influence exchange rates. In 2000, it worked with other major central banks to counter the sustained depreciation of the euro against other currencies. However, this was an intervention in consultation with other central banks and it was aimed at the central objective of price stability. See Taylor 2004.

not respond adequately to this undervaluation of the yuan, this will continue to give China a huge competitive advantage that could cost the EU dearly.

Trade defence measures may also form part of the strategic symmetry route: import tariffs applied by China can be met with similar import tariffs in return. However, trade defence measures can also be a pathway in their own right, as we will discuss in the section that follows.

Stronger trade defence measures

The final pathway is imposing stronger trade defence measures – measures that restrict imports from abroad or make them more expensive. Various steps have already been taken by the EU in this area in recent years.[128] However, these trade defence instruments are currently insufficient to ensure a level playing field for European companies. Furthermore, these instruments are bound up with lengthy administrative procedures and investigations, meaning they often come too late.[129] The solar panel industry provides a clear example. By the time the EU had finally reached agreement in the 2010s on imposing tariffs to address unfair competition from China, the European industry had already been wiped out.[130]

Trade defence instruments can be strengthened in various ways.[131] For example by applying different definitions within the WTO framework and by reducing administrative burdens and investigative requirements, which can speed up action. Other options include reversing the burden of proof, so that the other party is instead required to demonstrate that there is, for example, no state aid involved, or requiring documentation to be submitted in advance, before a foreign company is permitted to enter the European market.

Improvements are therefore certainly possible, but at the same time, the current instruments are simply not adequate, nor designed, to address the structural causes of distorted world trade.[132] Instruments are product-specific, meaning they are unsuitable

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[128] However, a number of trade instruments have been revised and introduced. One example is the Foreign Subsidies Regulation (2023), which allows the European Commission to investigate state aid provided by third countries. Another example is the anti-coercion instrument to prevent intentional economic pressures from third countries and, if these do occur, to allow for countermeasures.

[129] García-Herrero 2026b; *Haut-commissariat à la Stratégie et au Plan* 2026.

[130] *Haut-commissariat à la Stratégie et au Plan* 2026.

[131] For example, the WTO could publish a list of products covered by the national security exception, allowing countries to use simple trade defence instruments for these products. The definition of state subsidies could also be broadened, because cheap credit and cheap land are not currently included, although these remain difficult to identify; see C.-E. Bai et al. 2026.

[132] Mayr et al. 2026.

for addressing the economy-wide market distortions. 'Waiting for case-by-case investigations while Chinese exports flood the market is not a viable strategy when the damage to European industry is becoming structural,' according to Bruegel economist García Herrero.[133]

The undervaluation of the yuan is one such issue that cannot be adequately addressed through sector-by-sector measures, let alone through a product-by-product approach. According to some, the undervaluation can be regarded as an economy-wide state subsidy for all goods and products.[134] In response, a broad import levy would be justified.[135] As with many other measures, this could provoke a Chinese counter-response. The EU will need to be willing to undergo this at some point, in order to prevent a further growth in dependencies. Compensation will also have to be provided for the sectors affected by retaliatory measures; for example, part of the revenue raised from tariffs could be used for a compensation fund.[136]

Andrew Small of the European Council on Foreign Relations argues that unambiguous measures are precisely what translate easily into a counter-response by China. He therefore advocates a 'swarm' of measures that are in themselves too small to provoke a counter-response, but can be effective collectively. These include: measures concerning reciprocal market-access rules (what we have referred to as strategic symmetry); tools against subsidised overcapacity; diversification requirements for critical chokepoints; trusted-vendor standards for connected infrastructure; transparency obligations for strategic sectors; and measures targeting companies that support hostile military or coercive activities directed against Europe.[137]

When it comes to trade measures, attention quickly turns to goods and services, but capital flows may also come into focus. Given the difficult questions and limitations of the pathways discussed, Financial Times columnist Martin Wolf suggests introducing a tax on capital inflows. In his view, this is the only meaningful way to get the global debate on trade imbalances moving.[138] Other reports deliberately steer clear of such far-

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[133] García-Herrero 2026b.
[134] Matthes 2025.
[135] Matthes 2025; Segal et al. 2020; *Haut-commissariat à la Stratégie et au Plan* 2026.
[136] Tordoir & Setser 2026.
[137] Small 2026.
[138] Wolf 2025, who makes this proposal for the US. Pettis (2019) also proposes this. This proposal and underlying reasoning was critically discussed by Obstfeld (2024). The proposal led to the introduction of a US bill, which was ultimately not adopted: the Competitive Dollar for Jobs and Prosperity Act (S. 2357) would have authorised the US Federal Reserve to impose a market access charge on foreign purchases of US assets.

reaching steps, stressing that solutions must remain within the framework of the WTO and existing multilateral arrangements.[139]

This immediately highlights an important tension: The European Union, and the Netherlands, have much to gain from upholding the multilateral trade framework. However, we are dealing with a major trading partner that does not pursue the common benefits of global trade, but one that actively strives to become independent of other countries while at the same time achieving a strategic position in global trade chains – to the detriment of industry and employment in other countries. Adhering strictly to the existing multilateral framework then severely limits the scope for responding to this and can lead to an untenable disadvantage for European industry.[140]

Reflection

Clearly there is no easy pathway. This may explain the policy hesitancy demonstrated in some key reports on this subject. The solutions outlined in those reports centre mainly on international coordination, yet consider it unfeasible at the same time. Other frequently mentioned solutions concern better monitoring and statistics, which would help to create a better picture, but do not provide a real solution to the trade imbalance or the extent to which China 'manages' its currency. While these are worthwhile steps, they also seem to be highly moderate, reactive and time-consuming in relation to the scale of the problem and the risks involved.[141]

The scale of the problem is thus not entirely proportionate to the solutions most frequently proposed in recent reports – international coordination and improved monitoring. This reflects the fundamental tension at the heart of this debate: the desire to maintain the international multilateral trade framework that has brought a great deal to Europe and to the world; breaking away from that would bring far-reaching consequences. Open trade brings a number of clear benefits, including lower prices for consumers, more choice, and access to knowledge and technology from other parts of the world. These benefits have contributed significantly to European prosperity. It is therefore understandable, and indeed justified, to want to protect this framework. At the same time, the issue of growing trade imbalances cannot be resolved within that framework, because it lacks the appropriate instruments. It is an issue that Member States cannot solve on their own. Trade policy is an EU competence. Steps are currently

[139] C.-E. Bai et al. 2026; Mayr et al. 2026; Cesa-Bianchi et al. 2026a.
[140] Setser, for example, says we need to break free from the current system in order to save it. Cited in De Boer & Jongsma 2026.
[141] MacFadden 2026.

being taken: official consultations are taking place with China on trade and investment. It is important that European countries are not played off against one another in this process.[142] Should consultations with China fail to produce the desired result, the European Union must not shy away from taking further steps – preferably in cooperation with other countries.

6.2 Pointers for a new industrial policy

It is imperative that we develop a response to the trade imbalance. Until this is achieved, it will be very difficult to pursue an industrial policy that genuinely reduces our dependencies. At the same time, a robust industrial policy is also of crucial importance.

There are several reasons for this. In today's increasingly geopolitical world, in which dependencies are increasingly used as instruments of geopolitical power, it is important to maintain global strategic relevance in certain areas and maintain the capacity to produce certain critical goods domestically.[143] Moreover, the design of technologies often contains choices that may have a major societal impact when these are widely used. If Europe wants to see its own values reflected in technologies, it is important that Europe also plays a role in their development.

Furthermore, high-tech products are often manufactured in innovative industrial clusters, and production is characterised by substantial economies of scale, owing to the high R&D costs, the capital-intensive nature of manufacturing facilities, and the practical knowledge and skills involved. Once companies gain that scale and technology advantage, they can improve their products faster and reduce their costs. These scale advantages are extremely difficult to catch up on, except through a deliberate push or the emergence of a newer technology. Once a lag has developed, it is then increasingly difficult to catch up, and when a certain industry has disappeared, it cannot simply be rebuilt. Active industrial policy can play an important role in achieving innovation and these scale advantages.

A strong industrial policy, as advocated for instance in the Draghi and Wennink reports, therefore remains important. This is all the more true because China and the US are showing tremendous technological innovation. Europe scores high when it comes to

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[142] Leahy et al. 2026.

[143] Of course, that does not always have to be the answer. For ensuring security of supply it would often be preferable to first explore strategies aimed at diversification, stockpiling, finding alternatives (substitution) and a strong commitment to recycling. See Berg & Meyers 2025.

research, but low when it comes to scaling up to the market, partly because of shortcomings in the functioning of the single market. Despite the differences, industrial policy in China and the US, as well as recent scientific literature on the subject, can provide a number of important lessons for a European industrial policy.[144] The first is the importance of combining direction with competition. The second is the importance of paying attention to the whole value chain – from inputs to end markets. We will discuss these elements and the dilemmas that arise in relation to them.

Combination of direction and competition

Political discourse frequently frames policy options as a dichotomous choice between market forces or government intervention, yet effective industrial policy hinges on combining state direction with competitive market dynamics. This does not mean state-led innovation supporting a number of existing large enterprises, or the idea that government can identify future successful companies ('picking winners'). Nor does it mean primarily facilitating and leaving the markets to their own devices. It is about the combination of state direction and orchestrated competition. This is also referred to as the tournament model, whereby the various stages of innovation are financed in successive rounds, with only a subset of companies advancing to each subsequent round, until companies emerge that are ready to 'enter the market'. To achieve a productive combination of direction and competition in innovation, it is important to have clear goals, sufficient financial resources and to orchestrate competition. We will now look at these aspects in detail.

Innovation thrives on predictability and consistent policies, if only to make it attractive to private investors to invest.[145] China, for example, works with long-term plans. The challenge for the EU is to be able to set similar long-term goals and adhere to them. There is a strong temptation to make decisions that are popular in the short term, or to change strategies over and over again, but this creates unproductive unpredictability at the expense of innovation.

Driving innovation also requires clear, specific goals. The DARPA model in the United States, for example, sets explicit, ambitious technological targets. The approach focuses on selected technologies, on the understanding that not all technological bets will ultimately pay off. China, too, sets concrete targets for certain technologies. The goals underlying the main funds in the Netherlands and Europe are more open in nature. In the case of the Dutch National Growth Fund, for instance, hardly any direction was

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[144] For industrial policy considerations from recent scientific and policy literature, see Liu 2019; Criscuolo et al. 2022; Cherif & Hasanov 2024; Juhász & Lane 2024; Juhász et al. 2024; Mazzucato & Rodrik 2026; OECD 2026c.
[145] AWTI 2025.

given: private entities were expected to come forward with innovative plans that would contribute to economic growth, but more specific direction from the government was considered undesirable.[146] For the Important Projects of Common European Interest (IPCEIs), the EU only provides general criteria, such as a contribution to EU objectives and participation of several Member States. Member States jointly decide which technology domains to prioritise, such as hydrogen or semiconductors. In 2022, the Joint European Forum for IPCEI was set up to jointly identify strategic technologies. The more concrete targets are set bottom-up by the participating organisations.

Specific initiatives, such as the Chips Act (and the proposed Chips Act 2.0), do target a specific sector. Under the initial Chips Act, the goal was formulated that European players should achieve a 20% share of global chip supply by 2030, but it remains unclear precisely what this is intended to achieve. A certain market share in chip production without considering the whole chain still says little about security of supply or about what intermediate steps need to be taken. Of course, there is a complicated question behind this as to who should formulate these objectives: the European Union or the Member States? It is also important to consider the primary underlying goal: is it primarily to ensure the security of supply, for example access to certain raw materials, or is the aim to achieve strategic relevance, for example by gaining prominence in advanced semiconductor production or quantum technology?[147] This makes an important difference for the design and costs of the industrial policy.

Another crucial element of state direction is financial resources. The European Union's budget is limited in comparison with China or the US, which of course is linked to the fact that the EU is a completely different political system. The EU also has no fiscal competences, which rules out fiscal steering mechanisms at the European level.[148] Member States are in principle banned from providing state aid, albeit with a growing number of exceptions, such as under IPCEIs, the Clean Industrial State Aid Framework (CISAF), and Climate, Energy and Environmental Aid Guidelines (CEEAG). The EU thus systematically links permitted state aid to substantive policy objectives, transforming

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[146] Stellinga & Van Duijnen 2024. Dutch industrial policy seems to have recently moved towards a more selective approach, which is evident in the National Technology Strategy (prioritising ten key technologies) and in the transformation of the *Topsectoren* policy into an industrial policy focusing on a more limited set of markets.

[147] The recent literature on geoeconomic dependencies sometimes distinguishes between defensive and offensive policies, with the former aimed at reducing geoeconomic vulnerabilities arising from dependencies on foreign actors and the latter at increasing our own geoeconomic power; see Bauerle Danzman & Meunier 2024. See also Mehlbaum & Heerma van Voss 2025; Gaastra 2026; Meijerink et al. 2026; Swets & Van Wanrooij 2026.

[148] Tax credits for business, for example, play a significant role in American innovation policy. Such instruments do exist at Member State level, for example the R&D tax exemptions in the Netherlands.

state aid from an area primarily subject to EU oversight into an instrument for pursuing strategic EU priorities.[149]

This development, in turn, leads to other tensions. Large economies are making use of the expanded state aid frameworks to grant billions in support to their own clean-tech or defence industries. Smaller Member States experience this as a threat to the level playing field within the internal market. They point out that this dynamic leads to an internal subsidy race where most of the funding gravitates towards the largest Member States.[150] There is also friction over the administrative complexity of European instruments. Where Member States and industry require rapid, direct support to compete with the US innovation system, European IPCEIs and central funds are subject to strict framework conditions and reporting obligations. Member States are increasingly critical of this regulatory burden, which, in their view, hampers operational speed.[151]

The question of financing once again highlights the tension between the competences of the EU and those of its Member States. Who is entitled to allocate the funding? How are the fiscal competences of the EU and the Member States arranged? The proposal for the new Multiannual Financial Framework (MFF 2028-2034) now also includes a proposal for the creation of a European Competitiveness Fund (ECF), which could potentially offer at least part of an answer to these questions. Under this fund, the Commission intends to pool existing programmes and provide an additional financial injection. The fund's exact design will be crucial. This touches on the second important aspect of the combination of direction and competition, which is organising competition.

Various elements of competition can also be found in European programmes, for example through funding competitions (e.g. the Innovation Fund and Horizon Europe) and within IPCEIs. One of the difficulties here is that this often involves competition around a specific step in the innovation process, such as a proof of concept or the development of a prototype, although the EU is taking steps to ensure more coherence between these stages. Ideally there would be more of a tournament model, where the different stages of innovation are financed in successive rounds, until companies emerge that are ready to enter the market and production pathways have been established. The competition therefore extends beyond innovation itself to include the setting up of production capacity. What matters here is that, in each round, there is an

[149] Hornkohl & Pelekis 2026.
[150] Advisory Council on International Affairs, 2022
[151] See also Draghi 2024.

assessment of whether targets have been achieved, and only those parties that have achieved the goals receive funding for the next round.

The EU does not have such an integrated innovation ecosystem that sustains competition across the entire innovation chain, from initial research to market-ready products. Following the recommendations of the Wennink report, such an approach of orchestrated competition – which is also part of DARPA's approach, for example – is being considered by the Dutch government through the establishment of a National Agency for Disruptive Innovation (NADI). Such an approach could also be woven more closely into the IPCEIs. An approach of this kind, with clear goals and phased funding, should also form part of a European Competitiveness Fund yet to be established. The complicating factor here is that, from an innovation perspective, it is best for funding to go simply to the highest-quality proposal, irrespective of its geographical location. Within the EU, however, geographical distribution of funding also requires consideration, as well as whether a compensatory mechanism is needed.

Finally, there is the question of how competition can be preserved, even in domains that quickly tend towards monopoly. Maintaining competition is important, given the negative experiences associated with firms being continuously shielded from competitive pressures.[152] This could be achieved, for example, by ensuring that at least several firms remain active within each market segment or by requiring dominant firms to open their systems to smaller suppliers and start-ups. In the current debate, there are calls to make European competition policy more flexible in order to create national or European 'champions' capable of withstanding international competition. At the same time, we must bear in mind that the European Union has benefited greatly from its competition policy.[153] A degree of competition therefore remains important. And where this is not possible – for instance, in a market that strongly tends towards monopoly – other options should be considered, such as a strictly regulated market, as in the case of the postal market, or organising production as a public service.

Focus on the entire value chain, from suppliers to end markets

The second key aspect is that industrial policy must cover the whole value chain – from suppliers to end market – and the necessary pre-conditions for innovation, such as infrastructure and knowledge development.

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[152] Cherif & Hasanov 2024.
[153] Philippon 2019.

This means paying attention to raw materials and other inputs as part of industrial policy.[154] In Japan, this was clearly a part of industrial policy. Steel, for example, was initially subsidised to allow the automotive and shipbuilding industries to be built up.[155] Infrastructure in the broad sense is also important: in the Netherlands, the electricity grid congestion and the nitrogen crisis are two very clear bottlenecks that need to be resolved, as the Wennink report explains in detail.[156]

In addition, market creation is also crucial to the success of industrial policy. It is important to ensure that policies focused on end markets and policies focused on innovation and production are aligned, so that they are ultimately compatible. Government influences the end market through standard-setting and pricing, but it is also a major purchaser in its own right. Public procurement within the EU amounts to 14% of GDP.[157] This means it could serve as an important strategic instrument to steer innovation. By creating substantial demand at once for products that meet specified requirements, governments can trigger a race to the top, encouraging firms to compete by delivering their best innovations in order to secure public contracts.[158] The assurance that there will be substantial demand for innovative products then makes it more attractive for private parties to invest.

One domain where it would make a lot of sense to deploy this purchasing power is that of the digital services used by the government itself, such as cloud services. The problem here, as in other areas, is that procurement is highly fragmented and takes place at every level of government, from the municipal and provincial level to national and European level. These various purchasers apply different criteria, which makes procurement more of an obstacle than a driving force for innovation. Pooling this purchasing power – for cloud services, for example – could be an important step towards creating serious European alternatives for the currently dominant American players.

This strategic use of public procurement increases the opportunities to accelerate innovation and technological upscaling.[159] However, it also raises questions, not only about whether – and if so, which – non-European providers are eligible for preferential

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[154] Liu 2019.
[155] Haggard 2018.
[156] Wennink 2025. The Netherlands' nitrogen crisis stems from decades of high nitrogen emissions, which is especially too high for the Natura 2000 sites. This became a binding legal and political constraint in 2019, when a court ruling confirmed that the government's existing permit system failed to comply with EU nature-protection law, effectively freezing permits for new construction, infrastructure and farm expansion ever since.
[157] Letta 2024.
[158] Hesselmans et al. 2025.
[159] OECD 2017.

treatment. It also leads to more technical questions: what does sufficient strategic autonomy mean exactly? Which technology and origin-related criteria should be defined for this purpose? In modern complex production chains, this also means: what percentage should be of European origin? And do we measure that by the geography of production or of ownership? In addition, there is a risk that such complex selection criteria will strengthen the relative position of regions and Member States that already have developed industrial ecosystems and a high institutional capacity, with the possible consequence of widening the existing geographical disparities within the EU.

Reflection

A strong and more offensive industrial policy is needed. To avoid any misunderstanding, this is certainly not a plea for unrestrained financial support for European companies. It should not be forgotten that innovation is often the result of companies being challenged, rather than being shielded from pressure.[160] This implies that the design of industrial policy is key. We have highlighted two crucial elements: the combination of direction and competition, as well as attention paid to the value chain as a whole. When these issues are examined specifically for the EU and its Member States, it becomes evident that they create tensions for the institutional architecture of the European project.

The European Union and its Member States are both limited in what they can do in this situation. In many cases, Member States do not have the scale needed for innovation policies in certain high-tech products. Moreover, the scope for granting state aid is limited. In order to prevent distortion of the internal market, Member States must operate within European frameworks, not only when it comes to state aid, but also, for example, in the field of public procurement. The European Union, for its part, has a limited budget and Member States are reluctant to centralise more budgetary resources and powers at European level in order to pursue a fully fledged and effective industrial policy. There are also differing views on economic security and on how to deal with China.[161] The result is a system that is mutually constraining, in which neither the Member States nor the EU institutions possess the instruments to implement an effective and scalable industrial policy, with all the tensions that this entails. This mutual constraint could all too easily result in a stalemate.

[160] Hesselmans et al. 2025.
[161] Andersson & Lindberg 2024.

Rising geopolitical and economic pressures are exacerbating these internal tensions, both between Member States and the European Union and amongst Member States themselves. This may lead to further integration, but it could equally lead Member States to increasingly act unilaterally, with potential consequences for the coherence of the internal market and the effectiveness of European industrial policy. The governments of the Netherlands and other Member States must in any case be prepared to have these discussions. In doing so, they would do well not to be guided solely by direct costs and benefits, but also to weigh up the broader, long-term interests of Europe and their own country. Efforts by Member States to preserve their individual autonomy vis-à-vis the EU could ultimately reduce their collective ability to maintain autonomy in relation to the United States and China.

This does not mean, however, that there is nothing that can be done now. The strategic use of public procurement and the pooling of purchasing power (e.g. to develop a European cloud), embedding the IPCEI approach within a broader European industrial policy agenda and establishing an institute with a profile similar to DARPA are some examples of such measures. In these areas, the Netherlands could take the initiative to lead cooperation at EU level. Where this proves difficult, an alternative approach could be to pursue cooperation with a group of leading European countries.[162] Investments in the energy infrastructure can be pursued at the national level or together with a limited number of other countries. More effort can also be made to acquire more public expertise about strategic value chains and the necessary conditions to make them flourish.[163]

6.3 Key takeaways

Europe and its Member States are facing an enormous challenge. The two largest economies in the world – the US and China – are increasingly deploying economic dependencies for geopolitical purposes. Europe is particularly vulnerable, given its vital dependencies on these two countries. Although awareness of this fundamental challenge is growing – for example, through incidents involving Solvinity and Nexperia – it has proven difficult to actually reduce European dependencies. This relates to two underlying dynamics: (1) the global innovation race and (2) growing imbalances in international trade. In this chapter, the WRR has set out the beginnings of a response to this. This can be summarised in four key messages:

[162] Hirsch Ballin et al. 2020.
[163] As is currently being done for raw materials by the Special Representative for the Raw Materials Strategy.

1. **Industrial policy is important, but by itself not enough to tackle strategic dependencies. Formulate a strategy that addresses both trade imbalances and innovation.**

In Europe, industrial policy is rightly receiving significant attention. Since the Draghi report was published in the EU, boosting productivity has been high on the political agenda. While that is important, it is not enough. To prevent our strategic dependencies from increasing still further, it is equally important to formulate a response to distorted world trade. China's enormous export surplus is not solely the result of successful innovation or higher productivity, but also of substantial state aid, low domestic demand, low wages and exchange rate management. This has resulted in very significant price differences between Chinese and European products – differences that cannot be bridged with productivity gains alone. Distorted trade will need to be addressed: more needs to be done to create a fairer playing field for European companies. If we fail to do so, it will become almost impossible to pursue an industrial policy that genuinely reduces our dependencies.

At the same time, a strong industrial policy remains of crucial importance. China and the United States are advancing rapidly in technology, supported by powerful innovation systems. In today's geopolitical world, where dependencies are more often leveraged as a geopolitical tool, it is important to strengthen our position in critical technologies. So, it is crucial to implement a strong policy to boost innovation.

2. **Doing nothing also comes at a high price. Therefore, to address trade imbalances, all options need to be on the table, even if they are painful.**

Under the current circumstances, doing nothing also comes at a high price. Large parts of European industry are under pressure. In Germany, we have already seen this result in large-scale job losses. If we do not act, our dependencies will only worsen, and we will be hit hard economically. Growing dependencies will further constrain Europe's room for manoeuvre, making it even more difficult to reduce critical dependencies in the future. The longer we wait, the greater the future costs will be.

But a strong response would also come at a price: government support will be needed, trading partners may retaliate, and prices could rise.[164] These drawbacks have, thus far, discouraged the EU and its Member States from formulating a robust response. But the costs must be weighed against the potential damage of geoeconomic coercion, trade shocks and long-term economic costs. This tension will need to be confronted honestly. And all policy options will then need to be genuinely considered, even if they are painful.

3. Europe is lagging behind when it comes to applying and scaling up technological innovations. Commit to a coherent European innovation system.

Limiting our high-risk dependencies requires a strong European innovation system. While China and the US have coherent innovation systems, the European system is still fragmented and lags behind in scaling up and bringing technological innovations to the market. We need a consistent policy across the different stages of the innovation cycle – from breakthrough innovations to market introduction. Through a combination of state direction and orchestrated competition, companies should be constantly challenged to innovate and scale up. This requires a well-calibrated mix of policy instruments – including subsidies, loans, regulation and government acting as a launching customer – spanning the entire innovation cycle.

At the moment, the European Union and its Member States find themselves caught in a mutual constraint. Member States are limited in the scale they have, the financial support they can provide and the conditions they can impose. But the European Union is also limited in its budget and powers, which means that a fully fledged European industrial policy fails to get off the ground. This mutual limitation currently stands in the way of a coherent and powerful European innovation system. The reluctance to transfer powers and budget to the EU level is understandable, yet a transfer of national autonomy to the European Union must be weighed against the alternative: a loss of autonomy to China and the US. It is important to overcome this stalemate, which will of course have to be accompanied by strong conditions for an effective industrial policy. In the short term, efforts can focus on greater coordination and working with coalitions of frontrunner countries on various dossiers.

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[164] Some, however, prefer the term 'price correction', arguing that such a correction is necessary because markets fail to adequately price the risks arising from strategic dependencies. See Small 2026.

4. The world as we knew it no longer exists. Dare to think outside existing frameworks.

Europe has benefited greatly from a world of free trade governed by international agreements. However, the pillars of this post-war multilateral trading order are crumbling. This changing reality is not something that we can afford to ignore. Now that the world has fundamentally changed, it is important to reconsider entrenched perspectives on trade policy, industrial policy, government intervention and competition. If we fail to do so, do too little or wait too long, we run significant risks. A comparison is sometimes made with adherence to the gold standard. In the 1930s, the Dutch government dogmatically clung to this standard, under which national currencies were linked to gold, while almost all other countries abandoned it. This had severe negative economic consequences for the Netherlands.

This analogy illustrates how clinging to existing international frameworks under drastically new circumstances can, in fact be counterproductive, especially when other countries are flouting those very frameworks. The challenges of today call for a fundamental reorientation of our thinking. We must have the courage to cast aside the lens through which we have viewed the world over the past decades. That will be uncomfortable. It will be painful. But only by daring to think beyond conventional approaches can we build a prosperous future for Europe.

List of people interviewed

- **Paul Adriaansen,** Netherlands Authority for Consumers and Markets (ACM)
- **Román Arjona,** Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), European Commission
- **Andrés Barreneche García,** Organisation for Economic Co-operation and Development (OECD)
- **Fred van Beers,** SIF group
- **Paul de Bijl,** Netherlands Authority for Consumers and Markets (ACM)
- **Remco de Boer,** Studio Energie
- **Lucas Boehlé,** International Energy Agency (IEA)
- **Han ten Broeke,** Cabinet of European Commissioner Wopke Hoekstra
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- **Anneke François,** Netherlands Authority for Consumers and Markets (ACM)
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- **Nicolas Gonne,** Organisation for Economic Co-operation and Development (OECD)
- **Alexia González Fanfalone,** Organisation for Economic Co-operation and Development (OECD)
- **Tim Gould,** International Energy Agency (IEA)
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- **Balasz Kiss,** Directorate-General for Trade and Economic Security (DG TRADE), European Commission
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- **Manon van Raak,** Philips
- **Jack Radisch,** Organisation for Economic Co-operation and Development (OECD)
- **Stephan Raes,** Organisation for Economic Co-operation and Development (OECD)
- **Vincent Roza,** Dutch Ministry of Foreign Affairs
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- **Benedikt Runschke,** SVR Wirtschaft
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- **Andrew Small,** European Council on Foreign Relations (ECFR)
- **Bram Smeets,** Eneco
- **Demos Spatharis,** Directorate-General for Competition (DG COMP), European Commission
- **Floris Swets,** Dutch Ministry of Economic Affairs
- **Coen Teulings,** Professor Emeritus Utrecht University
- **Elizabeth Thomas Raynaud,** Organisation for Economic Co-operation and Development (OECD)

- **Jaap Walter Tilstra,** Directorate-General for Competition (DG COMP), European Commission
- **Stephanie Venuti,** Organisation for Economic Co-operation and Development (OECD)
- **Martien Visser,** Hanze University of Applied Sciences Groningen
- **Harm de Vries,** Innovation Industries
- **Stefan van Wanrooij,** Dutch Ministry of Economic Affairs and Climate
- **Harmen van Wijnen,** ABP
- **Christopher Zuber,** SVR Wirtschaft

In addition, the WRR paid a valuable visit to a range of institutions in Brussels, an itinerary arranged by the Permanent Representation of the Kingdom of the Netherlands to the European Union.

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Europe in the Era of Geoeconomics

Rebalancing Trade, Boosting Innovation

Economic relations are increasingly used as instruments of geopolitical power. We are living in an era of geoeconomics. The European Union is particularly vulnerable in this situation. While the urgency of this issue is increasingly recognised, Europe's dependencies are not diminishing. This has to do with two underlying dynamics: the global innovation race and growing imbalances in international trade.

In European policy debates, the global innovation race is often front of mind – and with good reason. A major effort is required to develop a truly effective industrial policy with sufficient direction and scale. But unless simultaneously a solution is found for the growing trade imbalances, we risk spending vast amounts of public money, and jeopardising key European values and aspirations in areas such as privacy, working conditions and climate policy – without actually reducing our critical dependencies. Therefore, the core message of this report is that both are needed in combination: a response to the growing trade imbalances and a commitment to a strong innovation system.

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