

A Service of



Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre

Van den Abeele, Éric

Working Paper

Towards a new paradigm in open strategic autonomy?

Working Paper, No. 2021.03

Provided in Cooperation with:

European Trade Union Institute (ETUI), Brussels

Suggested Citation: Van den Abeele, Éric (2021): Towards a new paradigm in open strategic autonomy?, Working Paper, No. 2021.03, European Trade Union Institute (ETUI), Brussels

This Version is available at: https://hdl.handle.net/10419/299691

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



Towards a new paradigm in open strategic autonomy?

Éric Van den Abeele



etui.

Towards a new paradigm in open strategic autonomy?

Éric Van den Abeele

Working Paper 2021.03 european trade union institute

ETUI publications are published to elicit comment and to encourage debate. The views expressed are those of the author(s) alone and do not necessarily represent the views of the ETUI nor those of the members of its general assembly.

Brussels, 2021

Publisher: ETUI aisbl, Brussels
All rights reserved
Print: ETUI Printshop, Brussels

D/2021/10.574/16 ISSN 1994-4446 (print version) ISSN 1994-4454 (electronic version)



The ETUI receives financial support from the European Union. The European Union is not responsible for any use made of the information contained in this publication.

Table of contents

Exe	cutive summary	5
Intr	oduction	6
	t One	
The	EU's dependence on the great powers	7
1.	The United States: a love-hate relationship	7
2.	China: the systemic rival	9
3.	Russia: an inescapable geopolitical power	11
	t Two	
The	concept of strategic autonomy in the European arena	13
1.	An elusive, shape-shifting concept	13
1.1	The idea of strategic autonomy was originally associated	
	with security and defence	
1.2	The industrial connotations of strategic autonomy	
1.3	Strategic autonomy at the heart of the Commission's initiatives	
1.4	Emmanuel Macron's crusade for a common strategic culture	
1.5 1.6	Charles Michel's advocacy for a new common European project The Conclusions of the European Council of October 2020	
1.7	The Conclusions of the European Council of October 2020 The Conclusions of the Competitiveness Council of 13 November 2020	
2.	The political rise of the concept of strategic autonomy	20
2.1	The open supporters	
2.2	The concept's detractors: the critical stance of the 'Group of Twelve'	
2.3	The question of digital sovereignty	
2.4	The ambivalent States	23
2.5	The non-participants	25
3.	How does the EU see the discussions unfolding?	
3.1	The ecosystem concept	25
3.2	The supply chain concept	
3.3	The strategic value chain (SVC) concept	
3.4	The cluster concept	29

	Three v should the EU move towards strategic autonomy?	31
1.	Priority to be given to a smoothly-running, protective, robust internal market	31
2.	A response at the level of industrial and competition policy: the IPCEI rout	
2.1	A restricted tool with conditions attached	
2.2	Launch of the Strategic Forum and selection of strategic value chains	
2.3	Launch of the first IPCEIs	
2.4	The other IPCEIs in prospect	
2.5 2.6	The new Commission Communication on IPCEIs	
3.	Trade policy and the question of the level playing field	42
3.1	Relaunching the multilateralist approach	42
3.2	The trade policy review: multilateralism based on compliance with the rules	43
3.3	The bilateral agreement between the EU and China, a worrying precedent	44
3.4	The establishment of a Carbon Border Adjustment Mechanism (CBAM)	45
3.5	A policy of targeted sanctions reduced to human rights violations	46
3.6	Levelling the playing field	46
4.	Developing an ambitious policy on harmonised standards	
4.1	Making the EU a leader in harmonised technical standards	
4.2	The protection of intellectual property contributes to strategic autonomy	48
	Four clusions and recommendations	49
1.	Creating a sustainable partnership and multilateral alliances	50
2.	Making a commitment to an ambitious multilateral agreement at WTO level	51
3.	Carrying out an impact assessment of strengths and weaknesses for each strategic value chain	51
4.	Making IPCEIs and innovation into levers for the industrial policy	52
5.	Forging industrial cooperation among the Twenty-Seven	52
6.	Strengthening the EU in terms of standards	53
7.	Capitalising on the Conference on the Future of Europe to move the debate forward	53
Refe	erences	54
List	of figures and tables	58

Executive summary

The aim of this research paper is to review the recent emergence on the European scene of the concept of open strategic autonomy and the consequences it may have for EU action.

Originally stemming from the language of the common foreign and security policy (CFSP) and the common security and defence policy (CSDP), strategic autonomy now seems to have become the EU's new catchphrase. Charles Michel dubbed it Goal No. 1 for our generation: 'For now, much of the debate on strategic autonomy has been on semantics, marking clear political divides between countries that see this as a threat to Europe's openness, and its proponents who see a chance to advance European industry and help foster "champions" able to compete on a global scale.'

The concept was endorsed by the European Council of 1 and 2 October 2020. It was referenced at the European Council of 26 March 2021. It has the full attention of the Portuguese Presidency, which devoted an informal meeting of the Competitiveness Council to this on 22 March 2021.

At the same time, the green and digital transition, the resilience of the EU's socio-economic model in the context of the pandemic and the recovery of the economies of the Twenty-Seven are taking up a great deal of space on the Union's agenda. By 30 April 2021, each Member State has to submit its national recovery plan with two targets: devoting 37% of this budget to greening and 20% to digital. By 2030, the EU, for its part, has to reduce its CO2 emissions by 55%.

Are these goals sustainable over a medium-term timeline (2030)? Is strategic autonomy the launch pad for a new European Union paradigm?

Given the huge challenge of changing its underlying model to bring its policies into line with these ambitions, the EU will need to tackle the numerous forms of inertia and resistance that it faces.

What should be the strategy to be developed by the EU and its Member States to achieve this? Are they capable of doing so, and do they have the political will?

This study raises the question and suggests some lines of thought. It remains for the EU to take the initiative to bring these requirements to multilateral level. Let us hope that the current negotiations can have some effect on developments in the EU and the world.

Introduction

In a context of unprecedented crisis, the concept of strategic autonomy has really caught on. The definition by the European Parliamentary Research Service (EPRS), however, shows that this multifaceted notion has more of a political dimension than a truly operational one: 'Strategic autonomy – defined as the ability to act autonomously, to rely on one's own resources in key strategic areas and to cooperate with partners whenever needed – is therefore a strength, which, if used effectively, could also allow the EU to fulfil the goals set by the European Council in its 2019-2024 strategic agenda: to protect the EU's interests and to promote its values worldwide. It would enable the EU to live up to its self-imposed level of ambition, to protect its citizens, respond to external conflicts and crises and help its partners to build their capacity.'

Strategic autonomy, which has the purpose of ensuring that the Union protects its vital interests, lies at the heart of the latest Conclusions of the European Council. The German and Portuguese EU Presidencies made points of substance out of it, and the members of the Euro Summit and the EU Council devoted some time to it.

Not many speeches, from those by Charles Michel, the President of the European Council, to those of Commissioner Thierry Breton, fail to raise this concept, calling for a shot in the arm for the EU.

Paradoxically, in certain other Council fora (EPSCO, AGRI, ENVI, etc.) and in the European Parliament (EP), the debate around strategic autonomy has been hardly touched upon, or even ignored. The concept is mentioned only twice in the European Recovery and Resilience Facility (RRF), and similarly in the Climate Law (Green Deal), in which it is given no practical scope.

In Part One, we look at the EU's situation with regard to the three main international players, establishing that the Union is in a dependent situation in military, industrial, energy and technological terms.

In Part Two, we turn to the evolution of the concept of strategic autonomy to analyse its foundations and its implications.

In Part Three, we consider the philosophy on the internal market, industrial and competition policy, trade policy and standards policy. We will see how Important Projects of Common European Interest (IPCEIs) and also the Carbon Border Adjustment Mechanism can be an ideal pathway to establishing the EU's technical sovereignty.

WP 2021.03

^{1.} Anghel *et al.* (2020: 3).

Part One The EU's dependence on the great powers

The emergence of the concept of strategic autonomy owes a great deal to the pandemic, but also to the stances of the three international players² which are, in order, the United States, China and Russia.

Because, while the EU is a leading economic player³ on the international stage, its military, economic, technological and energy dependency mean that Europe is a giant with feet of clay.

1. The United States: a love-hate relationship

EU-US relations are of great strategic importance in economic terms. Despite the headwinds whipped up by the failings of the Trump Administration, the United States and the European Union are each other's main trading partners and their biggest respective markets.

The total value of trade in goods and services between the EU27 and the United States was approximately €950 billion⁴ in 2020, that is to say some 40% higher than trade in goods and services with China.

It is in defence and security, however, that the EU is most heavily dependent on the United States,⁵ which funds NATO to the tune of 75%. The Union does not have the resources to guarantee its strategic autonomy in the short term, particularly as American military expenditure is increasing significantly year on year.

As far as energy too is concerned, the EU27 has turned to the United States wishing to diversify its supplies: between July 2018 and May 2019, imports of liquefied natural gas (LNG) from the United States increased by 272%, albeit with Russia remaining the EU's main source of supply.

^{2.} It should be noted that, in July 2017, the EU and Japan, which are the second and fourth largest economies in the world, respectively, and together account for 22% of world trade, entered into an ambitious agreement at political level.

^{3.} Among the European products most sold abroad listed by Eurostat are machines and vehicles (€404.7 billion, up 2.8% in one year) and chemicals (€191 billion, +7%).

^{4.} During the first quarter of 2020, trade in services between the EU and the United States amounted to €296.3 billion, five times the trade in services between the EU and China, which amounted to €53.3 billion (Hamilton, 2021).

US military expenditure increased by 5.3% to a total of \$732 billion in 2019. This is equivalent to 38% of military expenditure worldwide.

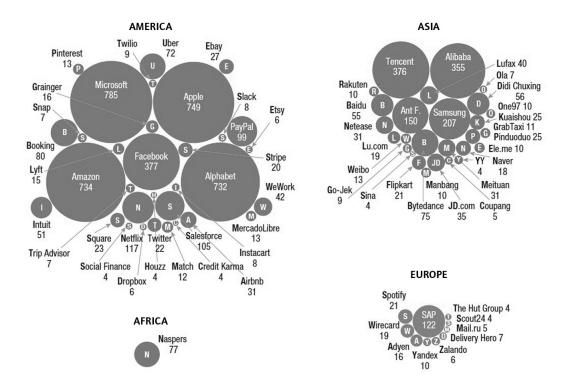


Figure 1 Geographical distribution of the global platforms (capitalisation in USD billion)

Source: UNCTAD 2019.

It is, however, in the digital sphere that the United States most clearly dominate bilateral relations.

This diagram clearly shows that the major American players (Google, Amazon, Facebook, Apple and Microsoft – GAFAM) are in a position of hegemony, which places the question of technological sovereignty at the very top of the political agenda.

To ensure that digital platforms with significant market impact do not impose unfair conditions on companies or discriminatory conditions on the public, the Commission has adopted two proposals for regulations, currently under review: the Digital Services Act⁶ and the Digital Markets Act.⁷

These legislative proposals, due to be approved in mid-2022 under the French Presidency, have two goals, which are economic and ethical in nature: holding

^{6.} The proposal for a regulation on digital services (Digital Services Act or DSA) aims to place accountability with all intermediaries, but particularly the largest platforms. They will have to moderate the content they host on their websites and cooperate with the authorities of the Member States.

^{7.} The proposal for a regulation on digital markets (Digital Markets Act or DMA) will impose specific constraints on 'systemic' players, with the chief aim of preventing the GAFAM companies from taking advantage of their size and market capitalisation to distort competition.

back the hegemonic strategy of the (primarily American) biggest players in the digital sphere and seeking more effective content moderation.

Furthermore, the Commission recently approved a Communication,⁸ one of the aims of which is precisely to ensure the security and resilience of the digital ecosystem and supply chains.

Even if it is too early to assess the impact of the Joe Biden Presidency on the EU's strategic autonomy, it is clear that the question is now posed in different terms. Significant guarantees on multilateral cooperation have been given by the United States: rejoining the Paris Climate Agreement, the desire to restore the Iran nuclear deal, temporary suspension of the customs duties imposed on Europe, appointment of pro-European personalities to key posts, etc. But even if the Biden Presidency holds out favourable prospects in terms of a strategic partnership, there could still be divergences on particularly sensitive issues: trade, taxes on the American digital giants and respective attitude to the development of Chinese technologies.

2. China: the systemic rival¹⁰

In the space of 15 years, China has become a major financial, economic, industrial and military power. By 2030, it is set to become the leading economic power, ahead of the United States, the EU and Japan.

Taking trade in goods and services together, China is the EU's second economic partner¹² after the United States but its first trading partner in terms of goods. For the year 2020, trade¹³ between the EU27 and China amounted to €657 billion.

The objective of China's economic and industrial policy, formalised in the 'Made in China 2025' strategy, ¹⁴ is to create national champions that can become the best in the world in the high technology strategic sectors.

^{8.} European Commission (2021b).

^{9.} In this connection, see Nardon (2021).

^{10.} The expression 'systemic rival' appears in the 2019 joint Commission/High Representative contribution to the European Council: 'China is (...) an economic competitor in the pursuit of technological leadership, and a systemic rival promoting alternative models of governance', Joint Communication, European Commission and HR/VP contribution 'EU-China – A strategic outlook', JOIN(2019) 5 final, 12 March 2019, p. 1.

^{11.} According to the Stockholm International Peace Research Institute (SIPRI), China's expenditure amounted to \$261 billion in 2019, an increase of 5.1% compared with 2018. Source: SIPRI (2020).

^{12.} See https://www.medef.com/fr/actualites/la-chine-premier-partenaire-commercial-de-lue-en-2020

^{13.} In 2017, with a 13% share in Chinese goods imports (€217 billion) and 16% in Chinese goods exports (€332 billion), the EU was China's biggest partner. In that same year, China accounted for 11% of extra-EU goods exports (€198 billion) and 20% of extra-EU goods imports (€375 billion), making it the EU's prime partner in this respect.

^{14.} 'Made in China 2025' was launched in 2015 to reduce China's dependence on foreign technologies. The aim is to achieve that objective by 2025.

According to the same logic, China preserves its internal market strictly for its domestic enterprises, shielding them from competition through selective market opening, huge subsidies granted to state-owned and private-sector companies, closure of its procurement market and the preference given to domestic operators.

As a precondition for access to the Chinese market, EU operators have to submit to onerous requirements, such as creating joint ventures with Chinese companies or transferring key technologies to their Chinese counterparts.

The EU is heavily dependent on China in three respects:

- Strategic raw materials: ¹⁵ The EU depends on China for 98% of its needs for heavy rare earth elements. By way of comparison, the EU depends on Turkey for 98% of its borate requirements and on South Africa for 71% of its platinoids (platinum, palladium, osmium, iridium, ruthenium, rhodium).
 - These critical raw materials are essential to the working of a wide range of industrial ecosystems, such as the automotive, steel, aeronautical and renewable energy sectors. Tungsten makes our phones vibrate. Gallium and indium are a feature of light-emitting diode (LED) technology, used in lights. Silicon metal is essential to the performance of semiconductors. Hydrogen fuel cells and electrolysers need platinoids.
- 2. Intermediate goods: these account for nearly 50% of worldwide trade in goods and lie at the heart of global value chains.
- 3. Medical supplies: The Vice-President of the Commission, Věra Jourová, spoke of the EU's 'morbid dependence' on China and India¹⁶ for medical supplies, brought to light by the coronavirus crisis.¹⁷

But it is in digital technologies above all that China has a considerable pool of competitiveness compared with the EU (see Figure 1).

Despite many agreements, ¹⁸ conciliatory pronouncements and the recent bilateral EU-China agreement ¹⁹ of January 2021, the situation has not really changed.

^{15.} European Commission (2020f): Economic importance and supply risk are the two main parameters used to determine criticality for the EU. The Commission's 2020 list of the most critical raw materials includes 30 materials, compared with 14 in 2011, 20 in 2014 and 27 in 2017.

^{16.} For example, the main ingredient of paracetamol is largely imported from China and India. During the initial phase of the pandemic, supply chains were disrupted, leading to major problems in the supply of these medicines.

^{17.} Statement of the Vice-President of the European Commission, Věra Jourová, on 19 April

^{18.} See, in particular, 'The Terms of Reference of the EU-China Competition Policy Dialogue', 6 May 2004; the 'Memorandum of Understanding on a dialogue in the area of the State aid control regime and the Fair Competition Review System between on one side The Directorate-General for Competition of the European Commission and on the other side The National Development and Reform Commission of The People's Republic of China', 2 June 2017.

^{19.} China-EU Investment Agreement Negotiations – Schedules of commitments and reservations, https://trade.ec.europa.eu/doclib/press/index.cfm?id 2253, 12 March 2021.

3. Russia: an inescapable geopolitical power

Russia is a lesser economic, industrial and trading power. But it remains a leading military power,²⁰ just behind India,²¹ and is a major geopolitical player in the energy sphere.²² Russia has become the EU's prime energy supplier²³ and today accounts for around 30% of its oil imports and nearly 40% of its natural gas and coal imports.

Europe will need to import an additional 100 billion cubic metres of gas per annum by 2025,²⁴ rising to 150 billion by 2035. The EU's dependence on Russian gas and the captive market that it represents are likely to be accentuated in future, because Russia is both the closest and the cheapest supplier.

The saga of the construction²⁵ of the Nord Stream 2 gas pipeline, which runs under the sea from Russia to northern Germany, bypassing Ukraine, Poland and the Baltic countries, demonstrates above all the fragility of the EU's sources of supply.

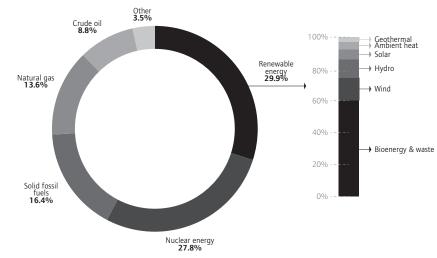


Figure 2 Production of primary energy, EU28, 2017

Source: Eurostat 2017.

²⁰ In 2019, Russia was in fourth place in terms of military budgets. Up by 4.5%, its military expenditure was \$65.1 billion.

²¹ India's military expenditure increased by 6.8% to reach \$71.1 billion in 2019.

²² In 2016, Gazprom sold 180 billion cubic metres of gas to Europe and Turkey, an increase of 12% compared with 2015, meaning that Russia covered one third of the European continent's consumption.

²³ The EU imports huge amounts of energy from outside the EU. Its imports increased to nearly €194 billion for the first six months of 2019. Source: Eurostat, 2019.

²⁴ See Quenelle (2017).

The Nord Stream 2 gas pipeline project (involving the construction of a 1 200-kilometre undersea link to send 55 billion cubic metres a year of Russian gas to Europe) is intended to double the delivery capacity of Nord Stream 1 to guarantee security of supply to Western Europe via the Baltic Sea. Although the work should have been completed in early 2020 at an estimated cost of nearly €10 billion, it was suspended because of the American sanctions, such as asset freezing and the cancellation of American visas for businesspeople involved in the gas pipeline, introduced as a reprisal for the Putin regime's annexation of Crimea.

This brief overview shows that the EU is heavily dependent on its three main partners, but in different ways and at different levels: essentially military as regards the United States, technological in the case of China and energy-related where Russia is concerned.

We should add, in passing, the EU's heavy dependence on imports of vegetable proteins, associated with the debate surrounding food sovereignty, regarded as a geostrategic objective in its own right.

Given that reversing a trend takes time, demands significant investment and requires political consensus among the Twenty-Seven, the question of the rate of transition towards the EU27's accession to a form of strategic autonomy emerges as a crucial geopolitical issue.

If the EU27 is to avoid being irretrievably distanced from its sources of supply (for food, energy, technology, etc.) and wants to achieve the objectives that it has set for 2030 (green and digital transition; resilience of its internal market), it looks as though it will have to set in motion a virtuous circle before the end of the von der Leyen Commission's term of office, in other words before 2024.

Part Two The concept of strategic autonomy in the European arena

1. An elusive, shape-shifting concept

1.1 The idea of strategic autonomy was originally associated with security and defence

There is nothing about strategic autonomy in the European Treaties. Only Europe's identity and its independence in terms of security and defence policy are highlighted in the Preamble to the TEU.²⁶

Strategic autonomy (SA) is intrinsically linked to the EU's common defence policy and the definition of NATO's European pillar. The term first appeared in 1994²⁷ and then again in 1998.²⁸ It re-emerged in 2003 just before the war in Iraq to assert Europe's independence and respond to the weakening of the link with the United States in a context of international tensions with the EU's neighbouring states.

The concept of SA is also linked to the EU's common foreign and security policy (CFSP). The European Council's Conclusions of 19 and 20 December 2013 on the common security and defence policy (CSDP)²⁹ read as follows:

'16. Europe needs a more integrated, sustainable, innovative and competitive defence technological and industrial base (EDTIB) to develop and sustain defence capabilities. This can also enhance its *strategic autonomy* and its ability to act with partners' (emphasis added).

^{26.} 'Resolved to implement a common foreign and security policy including the progressive framing of a common defence policy, which might lead to a common defence in accordance with the provisions of Article 42, thereby reinforcing the European identity and its independence in order to promote peace, security and progress in Europe and in the world', Preamble to the TEU.

^{27.} The expression was first used on 16 March 1950 by General de Gaulle during a press interview at the Palais d'Orsay in the context of security and defence, echoing the idea of national independence. The concept of 'strategic autonomy' then appeared in the White Paper on the Defence of France in June 1994. See www.ladocumentationfrancaise.fr/var/storage/rapports-publics/944048700.pdf, quoted in Mauro (2018: 4).

^{28.} There is clearly common ground between, on the one hand, the concept of strategic autonomy raised by France in 1994 and, on the other, its European counterpart, which appeared in 1998. In both cases, it is about conducting military crisis-management operations outside European territory autonomously – in other words without American assistance – but if necessary with the support of NATO resources. See Mauro (2018: 8).

^{29.} https://data.consilium.europa.eu/doc/document/ST-217-2013-INIT/en/pdf

Lastly, Brexit has most probably had the effect of speeding up this debate, in particular because of the United Kingdom's role in the defence of the EU.³⁰

1.2 The industrial connotations of strategic autonomy

It was not until 10 March 2020 and the Commission Communication on the industrial strategy for Europe³¹ that the Commission at last acknowledged the Union's overall dependence and recognised the concept of strategic autonomy in a broader sense:

'Europe's strategic autonomy³² is about reducing dependence on others for things we need the most: critical materials and technologies, food, infrastructure, security and other strategic areas. They also provide Europe's industry with an opportunity to develop its own markets, products and services which boost competitiveness' (emphasis added).

The Commission sees the SA concept as having two dimensions:

- defensive: reducing the EU's external dependency;
- offensive: developing the EU's markets, products and services externally.³³

The fact that this Communication coincided with the devastating onset of the Covid-19 epidemic was to play a key role later.

1.3 Strategic autonomy at the heart of the Commission's initiatives

The Commission incorporated this new political factor in several of its initiatives, in particular:

- the Communication Shaping Europe's Digital Future³⁴ of February 2020;
- the Communication on foreign direct investment (FDI Screening Regulation)³⁵ adopted in March 2020;
- the EU Foreign Investment Screening Mechanism³⁶ adopted in 2019 and fully operational in October 2020;

14

^{30.} With the United Kingdom's withdrawal from the EU, France has de facto become the sole guarantor of the EU's nuclear umbrella.

^{31.} European Commission (2020d).

^{32.} The idea of EU dependence, in particular as regards raw materials, was mentioned in several earlier key documents. See, for example, the Communication from the Commission on the raw materials initiative – meeting our critical needs for growth and jobs in Europe, COM(2008) 699 final, of 4 November 2008.

^{33.} Europe has a world market share of 33% in robotics, 30% in embedded systems, 55% of automotive semiconductors, 20% of semiconductor equipment and 20% of photonics components. (Source: European Commission, 2017.)

^{34.} https://ec.europa.eu/info/sites/info/files/communication-shaping-europes-digital-future-feb2020_en_3.pdf

^{35.} https://trade.ec.europa.eu/doclib/docs/2020/march/tradoc_158676.pdf

^{36.} https://eur-lex.europa.eu/eli/reg/2019/452/oj

- the Data Strategy³⁷ of November 2020;
- the 'Open strategic autonomy' trade policy review of February 2021.

These texts reflect the responses that the Commission wants to provide to underpin the various facets of this strategic independence.³⁸

1.4 Emmanuel Macron's crusade for a common strategic culture

The first politician to take ownership of the concept of strategic autonomy was the French President, Emmanuel Macron. As expressed by the President, the concept of strategic autonomy rapidly became a new symbol for the European Union. His Sorbonne speech,³⁹ made just four months after his investiture as President of the Republic, was very telling in this respect.

In his address, Emmanuel Macron made this observation, which has the hallmark of a profession of faith:

'Only Europe can (...) guarantee genuine sovereignty or our ability to exist in today's world, to defend our values and interests. What Europe lacks most today is a common strategic culture. Ensuring our sovereignty (...) means controlling our borders and preserving our values. The final key to our sovereignty is economic, industrial and monetary power. Making the heart of Europe an economic and industrial power naturally requires energy and digital technology policies.'

The 'Macron doctrine', which lay behind the thinking of the President of the European Council, Charles Michel, was set out in the course of a long interview carried out for the journal *Le Grand Continent* in November 2020.⁴⁰

From this interview, we quote the most explicit passage, which was to be a subject of debate among the Twenty-Seven:

'It is essential that our Europe should find the ways and means to decide for itself and not to depend on others, in all areas, ranging from the technological to health and geopolitics, and to be able to cooperate with whomever it chooses. Why? Because I think we are a coherent geographical area in terms of values, in terms of interests, and that it is intrinsically good to defend this. (...) And what I am saying is all the more true for China. That is why I believe that the concept of European strategic autonomy or European sovereignty

^{7.} https://digital-strategy.ec.europa.eu/en/policies/strategy-data

^{38.} Not forgetting the proposal for a Regulation on the Carbon Border Adjustment Mechanism, currently being debated in the European Parliament, which the Commission is proposing to adopt in the second quarter of 2021. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12228-Carbon-Border-Adjustment-Mechanism.

^{39.} Initiative for Europe, speech by the President of the Republic, Emmanuel Macron, at the Sorbonne, 26 September 2017.

^{40.} La doctrine Macron. Une conversation avec le Président français (The Macron Doctrine. A conversation with the French President), Le Grand Continent, published by the Groupe d'Etudes géopolitiques, 20 November 2020.

is very strong, very fertile, that it says that we are a coherent political and cultural area, that we owe it to our citizens not to depend on others, and that this is essential in order to have any influence among nations in the contemporary world' (emphasis added).

1.5 Charles Michel's advocacy for a new common European project

In September 2020, Charles Michel in turn stepped into the debate, taking up the SA standard for himself. Referring to the agreement on the European budget with the European Parliament and the recovery plan, the President of the European Council declared that 'This agreement was a major step to our vital objective: European strategic autonomy.'

Alluding to SA as a Copernican moment, Charles Michel sums up his thinking as follows: 'European strategic autonomy – these are not just words. The strategic independence of Europe is our new common project for this century. It's in all our common interest,' making strategic autonomy the key concept for the next 30 years.

The way Charles Michel sees the situation⁴¹ is as follows. An arc of instability has emerged around the EU (geopolitical tensions with Russia, strategic disagreements with the United States, economic and trade imbalances with China, the uncertainties of Brexit, etc.). Therefore, the push towards strategic autonomy for the EU must pursue three objectives: stability, disseminating European standards and promoting the EU's values.

- Stability means physical, environmental, economic and social security: guaranteeing a favourable environment for investment and trade; upholding fair market conditions and reciprocity with our trading partners; securing our supply of critical resources; managing our migration policies;
- The EU's capacity to set standards is a key factor contributing to Europe's power to establish benchmarks and take the lead in that field;
- Promoting the EU's values gives the EU great legitimacy and makes it
 hugely attractive in the eyes of many partners around the world.

1.6 The Conclusions of the European Council of October2020

The Conclusions of the European Council of 1 and 2 October 2020 make the concept of strategic autonomy a central feature of the internal market, industrial policy and the digital sector. However, the Heads of State or Government were at pains to specify that 'autonomy' had to be compatible with an 'open economy'.

^{41.} See, in particular, 'Strategic autonomy for Europe – the aim of our generation'. Speech by President Charles Michel to the Bruegel think tank, 19 September 2020.

This was the quid pro quo exacted by Ireland, the three Nordic countries and the Czech Republic, soon followed by seven other Member States (the Netherlands, Lithuania, Latvia, Estonia, Slovakia, Malta and Spain).

Along these lines, in paragraph 3 of its Conclusions, the European Council points out that:

'3. (...) The two mutually reinforcing pillars of such a recovery, the green transition and the digital transformation, together with a strong and deep Single Market, will foster new forms of growth, promote cohesion and convergence, and strengthen the EU's resilience. Achieving strategic autonomy while preserving an open economy is a key objective of the Union' (emphasis added).

Moreover, in paragraph 5 of the same Conclusions, the Council specifies that:

'5. The EU must pursue an ambitious industrial policy to make its industry more sustainable, more green, more competitive globally and more resilient. The European Council invites the Commission to identify *strategic dependencies*, *particularly in the most sensitive industrial ecosystems* such as for health and to propose measures to reduce these dependencies, including by diversifying production and supply chains, ensuring *strategic stockpiling*, as well as fostering production and investment in Europe' (emphasis added).

1.7 The Conclusions of the Competitiveness Council of 13 November 2020

The Competitiveness branch of the Council adopted its Conclusions on 13 November 2020.

In paragraph 3, the Council

'highlights that achieving strategic autonomy while preserving an open economy is a key objective of the Union in order to self-determine its economic path and interests. It recalls that this includes identifying and reducing strategic dependencies and increasing resilience in the most sensitive industrial ecosystems and specific areas, such as health, defence industry, space, digital, energy and critical raw materials. It underlines that this can include diversifying production and supply chains, ensuring strategic stockpiling, fostering and attracting investments and production in Europe, exploring alternative solutions and circular models, and promoting broad industrial cooperation across Member States'.⁴²

Paragraph 5 of the Conclusions is no less important. It underlines that 'technological leadership – based on research, knowledge transfer and innovation –, smart specialisation, sustainability, strengthened European

^{42.} A recovery advancing the transition towards a more dynamic, resilient and competitive European industry, Document 13004/20 of 16 November 2020. Emphasis added.

value chains and the security of supply of raw materials⁴³ in Europe are prerequisites for an enhanced level of resilience of European industry'. In this connection, the Council invites the Commission to 'identify strategic dependencies and propose measures to reduce them' (paragraph 27; emphasis added).

A number of lessons can be learned from these Conclusions: Firstly, the concept of strategic autonomy has been fleshed out compared with the initial definition provided by the European Council of 1 and 2 October 2020. It is no longer just about identifying and reducing the EU's dependencies, but about diversifying production and supply chains, ensuring strategic stockpiling, fostering and attracting investments and production in Europe, exploring alternative solutions and circular models, and promoting broad industrial cooperation across Member States. However, these demands are vague, unquantified and not structured over time (cf. Figure 2).

Then, the expression 'Union's open economy' comes before 'strategic autonomy', underlining that the concept of strategic autonomy falls within the framework of an open economy where the Union's industrial competitiveness takes precedence. This means that strategic autonomy is subject to two concurrent imperatives: that of keeping supply flows open and that of improving the competitiveness of the economy.

Lastly, these Conclusions call for a strengthening of ecosystems and value chains, without this call being linked to the dual green and digital transition. Although a tenuous link has been established in other texts (GATS, Green Deal) and at other times (programme statement from the Commission to the EP, for example), it is somewhat surprising that there is no cross-reference here.

Indeed, the EU's strategic autonomy must go hand-in-hand not only with the socio-economic dimension⁴⁴ but also with the paradigm shift on the environmental, climate and digital fronts.

^{43.} This commitment will be met, above all, through implementing an Action Plan for Critical Raw Materials.

^{44.} See, in this connection, Akgüc (2021).

Table 1 The EU's commitments on strategic autonomy

Commitments by the EC and the Competitiveness Council of the EU	When?	What?
Identifying and reducing strategic dependencies	The Commission is working on this.	Report
Increasing resilience to external shocks in the ecosystems (health, defence industry, space, digital, energy and raw materials)	Les EM et la Commission y travaillent	Political commitment
Ensuring the security of supply chains (raw materials)	Ongoing	Political commitment
Diversifying production chains	Ongoing	Political commitment
Ensuring strategic stockpiling	Ongoing	In progress
Attracting investments in production	Ongoing	Political commitment
Exploring alternative solutions and circular models	Ongoing	Political commitment
Promoting industrial cooperation across Member States	Ongoing	Political commitment
Strengthening value chains	The Member States are working on this.	IPCEIs

Source: Own compilation.

This table shows that the EU's commitments are not specifically linked to a timescale. Most of the political commitments are declarations of intent, for which there ought to be a 'Scoreboard of the EU's strategic commitments'. They should have performance indicators attached to them, to give a dynamic overview of the situation, which could be subject to follow-up on the actions taken.

At the end of this section, the following are the most interesting aspects of the concept of strategic autonomy to be noted:

- Upheld by Emmanuel Macron and Charles Michel, who succeeded in having strategic autonomy included in the Conclusions of the European Council of October 2020, the expression was supplemented with the words 'while preserving the open economy', which indicates a major dilution of the scope of European sovereignty.
- The need to maintain fair competition conditions so that European companies are competitive in the internal market and at international level in global value chains emerges as the quid pro quo offered to Ireland, the Nordic countries and the Czech Republic, among others.
- One of the most sensitive aspects of the SA concept does seem to be that the above-mentioned countries see it as calling into question the current rules of international trade in terms of a reduction in trade, which cannot be accepted by states that depend heavily on international trade for their development.
- It is interesting to note, however, that it is economic liberals (Emmanuel Macron, Charles Michel, Thierry Breton) who are most strongly

promoting a concept – that of strategic autonomy – which is perceived by other liberals (Micheál Martin, Andrej Babiš, Margrethe Vestager) as likely to be inconsistent with free trade.⁴⁵

2. The political rise of the concept of strategic autonomy

2.1 The open supporters

As mentioned above, the supporters of the SA concept are the President of the European Council, Charles Michel; President Emmanuel Macron;⁴⁶ and, to a lesser extent, Angela Merkel. The Portuguese Presidency has rallied alongside these major players.

The explanations for this lie, on the one hand, in the very close alignment between Charles Michel and Emmanuel Macron and, on the other, in the workings of the Franco-German partnership,⁴⁷ which shares many standpoints on a large number of subjects. France took the initiative. Germany followed, but without conviction,⁴⁸ in so far as the Federal Republic is a major exporting country, heavily dependent on its balance of trade to fuel its economic engine. For President Macron, the concept of strategic autonomy presents itself as a matter of personal conviction (survival of the Union, relaunching of European integration, etc.), an opportunity to take a position on the domestic political scene with the prospect of the 2022 presidential elections, but also an occasion to launch his national champions back into the race for competitiveness. Things are far less clear for Chancellor Angela Merkel, who seems to have one foot in and one foot out of the concept.

As for the Portuguese Presidency, it has logically seized on the subject to feed the discussions and drive forward the question of the resilience of the internal market and the strengthening of the industrial policy.

^{45.} One possible explanation for this surprising paradox may relate to the geopolitical vision shared by France and Charles Michel, in particular, regarding the position that the EU should take in the debate, rather than an ideological interpretation.

^{46.} France took the initiative of distributing a note advocating specific measures to enable the EU to seek strategic autonomy, as the synonym of resistance to crises and balanced openness. France identifies three major objectives: (a) placing innovation at the heart of the European health system; (b) deploying the industrial base in the service of strategic autonomy and fair competition; and (c) adapting the European public procurement framework.

^{47.} The context of the failed Alstom-Siemens merger, the DE-FR non-paper of 2019 and the letter to Margrethe Vestager, signed jointly with Italy and Poland, already partly foreshadowed this debate. The same fault lines are to be seen.

^{48.} This lack of conviction may be seen in the position adopted by Peter Altmayer in 2019. See, in this connection, the Franco-German declaration of October 2020.

2.2 The concept's detractors: the critical stance of the 'Group of Twelve'

Not every Member State shares the French vision. Far from it. A group of some 12 Member States, led by Denmark and consisting of Sweden,⁴⁹ Finland, the Netherlands, Ireland, the Baltic States (Lithuania, Latvia, Estonia), the Czech Republic, Slovakia, Malta and, surprisingly, Spain, have signed a joint non-paper on strategic autonomy.⁵⁰

This document sets out a vision in eight points, the salient features of which are strengthening the internal market; maintaining strict orthodoxy on state aid; the conditional nature of recourse to Important Projects of Common European Interest (IPCEIs),⁵¹ smart diversification that does not alter the EU's openness to trade and investment; and full commitment to a strong multilateral trading system with the WTO as its core and including trilateral cooperation between the EU, the United States and Japan.

It is interesting to note that the Twelve have taken ownership of a debate about which, in October 2020, they had some misgivings. This non-paper is primarily a way of positioning the signatory States in respect of the trade policy review and the updating of the industrial policy of the EU of 5 May 2021 (European Commission 2021c).

The proposals of the Twelve differ quite substantially in tone from those of France. For instance, there is no reference to a common culture or the need to strengthen the EU's sovereignty. The proposals indeed appear to be a step back from the Conclusions of the European Council of October 2020 and of the Competitiveness Council of November 2020. The Twelve emphasise that it remains a primary objective to maintain an open economy, and that strategic autonomy must be seen through that lens.

It is also striking that the nature of IPCEIs, deemed crucial for the future competitiveness of the EU, is not regarded as sufficient to warrant public action.

References to innovation and competitiveness crop up as leitmotifs without any precise explanation as to how they could help strengthen the Union's strategic autonomy.

The EU's values and ethics – to which Charles Michel and Emmanuel Macron constantly refer – are seen only through strict application of the rules on competition, which must be fair and undistorted.

^{49.} 'An open strategic autonomy can only be achieved by developing our own strengths and competitiveness, and by resisting protectionist pressure.' Updating the Industrial Strategy for Europe, Ministry of Economic Affairs and Employment of Finland, 11 December 2020 (internal document).

^{50.} 'Achieving strategic autonomy while preserving an open economy', joint non-paper by the Czech Republic, Denmark, Estonia, Finland, Ireland, Latvia, Lithuania, Malta, the Netherlands, Slovakia, Spain and Sweden, internal document, 25 January 2021.

^{51.} For instance, it is specified that IPCEIs must be exceptional in nature and must address a market failure.

2.3 The question of digital sovereignty

Digital sovereignty is a special category falling under the concept of strategic autonomy.

In early March 2021, two letters concerning digital sovereignty were sent to the Commission, one co-signed by Germany, Denmark, Finland and Estonia;⁵² and the other, in response to them, by Belgium, the Czech Republic, Ireland, Latvia, Lithuania, Luxembourg, Poland and Sweden.⁵³

The letter of 1 March calls on the Commission to take three initiatives:

- identify critical technology systems and strategic sectors by means of a thorough evaluation, taking account of global challenges;
- strengthen and refine the EU's policy approach to critical technology systems and strategic sectors;
- strengthen or present new robust initiatives promoting an innovative digital economy, in particular: a legislative framework for artificial intelligence, excellence in quantum computing, a new worldwide initiative on platform regulation, etc.

The letter from the eight Member States, for its part, recognises that:

'our agenda must be founded on a good mix of self-determination and openness. Our approach to digital sovereignty must be geared towards growing digital leadership by preparing for smart and selective action to ensure capacity where called for, while preserving open markets and strengthening global cooperation and the external trade dimension.'

Italy,⁵⁴ for its part, also stepped in, calling on the EU to achieve a high level of strategic autonomy in the digital sphere, while maintaining an open European economy.

In short, in a fragmented way, a large number of Member States felt it useful to take a position in the debate, often reactively, to make the same observations and call for the same mobilisation to strengthen innovation, the internal market and the EU's technological sovereignty.

Letter to President Charles Michel and President Ursula von der Leyen, unreferenced, 1 March 2021.

^{53.} Letter to President Charles Michel and President Ursula von der Leyen, unreferenced, 8

^{54.} See 'Mapping Strategic Autonomy. An Italian contribution to the notion of European Strategic Autonomy', position paper, not yet published, April 2021.

2.4 The ambivalent States

Poland

Poland's position is interesting, reflecting as it does the point of view of a State that generally shares the views of its close neighbours, particularly the Czech Republic and Slovakia, while monitoring what Germany and also France think.⁵⁵

In Poland's view, strategic autonomy should first be regarded as an exercise in building the Union's internal capacities: increasing the resilience of the EU economy to crises; rebuilding certain production capacities as part of a possible relocation of value chains in the EU; facilitating the EU's decarbonisation to ensure its competitiveness; bolstering the EU's international position; and optimising its strategic interests.

With this in mind, Poland considers that state aid can boost innovation potential and facilitate the twin transitions, but that fair competition conditions must be maintained.

The Union's strategic autonomy should aim to reduce its dependence on third countries in key industrial sectors, such as pharmaceutical products, hydrogen technologies, microelectronics, renewable energy resources, mobile networks and artificial intelligence.

In addition to calls for prudence (reservation regarding the relocation of strategic value chains within the EU, conditional nature of state aid), reminiscent of the position of the Group of Twelve, the Polish approach is characterised by several reservations:

- a) the broadening of the EU's powers must be effective and must respect the principles of subsidiarity and proportionality;
- b) transatlantic relations and NATO must remain the cornerstone of the Union's security, must be strengthened and must contribute to collective defence within the Alliance;
- c) strategic autonomy must extend to all the EU Member States and not be restricted to the euro area.

In short, the Polish vision is not very far-removed from that of the Twelve: prudence, reservations and conditions. The focus is on the strengthening of transatlantic relations and the major role that the Alliance should continue to play, which is not exactly the definition of strategic autonomy.

Poland's stance is also a tactical one, as the political positioning of its government is well out of step with that of the main EU States. In this context, by choosing ambivalence, it can negotiate how it rallies to the views of the other Member States.

^{55.} Along these lines, in 2019, Poland signed a joint letter on competition policy with France and Germany following the Commission's refusal to approve the merger between Alstom and Siemens.

.....

Austria

Austria's position⁵⁶ is no less interesting, in so far as it is halfway between that of France and the Twelve, but with some new areas of focus. Austria wants top priority to be reserved for strengthening strategic value chains. Value chains must therefore first be mapped, analysed and tested to identify their vulnerabilities and any bottlenecks. European production should be promoted in key sectors, if appropriate. Particular attention should be paid to the following, among others: environmental technologies, renewable energy, mobility, robotics, artificial intelligence and cybersecurity. This requirement is quite close to what Commissioner Breton has in mind to do: mapping the EU's ecosystems.

Austria then feels it is important for the EU to pool its resources and work in favour of improved cooperation/coordination at European level. With this in mind, IPCEIs should be supported, and competition law should be modernised, introducing a measure of flexibility in the appraisal of competition cases. This point is particularly interesting and is at odds with the position of the Twelve.

Thirdly, a fully operational internal market needs to be restored, based on the uniform application and implementation of the existing rules. In this respect, digital solutions need to be found for logistics and smart warehousing.

Lastly, the EU should strengthen international cooperation in trade. In this regard, the EU should promote the reform of the WTO and multilateral initiatives (e-commerce, facilitation of investments, etc.) or support initiatives in the area of health products. It should also assert its values, particularly on climate change, and ensure, if necessary, a level playing field for European industry, in particular by means of a Carbon Border Adjustment Mechanism.

In several respects, Austria is making specific, forward-looking proposals: support for IPCEIs, use of digital solutions to strengthen the internal market, introduction of a Carbon Border Adjustment Mechanism, etc.

2.5 The non-participants

Some Member States, including three of the EU's founding members (Italy,⁵⁷ Belgium and Luxembourg), but also Greece, Romania, Bulgaria and Hungary, have remained relatively silent in this debate, although some of them have cosigned joint letters⁵⁸ (in particular Belgium and Luxembourg).

Here, it is worth mentioning that, unlike in the northern countries of the UE, generally in favour of free trade, over the past 15 years, the southern countries of the EU, such as Portugal and Greece, have received numerous Chinese investments

^{56.} Cf. the non-paper of November 2020. Austria has also made health an area of strategic priority (internal document).

^{57.} Italy, a signatory to the letter mentioned above, is calling for coordinated action on health.

^{58.} Belgium and Luxembourg, for instance, co-signed a letter initiated by Sweden.

(such as in the energy sector and also in the shipping industry), which helps to reduce their appetite for European initiatives that are likely not only to damage their relations with China, but also to affect the influx of other foreign direct investment.

Was this to avoid choosing between one camp or the other or because these Member States did not feel they had anything to gain in taking sides? Either way, a number of countries did not wish to join the debate with too firm a stance. It is true that the avalanche of initiatives, whether joint or individual, is not necessarily conducive to motivating certain Member States, who find themselves partly aligned with the various viewpoints expressed.

What is to be concluded from this section? Not so much a mobilising concept around a common project, the concept of 'open strategic autonomy' emerges as an oxymoron that provides reassurance to the various protagonists and allows them to assert their national arguments.

The first people to become involved in the debate (particularly Charles Michel and Emmanuel Macron) feel that they have succeeded in driving their concept home, to the point of being confident that the word 'open' helps to clarify the meaning of the concept of strategic autonomy.

The others, more or less, think that they have stalled a headlong rush by the Union towards a form of hidden protectionism and a new stage of European spillover. And so the first part of the debate ends in a draw. But the game continues with the prospect of the Commission's update of the Communication on industrial policy, scheduled for 27 April.

3. How does the EU see the discussions unfolding?

Since, for the above reasons, the term 'open strategic autonomy' was at issue, Commissioner Breton pulled a new concept out of the EU's conceptual toolbox, which offers a more specific, dynamic and perhaps all-encompassing – these days, one might say 'holistic' – snapshot of the reality facing the EU: the concept of the industrial ecosystem.

3.1 The ecosystem concept

Stemming from the vocabulary of physics and biology, the term 'ecosystem' appears to have first been coined by Arthur George Tansley (1871-1955) in 1935, in an article published in the journal *Ecology*. This respected British botanist explained in his paper that 'the more fundamental conception is [...] the whole system [...] including not only the organism-complex but also the whole concept

of physical factors [...], the habitat factors in the widest sense. [...] It is the systems so formed which [...] are the basic units of nature. [...] These ecosystems [...] are of the most various kinds and sizes.'59

Tansley's definition formed the basis of a fully-fledged scientific approach, a way of seeing the world, consisting of interactive systems – ecosystems – which arise from reciprocal influences and are characterised by a dynamic structure.

The increasing complexity of industrial systems and services and of the geographical diversification of the organisation of production within enterprises has played a part in the adoption of the 'logic' of ecosystems. ⁶⁰ When applied to industrial policy, the richness of an ecosystem is determined by the depth and extent of cooperation among a continuum of stakeholders. Its strength lies in the fact that no individual actor has or exploits all the aspects of the solution. The value generated by the ecosystem is greater than that which each of the actors contributes individually.

Although the ecosystem concept appears only once in the Communication of 10 March 2020 on industrial policy,⁶¹ Thierry Breton made it the cornerstone of his industrial strategy and his public communication.

His strategy revolves around 14 industrial ecosystems, representing more than 50% of added value in the EU: digital, electronics, aerospace and defence, textiles, construction, mobility — automotive, creative and cultural industries, proximity and social economy, energy-intensive industries, health, agri-food, tourism, retail, renewable energies.

The central idea at the core of the strategy is to mobilise all the actors in the same value chain: large groups, SMEs, start-ups, training and research centres, associated services and suppliers, etc., to maximise the potential for innovation and research, technological development, productive capacities and market access.

The ecosystem would also act as an interactive platform to optimise dealings between the authorities and the stakeholders and to facilitate communication among the actors. So, for example, as soon as a company communicated a particular need, the whole ecosystem would be alerted to be able to respond.

There are two types of ecosystem:

- the industrial ecosystem proper, defined as a network of clusters belonging to a particular area of activity;
- the regional ecosystem, which covers the interaction of economic agents within a given region.

^{59.} See Abbadie (2021).

^{60.} See Andreoni (2018).

^{61.} 'This will be supported by a new focus on industrial ecosystems, taking into account all players within a value chain', European Commission (2020d: 1).



Figure 3 The 14 industrial ecosystems in the EU

Source: European Commission 2020 (internal document) and own elaboration.

At the Competitiveness Council of 19 November 2020, Thierry Breton announced that mapping the industrial ecosystems would highlight the EU's ecosystem weaknesses, by identifying the strategic dependencies, bottlenecks, training needs, etc.

This smart matrix will calibrate the progress made by the EU as a whole and will serve as a basis for dialogue with the stakeholders and for launching new initiatives.

Alongside the notion of ecosystem, other additional concepts shed light on the notions of strategic autonomy and ecosystem.

3.2 The supply chain concept

The supply chain⁶² cycle describes the operational management of the various flows (physical, financial, information) throughout the production and logistical processes, from the purchase of raw materials, through assembly to the delivery of the finished products to the end consumer.

This dimension is one of the keys to the Commission's Communication on the trade policy review of February 2021:⁶³ is the way forward through diversifying partnerships to secure our supply chains or through turning inwards to create strategic autonomy?

3.3 The strategic value chain (SVC) concept

The concept of 'value chain'⁶⁴ refers to a set of economic activities that create added value from a product, a process or a service. The value chain consists of all the interconnected stages involved in the creation of that added value from the combined action of companies and other kinds of actor (institutional, financial, etc.), cooperating among themselves. The SVC differs from the traditional value chain through the technological performance that it brings.

It is based on the use of strategic key technologies, advances in high-end technologies, performance in terms of R&D or disruptive innovation (such as autonomous driving, low-carbon technologies, etc.).

Lastly, the SVC is characterised by the economic and trade potential that it can generate to respond to the challenges faced by the EU (climate change, digital revolution, population ageing, etc.).

This table clearly shows that the segments of a value chain may be common to two or more ecosystems and to several regions specialising in this particular SVC.

Attention should also be paid to the concept of 'strategic segments of a value chain', indicating thereby that controlling certain particular parts of a value chain is sometimes more crucial than controlling the whole of the SVC.

In this case, it is clearly shown that the production and market deployment operations by the European operators NOKIA and ERICSON are lagging behind their American, Chinese and Korean competitors.

^{62.} The concept of 'supply chain' seems to have emerged in 1958 on the initiative of Jay Wright Forrester (1918-2016), an American pioneer of computer science and system dynamics.

^{63.} European Commission (2021a).

^{64.} See, in particular, Gereffi *et al.* (2005). The Director of the Global Value Chains Center at Duke University (https://gvcc.duke.edu), Gary Gereffi, is one of those behind the concepts of global commodity chain and global value chain.

3.4 The cluster concept⁶⁵

The concept of clusters refers to groups of specialised companies and other kinds of actors (SMEs, academic institutions, research centres, training centres, etc.) which share a common vision, cooperate closely among themselves and form a connected network with a view to mobilising a representative critical mass in a particular area of activity.

These clusters, which hold the EU's industrial policy together, are the key channels for the strategic value chains. Each actor in the cluster has a specific position and nature in feeding the growth of the cluster as a whole.

The network is structured as a cluster. It is characterised by the mobilisation of industrial operators, SMEs and academic actors, as well as research and training centres at the heart of a given territory. It is based on a set of pooled infrastructures and competencies benefiting from public and private sources of finance.

The originality of the cluster is its capacity to develop partnerships and cooperative relationships at regional,⁶⁶ national and international level in such a way as to create added value expressed through the design, development and production of a good or a service.

In conclusion, it is clear that the concept of strategic autonomy cannot be seen in isolation. More than the notion of industrial ecosystem, which sheds light on the debate but is extremely broad, it is the concept of strategic value chain that best illustrates the challenges facing the EU and what the question of strategic autonomy is about. Indeed, controlling the most crucial segments of global strategic value chains is a question of survival for the EU.

^{65.} It is generally considered that the concept of clusters was introduced into scientific literature by Michael E. Porter (1998a) in On competition. See also Porter (1998b).

^{66.} In this connection, see, in particular, the Vanguard Initiative for interregional collaboration. Involving almost 35 regions, the aim of this network is to build sustainable partnerships to foster innovation and entrepreneurship. The members undertake to develop smart specialisation strategies and to work in favour of strengthening European strategic value chains.

Part Three How should the EU move towards strategic autonomy?

There are different levels to the response that the EU can adopt to meet its strategic priorities. In this Working Paper, we will briefly address only four of these:⁶⁷

- internal market resilience;
- industrial and competition policy;
- trade policy;
- the standardisation approach.

Priority to be given to a smoothly-running, protective, robust internal market

The optimal functioning of an internal market without restrictions at the borders and without unjustified barriers is the starting point for a Union capable of generating an open market for innovative products and services, able to overcome supply difficulties and organise smart diversification for its imports.

Unfortunately, the pandemic has thrust upon us numerous – entirely unjustified – border closures, export controls, particularly in the medical and vaccines area, and restrictions on the free movement of persons, goods and services without any coordination, motivated by the spirit of self-interest.

On 21 September 2020, the EU Competitiveness Council adopted Conclusions calling on the Member States to respect the rules of the Single Market and remove barriers to cross-border trade in the EU.

The European Council of 25 and 26 March 2021 reiterated 'the importance of a strong, resilient and fully functioning Single Market and of strictly implementing and enforcing Single Market rules'. 68

^{67.} For instance, we are purposely not addressing here the food sovereignty strategy, defence policy and the strengthening of the international role of the euro, which would undoubtedly merit separate examination. It should be noted, in this connection, that the members of the Euro Summit supported the international role of the euro 'with a view to enhancing our strategic autonomy in economic and financial matters while preserving an open economy, contributing to the stability of the global financial system, and supporting European business and households'. Statement by the Members of the Euro Summit, meeting in an inclusive format, Document SN 2145/21, 26 March 2021 (internal document).

^{68.} Conclusions of the European Council, Document SN 2073/2/21 Rev. 2, 26 March 2021 (internal document).

In this respect, the Commission has announced the creation of a non-legislative instrument to address internal market failures, shortages and supply disruptions in emergency situations.

The integrity of the internal market is the top priority, welcomed by a large number of Member States, and a *sine qua non* for a well-considered strategic autonomy.

2. A response at the level of industrial and competition policy: the IPCEI route

For historical reasons, the tools that the EU can use to bolster its strategic autonomy are levers of shared competence, which depend on both the EU and its Member States.

The provisions of competition law to which they are, in large part, subject are Title XVII, 'Industry', of the TFEU and Article 173 thereof. One of the main reasons behind the absence of a 'common industrial policy' of the Union is the fact that this policy is perceived very differently depending on whether one is from a country with a Colbertist tradition, like France, or a country with a free-trade tradition, such as Germany, the United Kingdom, Ireland and the Nordic countries.

In the industrial sphere, the response that the EU can give is essentially at three different levels, which are complementary and mutually reinforcing:

- strategies and action plans proposed by the Commission;
- industrial alliances and partnerships;
- the route of Important Projects of Common European Interest (IPCEIs).

As we shall see, the fact that industrial policy has found its way into the debate about strategic autonomy can be seen as a sign of 'weakening' of the most pro-free-trade positions, even if the debate continues.

In the following sections, we shall focus more specifically on the IPCEIs that look to be a promising way forward in industrial terms, even though their use is subject to strict compliance with the rules on competition.

In some situations, the decision to invest in projects of sufficient critical size is not driven by the market. This is, for instance, the case with innovative, cross-border and complex projects, which involve a high degree of technological risk and financial issues that private investors are not necessarily prepared to assume alone and which require cooperation among several operators within the ecosystem or value chain concerned.

In this case, public support by several Member States operating together, pooling their resources to overcome the market failures, closes the start-up funding gap and allows the project to go ahead.

It was to address this very specific case that the Commission laid down the conditions for recourse to Article 107(3)(b) of the TFEU, which provides that 'aid

to promote the execution of an important project of common European interest (IPCEI) may be considered to be compatible with the internal market'.

2.1 A restricted tool with conditions attached

Approached in a cautious and conditional manner,⁶⁹ first in the context of the Research, Development and Innovation (R&D&I) framework,⁷⁰ then through the guidelines on state aid for environmental protection⁷¹ and lastly under state aid modernisation,⁷² recourse to IPCEIs is specified in a 2014 Communication.⁷³ For a project to qualify as an IPCEI, in addition to the two basic conditions (see footnote 52), there are four eligibility criteria to be met:

- the project must contribute in a concrete, clear and identifiable manner to one or more Union objectives and must have a significant impact on competitiveness of the Union, sustainable growth, addressing societal challenges or value creation across the Union;
- at least three Member States must be involved in its design;
- co-financing must be provided by the beneficiaries;
- the benefits must not be limited to the Member States, undertakings or sectors concerned, but must contribute to the European economy or society.

Moreover, the IPCEI must be particularly large in size or scope and imply a considerable level of technological or financial risk.

In short, given the very numerous prior conditions and criteria for start-up laid down by the Commission, it was many years before IPCEIs took off.

2.2 Launch of the Strategic Forum and selection of strategic value chains

In its 2017 industrial policy strategy, the Commission set up a Strategic Forum⁷⁴ to identify key value chains and investment projects.

The choice of strategic value chains

In 2017, nine strategic value chains (see list below) were identified by the Forum out of 31 possible options:

^{69.} The aid must address a market failure and have an incentive effect. In other words, the aid must motivate its beneficiary to embark upon activities that it would not otherwise have taken up.

^{70.} European Commission (2006).

^{71.} European Commission (2008).

^{72.} European Commission (2012).

^{73.} European Commission (2014). The review of this Communication should be completed by the end of 2021.

^{74.} Established in 2017 on the initiative of the Commission, the Strategic Forum for Important Projects of Common European Interest (IPCEI) brings together the main stakeholders to identify key value chains and investment projects and monitor progress achieved.

-
 - batteries for electric vehicles;
 - EuroHPC High-Performance Computing;
 - microelectronics.

On 6 February 2019, the Forum decided that six other value chains were also strategic in nature:

- connected, clean and autonomous vehicles;
- smart health;
- low-carbon industry;
- hydrogen technologies and systems;
- industrial Internet of Things;
- cybersecurity.

Twenty-two other value chains identified were not given priority by the Forum, which considered that currently the projects did not sufficiently meet the three selection criteria: technological innovativeness; economic and market potential; societal and political importance for the Union.

Table 2 List of 22 additional strategic value chains identified by the Strategic Forum

Additive manufacturing	Photonics, integrated circuits
Advanced materials	Photovoltaics
Augmented reality and virtual reality devices	Plastics recycling
Bio-based materials	Precision farming
Critical raw materials for innovative applications	Proteins from crops and residues (including aquaculture) and fermentation
Energy efficient and smart aeronautics	Smart vessels
Energy efficient and smart trains	Space-launchers
E-waste recycling	Structural electronics products
Industrial robotics	Wave and tidal energy
Net zero energy building construction and renovation	Wind energy
Nuclear decommissioning	Wired and wireless networks

Source: Strategic Forum 2019.

The composition of the Forum

The Strategic Forum was an opportunity to raise the awareness of the Member States and the social partners. It was a means to take a qualitative leap forwards to bring this instrument out of the obscurity in which it had been languishing.

On the other hand, the initial composition of the Forum was open to question. Admittedly, it is made up of 47 members: the Twenty-Seven, 17 employers' federations, organisations and businesses and the Commission, the OECD and the EIB, which gives it a certain representativity. But, looking more closely at the list of participants, one cannot help noticing that there are no organisations representing workers on the panel. On the other hand, it does include an

association representing SMEs (NEFI⁷⁵) and three research centres (IMEC,⁷⁶ CEA⁷⁷ and VTT⁷⁸).

The Commission expanded the composition of the Forum – which, in the meantime, had become the Industrial Forum⁷⁹ – by inviting other representatives of SMEs, trade unions and civil society to join it.

2.3 Launch of the first IPCEIs

The 'Microelectronics I' IPCEI

To illustrate the importance of the first Microelectronics IPCEI, one need look no further than the ranking of the top 12 microelectronics manufacturers in order to realise that European manufacturers are lagging behind.

Table 3 Ranking of the top 12 microelectronics manufacturers

Companies	Revenue (billions of dollars)	Net revenue (billions of dollars)	Nationality
Intel Corp. (INTC)	75.7	22.7	United States
Taiwan Semiconductor Manufacturing Co. Ltd. (TSM)	37.9	13.1	Taiwan
Qualcomm	24.7	4	United States
Broadcom Inc.	22.9	2.5	United States
Micron Technology Inc.	19.6	2.3	United States
Texas Instrument Inc. (TXN)	14.1	5.0	United States
ASE Technology Holding Co.	13.7	0.6	Taiwan
NVIDIA	11.8	3.3	United States
MediaTek	3.44*	_	Taiwan
Kioxia	11.5	_	Japan
ST Microelectronics (STM)	9.7	0.9	France/Italy
NXP Semi-conductors	8.8	0.2	Netherlands

Note: * First quarter of 2021.

Source: Investopedia, Nathan Reiff, July 2020.

Microelectronics is one of the most crucial generic key technologies for success in the digital transition and the EU's strategic autonomy. These electronic components are essential to the deployment of mobile communications (5G, 6G),

^{75.} NEFI (Network of European Financial Institutions for SMEs), Brussels, Belgium.

^{76.} IMEC (Interuniversity Microelectronics Centre), Leuven, Belgium.

^{77.} CEA (Commissariat à l'énergie atomique et aux énergies alternatives – French Alternative Energies and Atomic Energy Commission), France.

^{78.} VTT Technical Research Centre, Finland.

^{79.} Launched on 1 February 2021, the 'Industrial Forum' took over from the Strategic Forum. It is the new tool for governance of industrial policy. This group of experts, consisting of representatives from the Member States and industry, is to support the Commission in setting its new industrial strategy.

optical connectivity, smart mobility, artificial intelligence, etc. There was a striking demonstration of this when a shortage of electronic chips led to a stoppage in production in the automotive industry.

Initiated by four large Member States (Germany, France, Italy, United Kingdom), this first IPCEI is aimed at consolidating industrial capacities in the areas where the EU is heavily dependent on the exterior, 80 and contributing, *inter alia*, to the manufacture of energy-efficient chips and power semiconductors.

Table 4 Overall structure of the IPCEI Microelectronics

Project management					
1 2		3	4	5	
Energy efficicient chips	Power semiconductors	Sensors	Advanced optical equipment	Compound materials	
CEA-Leti (FR)	3-D Micromac (DE)	CEA-Leti (FR)	AMTC (DE)	AZUR Space	
Cologne Chip (DE)	AP&S	CorTec (DE)	Carl Zeiss* (DE)	Solar Power (DE)	
Globalfoundries (DE)	International (DE)	Elmos		CEA-Leti (FR)	
RacylCs (DE)	CEA-Leti (FR)	Semiconductors (DE)		Integrated	
Soitec* (FR) Elmos Semiconductors (I		Fondazione Bruno Kessler (IT)		Compound semiconductors (UK)	
ST Micro-	Infineon* (DE)	Infineon (DE)		IQE* (UK)	
electronics (IT/FR) X-FAB (FR)	MURATA (FR)	Robert Bosch* (DE)		Newport Wafer Fab (UK)	
(11)	Robert Bosch (DE)	ST Micro-		SPTS	
	SEMIKRON (DE)	electronics (IT/FR)		Technologies (UK)	
	ST Micro-	TDK-Micronas (DE)		OSRAM (DE)	
	electronics (IT/FR)	ULIS (FR)		Sofradir (FR)	
	X-FAB (DE)	X-FAB (FR/DE)		Soitec (FR)	
				ST Micro- electronics (FR)	

Note: Names in italics = SME; * coordinator

Source: Decision C(2018) 8864 final of 13 December 2018, paragraph 27, not published.

The estimated total cost of the first Microelectronics IPCEI is more than $\mathfrak{C}_{7.8}$ billion, including $\mathfrak{C}_{5.3}$ billion for the first industrial deployment and $\mathfrak{C}_{2.5}$ billion for research and development.

In February 2021, this IPCEI was kicked off by a high-level event involving industry and stakeholders. Prenotification of projects was set to start during the second half of 2021.

^{80.} The world's biggest manufacturer of electronic chips for smartphones and supercomputers is the Taiwanese company TSMC, with market capitalisation of \$694 billion. In 2021, TSMC is set to invest \$28 billion, 80% of which (\$20.5 billion) will be devoted to advanced technologies. (Source: L'Echo, 15 January 2021.)

It took four years for this IPCEI to materialise, thereby demonstrating the difficulty of working together within the current rules. It will be many more months before this IPCEI produces its first results.

The Batteries I and II IPCEI

- The European Battery Innovation project (EUBATIN - Summer IPCEI)

The other major priority was the EU's hyperdependence on China for electric battery components. In May 2018, driven forward by the Energy Commissioner, Maroš Šefčovič, a European Battery Alliance came into being, followed by a strategic action plan.

Pressed by major industrialists, three large Member States (France, Germany and Italy) committed to an IPCEI in the same year, with the intention of finalising the project by summer 2019. This time, they were joined by four other Member States (Belgium, Finland, Poland and Sweden).

The project, which involves 17 participants from the above-mentioned seven Member States, was approved on 9 December 2018. In addition to this, there is the participation of the private operators, estimated at more than \mathfrak{C}_5 billion. The project, which is valued at $\mathfrak{C}_3.2$ billion, \mathfrak{S}_1 should be completed by 2031.

The project launch was achieved quite quickly, although it will still be several years before it bears its first fruits.

- The European Battery Innovation project (EUBATIN - Autumn IPCEI)

This second project was developed in parallel with the first, but with a more open perspective.

Germany again took the initiative with the project, which immediately met with keen interest. Twelve Member States, some 50 businesses and around 150 external partners responded immediately to the call. Notified to the Commission in November 2020, the project was given the go-ahead by the Commission on 26 January 2021.

In total, the project amounts to nearly \mathfrak{C}_3 billion with an estimated multiplier effect of \mathfrak{C}_9 billion.

^{81.} More specifically, Belgium requested authorisation to provide aid of up to approximately €80 million; Finland, aid of up to approximately €30 million; France, up to approximately €960 million; Germany, up to approximately €1.25 billion; Italy, up to approximately €570 million; Poland, up to €240 million and Sweden, up to approximately €50 million.

2.4. The other IPCEIs in prospect

Several projects in four other strategic value chains are under development. It should be mentioned that the provision of substantial amounts from the national recovery plans offers significant possibilities for investment in green and digital technologies.

A hydrogen IPCEI

On the initiative of the Commission, on 17 December 2020, a conference involving investors, industrialists and governmental and institutional partners launched a Hydrogen IPCEI, and a Hydrogen Manifesto was signed by 22 Member States⁸² and Norway. The project should start up in 2022.

Austria, Denmark, Luxembourg, Portugal and Spain published a joint letter⁸³ asking the European Union to give clear priority to renewable energies within a project led by the EU aiming to speed up hydrogen deployment, research and infrastructure.

Again, Germany offered its services not only to organise the project launch event – on 17 December 2020 – but also to coordinate the project.

A second microelectronics IPCEI (MicroElectronics II)

On the initiative of the German Presidency, the launch of a second IPCEI for microprocessors and semiconductors led to 19 Member States⁸⁴ signing a joint Declaration of Intent, committing the signatories to work towards the EU's digital sovereignty.

Originally planned for March 2021, the notification of this second microelectronics IPCEI was postponed because of the need to coordinate an ever-growing number of stakeholders.

A new generation Cloud IPCEI

On the initiative of France, an IPCEI on new generation Cloud infrastructure and services is in the course of preparation. It involves Germany, Spain and Italy, which have co-signed a non-paper.

The objective is to build a common European data processing infrastructure and to create secure, interoperable platforms with a view to cross-sector use.

^{82.} These Member States are Austria, Belgium, Bulgaria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Luxembourg, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden.

^{83.} https://www.euractiv.com/section/energy-environment/news/five-eu-countries-object-to-eus-latest-hydrogen-manifesto

^{84.} Austria, Belgium, Cyprus, Croatia, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia and Spain.

An ambitious schedule and a roadmap were drawn up on 21 January 2021. The intentions were to be clarified within the framework of an ad hoc European Alliance.

It is worth mentioning, however, that this Cloud IPCEI falls outside the list of the nine strategic value chains, and even outside the 29 other value chains identified by the Strategic Forum. Paradoxically, this could be interpreted as a manifestation of success for the dynamic cooperation established between institutional and private operators.

A smart health IPCEI

The future project is to cover personalised medicine, medical data and analyses, but also medical and clinical devices.

As a result of the pandemic and the disruption of supply chains, some voices have been raised calling for an extension of the scope, such as to cover supply difficulties or strategic stockpiling.

Immediately after the pharmaceutical strategy was launched by the Commission, ⁸⁵ on 29 January 2021, France issued an Call for Expressions of Interest (CEI) to build up a French and European health sector as part of a new IPCEI. ⁸⁶

2.5 The new Commission Communication on IPCEIs

On 23 February 2021, the Commission launched a public consultation 87 concerning a review of its 2014 Communication on State aid for Important Projects of Common European Interest.

This Communication on IPCEIs, which will apply as from 1 January 2022, is awaited by the Member States and economic operators, as well as research centres and SMEs, as a strong signal that the Commission can send to the Union. There was an opportunity here for the European executive to confirm this instrument's leverage effect.

Although, in a few rare cases, it loosens up, such as with recognition of the major importance that IPCEIs can play in the implementation of the Green Deal, the digital strategy and the Union's industrial policy, the Commission still insists on the strict orthodoxy of this instrument, which has to comply with competition rules.

^{85.} European Commission (2020n).

^{86.} https://www.entreprises.gouv.fr/fr/aap/appels-projets-appels-manifestation-d-interet/ami-lancement-d-piiec-pour-developpement-des

^{87.} Interested parties have until 20 April 2021 to reply to the consultation. It should be borne in mind that the Commission has the last word, and it is for the Commission alone to adopt its decision.

The project of common interest must 'demonstrate that it is designed to overcome important market or systemic failures, preventing the project from being carried out to the same extent or in the same manner in the absence of the aid, or societal challenges, which could not otherwise be addressed or remedied'. Despite repeated requests from several stakeholders, the conditional nature of the use of IPCEIs has not lost its force.

Moreover, the draft Communication states that, '[a]s an additional safeguard to ensure that the State aid remains proportionate and limited to the necessary' (our added emphasis), the Commission may request the notifying Member State to implement a claw-back mechanism. The claw-back mechanism should ensure a balanced sharing of gains when the project is more profitable than forecasted in the funding gap analysis'. This provision clarifies the restrictions on its use.

Lastly, the Member State (concerned) must 'provide evidence that the proposed aid measure constitutes the appropriate policy instrument to address the objective of the project' (point 44). This point demonstrates that the IPCEI remains a subordinate tool which cannot replace market forces.

What is more debatable is that there is no reference to the EU's strategic autonomy written into the Communication. This absence may be explained as follows: strategic autonomy cannot provide an explicit justification for launching an IPCEI. Indeed, a written reference of that kind by the Commission might lead to litigation with third countries at WTO level⁸⁸ on grounds of infringement of the free trade rules.

To conclude this section – and it is a paradoxical, thought-provoking point – whereas IPCEIs are a useful instrument that is finding ever broader resonance with Member States and private operators, the Commission has maintained the conditional, restricted and subordinate nature of this tool, for which ex ante evidence of its usefulness⁸⁹ and its compliance with the competition and international trade rules always has to be furnished.

The Commission's position, moreover, is somewhat reminiscent of that of the Group of Twelve, which also expressed the same kind of reservations about the use of IPCEIs, even though some members of the Group, such as Sweden, participate in IPCEIs. It will be very interesting to see how the public consultation can influence the European executive towards a more favourable approach to Important Projects of Common European Interest.

^{88.} We have it from a reliable source that, on this precise point, the Commission's DG Trade and Legal Service intended to use the utmost caution to avoid risking a dispute with a third country before the WTO.

^{89.} The Commission's position may also be explained by its role as guardian of the Treaties, on the basis of which it ensures the absence of overbidding by better endowed Member States and the avoidance of any clientelistic or procyclical abuses by certain States that would adversely affect the functioning of the internal market.

2.6 Are IPCEIs a future way forward?

Notwithstanding the Commission's misgivings about the creation of 'European industrial champions', 90 pooling the expertise of top industries is an avenue that has already produced convincing results, as, for example, the Swedish companies Ericson, Telia and Volvo CE have succeeded in demonstrating in the context of 5G testing.

As with the 'Airbus' programme, IPCEIs look to be a potential lever to conduct major industrial projects that could contribute to the EU's strategic autonomy and reduce its technological dependence on third countries.

Bearing in mind the critical response of the 'Group of Twelve' and the fact that it is essentially France and Germany sharing the role of initiator of IPCEIs, the tool needs to be reformed to win the confidence of other Member States and stakeholders.

It seems to us, therefore, that the Commission could take on the role of coordinator of IPCEIs, so that each Member State could participate in the project, either directly or indirectly, as a beneficiary of the spin-off from the IPCEI. The fact that it has systematically been a member of the Franco-German partnership taking on the position of coordinator of this tool is unlikely to win over the other partners.

Lastly, IPCEIs have to find their logical place within the panoply of other instruments available to the EU (in particular in research and innovation). Better integration of the tools would improve the coordination of national funding with the European funding that should be made available to support strategic value chains.

^{90.} On 8 June 2018, the Commission received a formal notification of a proposed concentration by which Siemens would acquire sole control of Alstom by way of a contribution of Siemens' mobility business to Alstom in consideration for newly issued Alstom shares. The declared objective was to create a European industrial champion to counter the expansion of the Chinese giant, CRRC Corporation Limited, specialising in the manufacture, repair, sale and leasing of railway equipment. On 6 February 2019, the Commission adopted a negative decision under Council Regulation (EC) No. 139/2004 on the control of concentrations between undertakings, on the grounds that the transaction significantly impeded effective competition, due to horizontal non-coordinated effects in the market for high-speed trains (Case M.8677 — Siemens/Alstom).

3. Trade policy and the question of the level playing field

3.1 Relaunching the multilateralist approach

In the past, the EU has always relied on the multilateral institutions – primarily NATO, the WTO and the OECD – to delegate its influence.

However, as a result of the erratic policy of the Trump administration, the EU has had to recognise that the multilateral negotiation approach could not make up for a lack of unity within the Twenty-Seven and an absence of leadership by the EU.

In Doha (Qatar), in 2001, the WTO conference launched a cycle of negotiations on world trade which was supposed to have been completed by 1 January 2005. Almost 20 years later, the process is on hold, with no comprehensive agreement.

The discussions concerning the Dispute Settlement Body and its appellate body, which resolves conflicts, are in deadlock.

The institution is going through a serious crisis and is no longer able to contain the numerous circumventions of the organisation's rules by China, which still has the status of a developing country.

The WTO needs to be thoroughly reformed, not only to eliminate the unfair practices employed by China and other emerging countries, but, more generally, to take state subsidies in hand, protect the EU's intellectual property and punish counterfeiting, regulate access to data protection and address environmental and work-related issues.

In this context, can the WTO serve as a sounding board for the EU's demands for greater strategic autonomy, for instance by securing supply chains or allowing the sharing and dissemination of certain technological advances? At the present time, nothing could be less certain. But the EU would be wrong to refrain from opening the dialogue,⁹¹ in particular with the United States, Japan, India and Canada, to place questions of dealing with rare earth elements, the transfer of technologies and respect for intellectual property on the agenda of a future major conference.

^{91.} In 2018, the European Union presented a Concept Paper entitled 'WTO modernisation. Future EU proposals on rule making' (EU discussion document on WTO reform, http://trade.ec.europa.eu/doclib/docs/2018/september/tradoc_157331.pdf). On 13 May 2019, it was China's turn to put forward its proposals for reforming the WTO (https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?CatalogueIdList=254127&CurrentCatalogueIdIndex=0). Supported by many emerging countries, India lodged its own Concept Paper on 22 July 2019.

3.2 The trade policy review: multilateralism based on compliance with the rules

On 18 February 2021, the Commission adopted a Communication on its new trade policy, 92 which opens the way to more balanced trade relations. The Commission recognises that trade policy must contribute to the Union's strategic autonomy by enhancing the resilience of supply chains and making them more sustainable, transparent and traceable.

The Commission set out several pathways to achieve its medium-term objectives:

- restoring dispute settlement within the framework of transatlantic cooperation;
- promoting sustainable value chains, in particular through the adoption of a proposal on mandatory due diligence in order to rule out forced labour;
- forging a transatlantic partnership on the green and digital transition;
- strengthening the implementation and application of trade agreements by:
 - setting up a mechanism to screen foreign investments to address cases where the control of a particular business or technology would create a risk to security or public order in the EU;
 - ensuring the effective implementation of the Export Control Regulation on sensitive dual-use goods and technologies to support the EU's strategic value chains;
 - creating a legal instrument to address distortions caused by foreign subsidies on the EU's internal market;
 - adopting a regulation on international public procurement.

This Communication is an important first step, but it is still very inadequate, containing as it does many announcements, but not many decisions that can produce immediate practical results.

The Trade Policy Review has everyone in agreement: the supporters of free trade (first and foremost the Group of Twelve) and those who are more demanding about the conditions for opening up trade (essentially France).

An ideological fuzziness has brought convergence around the table for the time being. For economic liberals, strategic autonomy means more trade and openness, more free trade agreements and less recourse to independent measures.

Provocatively, we could even conclude that the Group of Twelve has won this first battle and that the proponents of strategic autonomy have succeeded in saving face.

^{92.} See European Commission (2021a).

3.3 The bilateral agreement between the EU and China, a worrying precedent

The EU has no fewer than 40 bilateral free trade agreements, demonstrating by contrast the relative failure of the multilateral approach. In 2020, 76% of imports entered EU territory duty-free. 93

Bilateral agreements are standard instruments with limited scope in terms of the level of ambition shown by the EU, in particular as regards:

- respect for fundamental values;
- the level of standards;
- social, environmental and climate protection and protection of working conditions.

The qualitative criteria characterising these agreements are generally based on the lowest common denominator. These agreements make little or no provision for strengthening the EU's strategic autonomy and making its supply chains secure.

Negotiations with China for the conclusion of a comprehensive agreement on investment have been under way since 2013. The China-EU Comprehensive Agreement on Investment (CAI)⁹⁴ should, in particular, facilitate investments in China for European companies in financial services, electric vehicles and Cloud and health services. It was also intended to rebalance investment relations and ensure fair and equitable treatment for EU companies located in China.

Concluded on 30 January 2021, the Agreement in Principle⁹⁵ hinges on three pillars: market access, a level playing field (including an end to forced technology transfers) and sustainable development.

The aspect of the agreement that is probably most commented on is that China agreed to include in it a promise to make progress on the application and adoption of the International Labour Organization (ILO) conventions. The agreement also focuses on ILO Conventions Nos. 29 and 105 on forced labour: China 'shall make continued and sustained efforts' to adopt them, even though it is not expected at this stage that the Chinese Government will allow freedom of association and the formation of free trade unions.

The agreement includes a series of declarations of principle but little in the way of guarantees or tangible progress. The agreement mentions the concept of transparency, but Chinese state enterprises will still be able to receive concealed aid.

^{93.} Source: Anghel et al. (2020: 36).

^{94.} China-EU Investment Agreement Negotiations – Schedules of China: https://trade.ec.europa.eu/doclib/docs/2021/march/tradoc_159483.pdf

^{95.} EU-China investment negotiations: https://ec.europa.eu/trade/policy/in-focus/eu-china-agreement

Conversely, European concessions appear far greater. Chinese companies will be able to initiate arbitration proceedings before the European courts, whereas arbitration proceedings in China, which are long and extremely complex to initiate, are out of scope for European companies.

Lastly, the Agreement in Principle does not cover the protection of European investments, which directly impinges on the question of strategic autonomy. China argues for the private arbitration system (Investor-State Dispute Settlement), whereas the EU advocates the creation of public courts of arbitration (Investment Court System).

Quite clearly, this bilateral agreement does not in any sense open the way towards greater security for supply chains, nor does it strengthen strategic autonomy, which is not a term used in the Agreement.

3.4 The establishment of a Carbon Border Adjustment Mechanism (CBAM)⁹⁶

On 21 June 2021, the Commission is set to adopt a proposal for a regulation establishing a 'Carbon Border Adjustment Mechanism' (CBAM). Currently undergoing a thorough impact assessment as regards its architecture, its viability and its compatibility with WTO rules, this new legislative tool⁹⁷ could take the form of an emissions trading system (ETS).

This mechanism goes some way to addressing the partial relocation of some industrial production and jobs outside Europe (carbon leakage) as a result of less stringent legislation in non-EU states (typically China). However, it will be particularly challenging to achieve a balancing point in this new instrument, because the EU's level of requirements, in terms of the Paris Climate Agreement or as regards environmental protection, for example, is often interpreted as a protectionist measure.⁹⁸

In parallel, the CBAM seeks to push the Twenty-Seven to invest in research and innovation to bring about disruptive technologies, helping the EU to fulfil the commitments it entered into under the Green Deal.⁹⁹ This dimension should lead the EU to respect its climate commitments and to be at the forefront of the transition to a carbon-neutral economy.

^{96.} Approved by the European Parliament on 8 March 2021, the proposal for a 'carbon emissions adjustment' at the borders could come into force in 2023.

^{97.} See the statement 'To fight climate change, fight carbon leakage', signed by 18 ministers from 10 Member States (Austria, Czech Republic, Denmark, France, Germany, Lithuania, Luxembourg, the Netherlands, Slovakia and Spain), Blümel *et al.* (2021).

^{98.} Thus, the EU's recent decision to phase out palm oil as a renewable fuel by 2030 was challenged by producer-countries within the WTO, which see it as a protectionist measure.

^{99.} In particular, the 55% reduction in its CO2 emissions by 2030, compared with its 1990 emission rates.

There are three aspects to the CBAM's link with strategic autonomy:

- reducing the Union's dependence on third countries thanks to the technological innovation resulting from research;
- combating unfair competition that penalises industrial production in the EU and feeds carbon leakage, by imposing a level playing field; and
- improving compliance with the social and environmental standards that underpin the EU's values and its ethical framework.

3.5 A policy of targeted sanctions reduced to human rights violations

Used wisely, sanctions can help the EU to maintain its capacity to act independently to protect its values and interests. But with 44 different sanctions regimes¹⁰⁰ against 34 third countries, the Union is finding it difficult to deliver results through the three kinds of sanctions that it applies.¹⁰¹

Under the autonomous sanctions regime, ¹⁰² the EU can adopt retaliatory measures in situations where the UN Security Council does not take a common position. The most commonly used sanctions are asset freezing, arms embargoes or visa bans. Sanctions are usually targeted at human rights violations or the use of chemical weapons, and more rarely against intellectual property infringements.

In short, this autonomous sanctions mechanism would appear to be completely ineffective when it comes to securing strategic value chains or essential supply chains.

To give the EU proper leverage in negotiations, the EU would also have to commit, for example, to setting up a multilateral investment tribunal within the United Nations Commission on International Trade Law.

Unfortunately, there is nothing to indicate that negotiations are heading in that direction at present.

3.6 Levelling the playing field

In the EU Work Programme 2021,¹⁰³ the Commission undertook to adopt a proposal for a regulation to level the playing field, preceded by a thorough impact assessment, which will probably be published in April 2021.

^{100.} The EU is the second biggest user of such measures after the United States. See Russell (2018).

^{101.} The EU applies three kinds of sanctions: the UN's mandatory sanctions; measures going beyond the UN sanctions, adopted at EU level; and the EU's autonomous sanctions, T. Biersteker and C. Portela (2015), quoted in Anghel *et al.* (2020: 30).

^{102.} Although described as autonomous, the EU sanctions are generally implemented with the assistance of the United States, allied states or regional organisations, such as the African Union, ASEAN or the League of Arab States, to bolster their effectiveness.

^{103.} European Commission (2020l).

Impatiently awaited, this instrument could pave the way for a more ambitious position of the Twenty-Seven within the WTO and other international fora. The Council and the European Parliament will still need to agree on the scope of an instrument that will not see the light of day until sometime in 2023 at the earliest.

Developing an ambitious policy on harmonised standards

There are three separate committees responsible for European standardisation:¹⁰⁴ the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI).

It is subject to a structured dialogue among 34 national standards institutes and the European standardisation committees. It is based on a public-private partnership between the Commission and the standardisation community. This dialogue is often long, bureaucratic and fraught with technical pitfalls. While the Union has succeeded in retaining primacy over certain standards, ¹⁰⁵ the United States and China are challenging European leadership where it is strongest and imposing their standards where they themselves have taken the lead.

The standards policy is a strategic question that should not be underestimated for at least three reasons:

- it can ensure that goods placed on the market meet the Union's essential requirements;
- it can address the EU's need for strategic autonomy and the strengthening of its technological potential;
- it can help the Union to impose its high quality ethical principles through the use of harmonised standards.

4.1 Making the EU a leader in harmonised technical standards

The world of standards is changing rapidly, in particular in the areas of the Internet of Things, megadata, advanced manufacturing technologies, robotics, 3D printing, blockchain technologies and artificial intelligence.

Only a modern, agile, inclusive European standardisation system, capable of reacting quickly to new developments, would be such as to speed up the creation and dissemination of new standards.

^{104.} European Parliament and Council of the European Union (2012).

^{105.} The most frequently cited example is Regulation (EU) 2016/679 of the European Parliament and the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation or GDPR); OJ L 119, 4 May 2016, pp. 1-88.

Launched in 2019, the consultation initiated by the Commission¹⁰⁶ should lead to recommendations in 2021.

4.2 The protection of intellectual property contributes to strategic autonomy

With a view to achieving technological sovereignty in Europe, the Commission has published an intellectual property action plan¹⁰⁷ to help companies capitalise on their intangible assets.

This action plan is intended to address the fragmentation of the European intellectual property system, the barriers to access for SMEs and microenterprises, the costly, cumbersome licence procedures for essential patents, counterfeiting and the lack of fairness on the part of companies from third countries.

But it is first and foremost in the area of licences for standard-essential patents (SEPs) that the urgency for coordinated action is most pressing.

Indeed, although currently the biggest disputes seem to occur in the automotive sector, SEPs are relevant also in the health, energy, digital and electronics sectors.

To address this situation, the Commission is planning to improve the SEP framework, including by means of new regulations.

In conclusion, the EU needs to strengthen its leadership role (as norm-setter) in response to international competition, by taking the initiative to develop new standards in the key sectors where the Union is lagging behind its competitors and by modernising its legal toolkit where it has overtaken its partners.

This approach seems all the more necessary in that it could allow the EU to keep its standards-based open model, contrary to the United States, for example, which prefers patent-based systems, and China, which circumvents all the models.

^{106.} European Commission (2018).

^{107.} European Commission (2020m).

Part Four Conclusions and recommendations

By 2030, China will probably be the world's biggest economic power, and also the technological leader and a top-tier financial player. China and the United States will clearly have become the only two superpowers.

Where will the EU be in all this, having committed to taking up three huge challenges: a green and digital transition, the resilience of its economic and social model and the securing of its strategic value chains, to which the Union has added the no less ambitious objective of making fundamental ethical values a brand and a competitive asset?

While the Twenty-Seven all seem to be aware of the issues relating to dependence on foreign sources for their technologies, their energy, their raw materials and their security, they are divided about how to address this.

Firstly, the EU looks fragmented as regards both the concept itself (common culture; strategic autonomy, whether open or otherwise; technological sovereignty; independence in security and defence; etc.), how to manage 'open' strategic autonomy and the role to be played by competition and IPCEIs, as well as other instruments, not to mention how trade policy or standards policy can help to support these objectives.

The patchwork of stances adopted shows that there is not one Union but interchangeable blocks of Member States more or less sharing certain common objectives. All these positions, which bypass the official fora and short-circuit the usual diplomatic channels, cause confusion and demonstrate, if need there be, that the EU has no common vision of its future.

Secondly, the concept of 'open' strategic autonomy has revealed all its limitations. It is a hazy, ambiguous notion with scant power to motivate, because this oxymoron advocates one thing (autonomy and sovereignty) and its opposite (openness and trade liberalisation). Its greatest fault is that it demolishes the threefold key responsibility that falls to the Union:

- to take the initiative to relaunch multilateralism within the WTO framework by imposing a level playing field on its partners;
- to restore a more balanced, more sustainable and more robust transatlantic partnership with the United States;

to revisit the numerous bilateral agreements signed by the Union¹⁰⁸ that
are proving to fall well below the strategic ambition that the Union has
set itself, particularly in the Green Deal.

Thirdly, the window of opportunity for action is narrow and short. The Biden administration, and also the EU's traditional allies, in particular Canada, India and Japan, need quickly to receive the signal that the Union is capable of relaunching the multilateralist approach. If the Union delays taking ownership or proves incapable of doing so, there is a major risk that the impetus will be lost and that the situation will become bogged down until the next American presidential elections and the term of office of the new Commission (2024). By that time, it will be too late.

Consequently, it is essential that the Commission quickly propose a system of governance and a working method that meet these challenges. It is true that the executive has issued multiple Communications and an array of ambitious legislative proposals, but we feel that it could do more, by linking the three areas in a more coherent fashion. An extraordinary European Council also needs to redefine the schedule and the overall level of ambition.

In our view, there are seven recommendations to feed the discussion over the coming months:

Creating a sustainable partnership and multilateral alliances

In the first part of this study, we noted that the concept of strategic autonomy was essentially French-inspired, passed on by the President of the European Council, Charles Michel, and, cautiously, by Chancellor Angela Merkel. We also remarked that the concept was challenged by some 12 Member States who preferred the term 'open strategic autonomy' ('while preserving the open economy') to indicate clearly that emphasis should be placed on openness to trade. But, being ambiguous and contentious, the term 'open strategic autonomy' has been overtaken by events.

To break the stalemate, it would probably be appropriate to change the watchword to emphasise the qualitative aspects of the transition, starting with social cohesion, the environment and the climate. It will also be necessary for the values¹⁰⁹ that the EU upholds (respect for personal data and intellectual property, protection of private life, promotion of the rule of law and democracy, etc.) to form part of the new underlying model to which citizens must be able to subscribe.

^{108.} Balanced agreements can be achieved only if both parties, and not just one of them, want this. This new approach would, at the very least, make it possible to convey, particularly to China, that the EU is no 'village idiot', keen to sign agreements at any price.

^{109.} In this connection, it is worth mentioning that the expression 'open strategic autonomy' makes no reference at all to the core values promoted by the Union.

2. Making a commitment to an ambitious multilateral agreement at WTO level

Between wishy-washy multilateralism and blind protectionism, there is a third way, which is that of open but protective multilateralism, based on a fair level playing field that is binding on everyone, starting with China.

The EU needs to take the initiative to relaunch negotiations on a broad multilateral agreement in parallel with the resumption of the Paris climate agreements and to propose a new working method at WTO level.

This initiative should, in particular, cover the circular economy, 110 sustainable management of rare resources, dispute settlement and a screening mechanism for foreign investments, especially in strategic sectors.

In this connection, the future proposal for an EU Regulation on the Level Playing Field is a unique opportunity to send a clear signal as to the Union's wishes to impose transparent, fair and lasting rules of the game.

3. Carrying out an impact assessment of strengths and weaknesses for each strategic value chain

The EU has launched an ambitious plan to strengthen the EU's resilience through the adoption of 27 national plans. However, this is progressing at different rates according to the specific logic of each Member State.

The Commission, for its part, has undertaken to map the strengths and weaknesses of the 14 basic ecosystems.

We feel that it is also urgent for the Commission to carry out a thorough impact assessment for the strategic value chains, focusing on the EU's most critical dependencies in:

- food security;
- rare raw materials;
- technology;
- the most vulnerable segments of the strategic value chains.

This impact assessment should focus on the credible alternatives to offset the vulnerabilities noted at EU level. The mapping exercise should also cover skills and professional profiles.

On this basis, there should be an action plan, including a schedule, setting out the most urgent measures to be taken at EU and Member State level.

^{110.} The circular economy is, without doubt, one of the avenues that best reconciles the imperatives of respect for the environment, the climate, and social and territorial cohesion with the question of the EU's strategic autonomy. This aspect would merit a separate chapter that we are unable to incorporate here.

4. Making IPCEIs and innovation into levers for the industrial policy

As we have seen, IPCEIs are an instrument that could offer the EU the possibility of developing disruptive technologies. It would still be necessary for the Twenty-Seven as a whole to be involved in their design and implementation and so to benefit from their industrial impact.

We propose that the Commission should coordinate this tool, uncoupling it from a vision that is too closely linked to competition policy.

Rather than 'European champions' (originating from the large Member States), the Union needs a structured alliance among European economic actors coming together in a partnership of the 'Airbus' type with strong participation by SMEs, in order to promote Europe-wide industrial players.

In so far as it provides an interface between technological research and development, an ambitious innovation policy is more necessary than ever to provide a basis for greater EU technological sovereignty.

Direct European investments – like Galileo, Copernicus and ITER – are needed to build capacities that are lacking in the EU in the key strategic sectors.

Forging industrial cooperation among the Twenty-Seven

In 2021, industry is still not one of the EU's fully-fledged areas of competence. Under Article 173 of the TFEU, the Union has a supporting competence to take action to speed up the adjustment of industry to structural changes and foster better exploitation of the industrial potential of policies of innovation, research and technological development.

To date, the EU has neither the necessary integrative power nor a sufficient budget to conduct a sustainable industrial policy adhering to the green transition. This is the fruit of a debatable ideological vision that has led the EU into a situation of dependency and weakness, where blind faith in globalisation has replaced enlightened choices in the area of industrial policy.

It has become a matter of urgency to establish a genuine EU industrial policy to strengthen the European Commission's powers of management and coordination and let it take initiatives on the EU's behalf on the basis of a clear, predefined mandate.

It is to be hoped that the updating of the industrial policy will serve as a catalyst for efforts to turn this into one of the engines of the green revolution and the drive for the Union's resilience.

6. Strengthening the EU in terms of standards

The development of new technical standards and regulations, combined with increased participation by the EU in international standards bodies, is essential to stimulate and harness the competitiveness of a sustainable industry.

The much-desired Summit of Heads of State or Government should kick off a broad initiative to rationalise the system of European standards and impose European norms in global strategic ecosystems. These standards must be of high quality, sustainable and competitive, but also based on a high ethical foundation.

7. Capitalising on the Conference on the Future of Europe to move the debate forward

A Conference on the Future of Europe is set to take place in 2021. The overall strategy should encompass the EU's core values: democracy, fundamental rights, a humane asylum and immigration policy and development cooperation.

Hopefully, this event will be an opportunity to make progress on a sustainable and ambitious multilateral partnership.

References

- Abbadie L. (2021) Écosystèmes, Encyclopædia Universalis [consulted on 07.03.2021]. https://www.universalis.fr/encyclopedie/ecosystemes
- Akgüç M. (2021) Socioeconomic and environmental dimensions of Europe's Open Strategic Autonomy, Working Paper, Brussels, ETUI [fortchcoming].
- Andreoni A. (2018) The architecture and dynamics of industrial ecosystems: diversification and innovative industrial renewal in Emilia Romagna, Cambridge Journal of Economics, 42 (6), 1613-1642.
- Anghel S., Immenkamp B., Lazarou E., Saulnier J. L., and Wilson A. B. (2020) On the path to 'strategic autonomy'. The EU in an evolving geopolitical environment, Study September 2020, Brussels, European Parliamentary Research Service.
- Biersteker T. and Portela C. (2015) EU sanctions in context: three types, Brief Issue 26, Brussels, European Union Institute for Security Studies.
- Blümel G. et al. (2021) To fight climate change, fight carbon leakage, Politico, 23.03.2021. https://www.politico.eu/article/europe-climate-change-carbon-leakage/
- Bouinot J. (2007) Les pôles de compétitivité : le recours au modèle des clusters ?, Cybergeo : European Journal of Geography, Débats, Chronique d'économie géographique [consulted on16.01.2021]. http://journals.openedition.org/cybergeo/4961
- Clinchamps N. and Monjal P.-Y. (eds.) (2015) L'autonomie stratégique de l' Union européenne. Perspectives, responsabilité, ambitions et limite de la défense européenne, Bruxelles, Larcier, 2015.
- European Commission (2006) Encadrement communautaire des aides d'État à la recherche, au développement et à l'innovation, Journal officiel de l'Union européenne, C 323, 30 December 2006, p. 1-26.
- European Commission (2008) Lignes directrices concernant les aides d'État à la protection de l'environnement, Journal officiel de l'Union européenne, C 82/1, 1 April 2008.
- European Commission (2012) Communication de la Commission au Parlement européen, au Conseil, au Comité Économique et Social Européen et au Comité des Régions : Modernisation de la politique de l'UE en matière d'aides d'État, COM(2012) 209 final, 8 May 2012.
- European Commission (2014) Communication de la Commission Critères relatifs à l'analyse de la compatibilité avec le marché intérieur des aides d'État destinées à promouvoir la réalisation de projets importants d'intérêt européen commun, Journal officiel de l'Union européenne, C188/02, 20 June 2014, p. 4-12.
- European Commission (2017a) Communication de la Commission au Parlement européen, au Conseil européen, au Conseil, au Comité Économique et Social Européen et au Comité des Régions et à la Banque Européenne d'Investissement. Investir dans une industrie intelligente, innovante et durable Une stratégie revisitée pour la politique industrielle de l'UE, COM(2017) 479 final, 13 September 2017.
- European Commission (2017b) Communication de la Commission au Parlement européen, au Conseil européen, au Conseil, au Comité économique et social européen, au Comité des régions et à la Banque européenne d'investissement : Investir dans une industrie intelligente, innovante et durable Une stratégie revisitée pour la politique industrielle de l'UE, doc. 12202/17 + ADD 1, 14 September 2017.

- European Commission (2018) Communication de la Commission au Parlement européen, au Conseil et au Comité économique et social européen : Normes harmonisées : renforcer la transparence et la sécurité juridique pour un marché unique pleinement opérationnel COM/2018/764 final, 22 November 2018.
- European Commission (2019) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions :

 Renforcer la confiance dans l'intelligence artificielle axée sur le facteur humain,

 COM(2019) 168 final, 8 April 2019.
- European Commission (2020a) Communication de la Commission : Réaction économique économique coordonnée face à la flambée de COVID-19, COM(2020) 112 final, 13 March 2020.
- European Commission (2020b) Communication de la Commission au Parlement européen, au Conseil européen, au Conseil, au Comité économique et social européen et au Comité des régions : L'heure de l'Europe: réparer les dommages et préparer l'avenir pour la prochaine génération, COM(2020) 456 final, 27 May 2020.
- European Commission (2020c) Communication de la Commission au Parlement européen, au Conseil européen, au Conseil, au Comité économique et social européen et au Comité des régions : Remaniement du programme de travail de la Commission pour 2020, COM(2020) 440 final, 27 May 2020.
- European Commission (2020d) Communication de la Commission au Parlement européen, au Conseil européen, au Conseil, au Comité économique et social européen et au Comité des régions : Une nouvelle stratégie industrielle pour l'Europe, COM(2020) 102 final, 10 March 2020.
- European Commission (2020e) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions : Programme de travail de la Commission pour 2020. Une Union plus ambitieuse, COM(2020) 37 final, 29 January 2020.
- European Commission (2020f) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions : Résilience des matières premières critiques : la voie à suivre pour un renforcement de la sécurité et de la durabilité, COM(2020) 474 final, 3 September 2020.
- European Commission (2020g) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions : Un nouveau plan d'action pour une économie circulaire. Pour une Europe plus propre et plus compétitive, COM(2020) 98 final, 11 March 2020.
- European Commission (2020h) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions : Une stratégie axée sur les PME pour une Europe durable et numérique, COM(2020) 103 final, 10 March 2020.
- European Commission (2020i) Critical raw materials for strategic technologies and sectors in the EU A foresight study, Luxembourg, Publications Office of the European Union.
- European Commission (2020j) Livre blanc relatif à l'établissement de conditions de concurrence égales pour tous en ce qui concerne les subventions étrangères, COM(2020) 253 final, 17 June 2020.
- European Commission (2020k) Proposition de Règlement du Parlement européen et du Conseil relatif aux marchés contestables et équitables dans le secteur numérique (législation sur les marchés numériques), COM(2020) 842 final, 15 December 2020.

European Commission (2020l) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions : Programme de travail de la Commission pour 2021. Une Union pleine de vitalité dans

European Commission (2020m) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions :

Exploiter au mieux le potentiel d'innovation de l'Union européenne Un plan d'action en faveur de la propriété intellectuelle afin de soutenir la reprise et la résilience dans l'Union européenne, COM(2020) 760 final, 25 November 2020.

un monde fragile COM(2020) 690 final, 19 October 2020.

- European Commission (2020n) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions : Stratégie pharmaceutique pour l' Europe, COM(2020) 761 final, 25 November 2020.
- European Commission (2021a) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions : Réexamen de la politique commerciale – Une politique commerciale ouverte, durable et ferme, COM(2021) 66 final, 18 February 2021.
- European Commission (2021b) Communication de la Commission au Parlement européen, au Conseil, au Comité économique et social européen et au Comité des régions : Une boussole numérique pour 2030: l' Europe balise la décennie numérique, COM(2021) 118 final, 9 March 2021.
- European Parliament and Council of the the European Union (2012) Règlement (UE) n° 1025/2012 du Parlement européen et du Conseil du 25 octobre 2012 relatif à la normalisation européenne, modifiant les directives 89/686/CEE et 93/15/CEE du Conseil ainsi que les directives 94/9/CE, 94/25/CE, 95/16/CE, 97/23/CE, 98/34/CE, 2004/22/CE, 2007/23/CE, 2009/23/CE et 2009/105/CE du Parlement européen et du Conseil et abrogeant la décision 87/95/CEE du Conseil et la décision n° 1673/2006/CE du Parlement européen et du Conseil Texte présentant de l'intérêt pour l'EEE, Journal officiel de l'Union européenne, L316/12, 14 November 2012.
- European Parliament and Council of the the European Union (2018a) Proposition modifiée de Règlement du Parlement européen et du Conseil établissant le cadre requis pour parvenir à la neutralité climatique et modifiant le règlement (UE) 2018/1999 (loi européenne sur le climat), COM(2020) 563 final, 17 September 2020.
- European Parliament and Council of the the European Union (2018b) Règlement (UE) 2018/1999 du Parlement européen et du Conseil du 11 décembre 2018 sur la gouvernance de l'union de l'énergie et de l'action pour le climat, modifiant les règlements (CE) n° 663/2009 et (CE) n° 715/2009 du Parlement européen et du Conseil, les directives 94/22/CE, 98/70/CE, 2009/31/CE, 2009/73/CE, 2010/31/UE, 2012/27/UE et 2013/30/UE du Parlement européen et du Conseil, les directives 2009/119/CE et (UE) 2015/652 du Conseil et abrogeant le règlement (UE) n° 525/2013 du Parlement européen et du Conseil, Journal officiel de l'Union européenne, L328/1, 21 December 2018.
- Fiott D. (2018) Strategic autonomy: towards 'European sovereignty' in defence?, Brief Issue 12, Brussels, European Union Institute for Security Studies.
- Franke U. and Varma T. (2019) Independence play: Europe's pursuit of strategic autonomy, European Council on Foreign Relations, 18.07.2019. https://ecfr.eu/special/independence_play_europes_pursuit_of_strategic_autonomy/
- Gereffi G., Humphrey J. and Sturgeon T. (2005) The governance of global value chains, Review of International Political Economy, 12 (1), 78–104.

- Hamilton D. S. (2021) No, China is not the EU's top trading partner, Politico, 19.02.2021. https://www.politico.eu/article/china-not-eu-top-trade-partner-us-is/
- High Level Group on Energy-Intensive Industries (2020) Masterplan for a competitive transformation of EU energy-intensive industries enabling a climate-neutral circular economy by 2050 [Schéma directeur pour une transformation compétitive des industries à forte intensité d'énergie de l'UE permettant une économie circulaire neutre pour le climat d'ici 2050 Rapport du groupe de haut niveau sur les industries à forte intensité énergétique], Luxembourg, Publications Office of the European Union.
- Krulis K. (2020) Otevřená strategická autonomie: v voj obchodu pod ambivalentním konceptem [Open strategic autonomy: the development of trade under the ambivalent concept], Briefing Paper 17, Prague, Association for International Affairs (AMO). https://www.amo.cz/otevrena-strategicka-autonomie-vyvoj-obchodu-pod-ambivalentnim-konceptem/
- Mauro F. (2018) Autonomie stratégique. Le nouveau Graal de la défense européenne, les rapports du GRIP 2018/1, Brussels, Groupe de Recherche et d'Information sur la Paix et la Sécurité.
- Nardon L. (2021) Contribution dans Groupe d'études géopolitiques (2021) L'autonomie stratégique européenne et la présidence Biden, Note de travail 11, Paris, Groupe d'études géopolitiques.
- Porter M. E. (1998a) On competition, Boston, MA, Harvard Business School Publishing. Porter M. E. (1998b) Clusters and the new economics of competition, Harvard Business Review, 76 (6), 77-90.
- Quenelle B. (2017) L' Europe et le gaz russe, une dépendance en trompe-l'oeil, Les Echos, 24.02.2017.
- Reshef A. and Santoni G. (2019), Are your labor shares set in Beijing? The view through the lens of global value chains, Working Paper 2019-16, Paris, Centre d'études prospectives et d'informations internationales.
- Reshef A. and Santoni G. (2020) La fragmentation des chaînes de production a changé le partage de la valeur ajoutée, La Lettre du CEPII, n° 406, Paris, Centre d'études prospectives et d'informations internationales.
- Russell M. (2018) EU sanctions: A key foreign and security policy instrument, Briefing May 2018, Brussels, European Parliamentary Research Service.
- Seurre X. (2020) L'intelligence artificielle, un enjeu stratégique pour la puissance chinoise, Institut de relations internationales et stratégiques, Asia Focus 132, Paris, Institut de relations internationales et stratégiques.
- SIPRI (2020) Global military expenditure sees largest annual increase in a decade—says SIPRI—reaching \$1917 billion in 2019, Stockholm, Stockholm International Peace Research Institute, 27.04.2020.
- Thompson J. (2019) Les Etats-Unis et l'autonomie stratégique européenne, Politiques de sécurité : analyses, n° 248.
- Witney N. (2018) Le Brexit, la défense et la quête de l'UE pour une « autonomie stratégique », European Council on Foreign Relations, 25.06. 2018. https://ecfr.eu/paris/article/le_brexit_la_defense_et_la_quete_de_lue_pour_une_autonomie_strategique/

All links were checked on 27 April 2021.

			beel	

Li

List of figures	
Figure 1 — Geographical distribution of the global platforms	
(capitalisation in USD billion)	8
Figure 2 — Production of primary energy, EU28, 2017	11
Figure 3 — The 14 industrial ecosystems in the EU	27
List of tables	
Table 1 — The EU's commitments on strategic autonomy	19
Table 2 — List of 22 additional strategic value chains identified	
by the Strategic Forum	34
Table 3 — Ranking of the top 12 microelectronics manufacturers	35
Table 4 — Overall structure of the IPCEI Microelectronics	36

ETUI Working Papers

Creative labour in the era of Covid-19: The case of freelancers

Working Paper 2021.02 Valeria Pulignano, Markieta Domecka, Karol Muszyński, Lander Vermeerbergen, Me-Linh Riemann

Digital technologies and the nature and routine intensity of work Evidence from Hungarian manufacturing subsidiaries Working Paper 2021.01 Andrea Szalavetz

Reform and oversight mechanisms are not enough. Access to justice for workers and employment standards in Central Eastern European countries

Working Paper 2020.09 Karol Muszyński

A socially just transition through the European Green Deal?

Working Paper 2020.08 Sebastiano Sabato and Boris Fronteddu

Mitigating the Covid-19 effect: Emergency economic policy-making in Central Europe Working Paper 2020.07

Ana Podvršič, Joachim Becker, Dóra Piroska, Tomáš Profant and Vladan Hodulák

Counting gigs. How can we measure the scale of online platform work?

Working Paper 2020.06 Agnieszka Piasna

Using GDPR to improve legal clarity and working conditions on digital labour platforms

Working Paper 2020.05

Michael 'Six' Silberman and Hannah Johnston

'One-in, one-out' in the European Union legal system: a deceptive reform?

Working Paper 2020.04 Éric Van den Abeele

European multinational companies and trade unions in eastern and east-central Europe

Working Paper 2020.03

Martin Myant

These publications can be downloaded free of charge from our website.

Please visit: www.etui.org/publications

European Trade Union Institute

Bd du Roi Albert II, 5 1210 Brussels Belgium +32 (0)2 224 04 70 etui@etui.org www.etui.org

