

Proposal COM(2022) 46 of 8 February 2022 for a **Regulation** of the European Parliament and of the Council establishing a framework of measures for strengthening Europe's semiconductor ecosystem (Chips Act)

Communication COM(2022) 45 of 8 February 2022: **A Chips Act for Europe**

Note: Unless otherwise indicated, references refer to the proposal for a Regulation.

CHIPS ACT

cepPolicyBrief No. 8/2022

LONG VERSION

A.	KEY ELEMENTS OF THE EU PROPOSAL	2
1	Technical and economic background	2
2	Objectives	2
3	Pillar 1: “Chips for Europe” Initiative.....	3
4	Pillar 2: Chip production in Europe.....	3
5	Pillar 3: Monitoring of value chains and crisis response	4
6	Enforcement	5
B.	LEGAL AND POLITICAL CONTEXT	5
1	Status of legislative procedure.....	5
2	Options for exerting political influence	5
3	Formalities.....	5
C.	ASSESSMENT	5
1	Economic Impact Assessment	5
2	Legal Assessment	8
2.1	Legislative Competence of the EU	8
2.2	Subsidiarity	8
2.3	Proportionality with Respect to Member States	8
2.4	Compatibility with EU law in Other Respects	8
D.	CONCLUSION	10

A. Key elements of the EU proposal

1 Technical and economic background

- ▶ Computer chips are an essential component of digital products. Since the beginning of 2020 there have been supply problems with chips in the EU and other parts of the world. This has given rise to production deficits in many sectors of the economy, e.g. the automotive industry [p. 1; COM(2022) 45, p. 1].
- ▶ Chips are essentially produced in three stages.
 - Design: This involves designing the chip's construction so that it has the desired properties.
 - Fabrication: Here, the chip is produced based on the design.
 - Assembly, testing and packaging: Here, the chip is e.g. encased in a housing so that it can be attached to a printed circuit board.
- ▶ Semiconductors are – as well as materials such as silicon – chip components that consist of a series of layers of semiconducting, insulating and conducting materials, and after further processing are intended to perform well-defined electronic and/or photonic functions [Art. 2 (1) (1) (b)].
- ▶ The semiconductor sector is capital and knowledge intensive [S. 1]:
 - The cost of building a production facility for chips with a precision of just a few nanometres is at least € 15 billion.
 - Companies in the semiconductor sector frequently have research intensity of over 15% of revenue.
- ▶ The EU is strong in some areas of semiconductor production, such as [COM(2022) 45, p. 1 et seq.]
 - R&D for semiconductors, e.g. material research,
 - design of chips for sensors and microcontrollers that are used in the automotive and manufacturing industry, and
 - in the manufacture of materials and equipment needed to run large chip manufacturing plants.
- ▶ Despite these strengths, the EU is dependent on third countries at all stages of production. It has, e.g. [COM(2022) 45, p. 2]
 - only limited capacity to produce chips – 10% of the world's chips come from the EU, whilst the EU consumes 18% of the world's chips – and
 - no capacity for manufacturing leading-edge chips, i.e. chips with a peak node density – the node density correlates to the production size of a chip – of ≤ 7 nm (nanometres).
- ▶ The semiconductor sector is very concentrated. Thus, chips with the smallest node sizes can only be manufactured by two companies based in South Korea and Taiwan respectively [COM(2022) 45, p. 1].

2 Objectives

- ▶ The Commission's objective is
 - to improve the functioning of the internal market by creating a common EU legal framework to enhance the EU's competitiveness, innovation capacity, resilience and security of supply in the field of semiconductor technologies [Recitals 3 and 8],
 - to bridge the gap between chip research and production [Recital 11],
 - to push decisively ahead with the green transition, create new products and bring about a more efficient, effective, clean and durable use of resources [Recital 11], and
 - increase the value of the EU's share of global chip production to 20% by 2030. In view of the expected growth in the chip market, the EU will need to quadruple its production to achieve this. This aims to reduce Europe's dependence on other economic regions and allow Europe to participate in the growth of the chips market [p. 2]. Europe is to focus on chips with a node size of below 10 nm, and especially below 2 nm [COM(2022) 45, p. 10].
- ▶ To achieve these goals, the Commission intends to
 - establish the "Chips for Europe" initiative (Pillar 1),
 - extend the production of highly advanced chips in the EU (Pillar 2) and

- monitor the chip value chain to counteract shortages (Pillar 3).

3 Pillar 1: “Chips for Europe” Initiative

- ▶ The Chips Act establishes the "Chips for Europe" initiative for the period 2021-2027. “Chips for Europe” aims to enable the development and use of advanced semiconductor and quantum technology in the EU. In order to achieve this, the initiative is pursuing the following objectives [Art. 4, Art. 5]:
 - building up advanced design capacities for semiconductor technology, i.e. the deployment of a virtual platform enabling the use of advanced software to design the next generation of chips;
 - enhancing existing, and developing new, advanced pilot lines, i.e. installations in which new technologies and production methods for chips, e.g. new materials for chip production or ways to increase the computing power of chips, is researched and tested before they go into manufacturing in order to close the gap between research and commercial production [COM(2022) 45, p. 15];
 - expansion of capacities such as testing and experimental facilities to accelerate the development of technically advanced quantum chips, i.e. chips that can perform complex calculations faster than conventional chips by using quantum mechanics;
 - creation of a network of competence centres, i.e. facilities that support companies and public bodies in accessing inter alia chip expertise, piloting facilities and the virtual chip design platform, as well as measures to address the skills shortage in the semiconductor sector;
 - creation of a "Chips Fund" to facilitate access to debt and equity financing by companies in the semiconductor value chain. For this [COM(2022) 45, p. 18]
 - the InvestEU programme will provide equity and quasi-equity financing through venture capital funds and
 - the Horizon Europe programme will provide investment possibilities in the form of grants and equity.
- ▶ The initiative is supported by € 3.3 billion from the EU budget, divided equally between the “Horizon Europe” and the “Digital Europe” programmes [Art. 3].
- ▶ Competence centres will be designated by the Member States whilst the procedure for establishing them, including selection criteria, will be set by the Commission in implementing acts [Art. 8 (3)].

4 Pillar 2: Chip production in Europe

- ▶ The Chips Act introduces the concept of Integrated Production Facilities and Open EU Foundries.
 - Integrated Production Facilities are “first-of-a-kind” semiconductor design and manufacturing facilities [Art. 10 (1)], i.e. design and manufacturing facilities targeted at the manufacture of technologies which go beyond the EU’s state of the art, e.g. as regards node density or the materials used [Art. 2 (1) (10); COM(2022) 45, p. 16].
 - Open EU Foundries are "first-of-a-kind" semiconductor manufacturing facilities that offer production capacity to unrelated companies [Art. 11 (1)].
- ▶ The construction of Integrated Production Facilities and Open EU Foundries may be given financial support by Member States, covering up to 100% [COM(2022) 45, p. 16] of the proven funding gap [Art. 13 (1)]. For such support to be possible, the Integrated Production Facilities and Open EU Foundries must be recognised as such by the Commission. In this regard, the Commission examines whether the Integrated Production Facilities and/or Open EU Foundries [Art. 10 (2), (3), Art. 11 (2), (4), Art. 12 (2)]
 - whether the Integrated Production Facility resp. Open EU Foundry
 - is “first-of-a kind”;
 - has a clear positive impact on the EU’s semiconductor value chain with regard to security of supply and increasing the qualified workforce;
 - can give priority to EU orders in the event of a crisis;
 - invests in the next generation of chips;
 - the business plan evaluating the financial viability of the project, including information on any planned public support;

- the applicant has proven experience in installing and operating similar facilities, and
- the Member State, in which the facility is to be established, is ready to facilitate the construction of such a facility.
- ▶ When assessing whether to approve such aid, the Commission will additionally consider whether [COM(2022) 45, p. 16 et seq.]
 - the production facilities would not be built without the aid,
 - the production facilities will be economically viable in the long term without operating support and
 - excessive restrictions of competition have been kept to a minimum.
- ▶ Member States must ensure that administrative applications relating to Integrated Production Facilities and Open EU Foundries [Art. 14]
 - are processed as rapidly as possible,
 - are allocated the highest possible national status where such special status exists in national law, and
 - are supported by the nomination of an authority responsible for facilitating and coordinating administrative applications related to planning, construction and operation.

5 Pillar 3: Monitoring of value chains and crisis response

- ▶ Member States shall carry out regular monitoring of the semiconductor value chain. This includes monitoring the availability of the goods and services provided by the key market actors of the semiconductor supply chain [Art. 15 (1)].
- ▶ Member States shall invite the main users of semiconductors and other relevant stakeholders to provide information regarding significant fluctuations in demand and known disruptions of their supply chain [Art. 15 (2)]. Where necessary and proportionate, they can also request information from individual undertakings or representative organisations [Art. 15 (3)].
- ▶ Where a Member State becomes aware of a potential “semiconductor crisis”, it must immediately alert the Commission [Art. 15 (4)]. A “semiconductor crisis” occurs where there are serious disruptions in the supply of semiconductors leading to significant shortages, which [Art. 18 (1)]
 - entail significant delays or significant negative effects on one or more economic sectors in the EU, or
 - prevent the supply, repair and maintenance of essential products used by critical sectors. e.g. medical and diagnostic equipment [Recital 42].
- ▶ Where the Commission becomes aware of a potential semiconductor crisis, it must [Art. 15 (5), Art. 18 (2)]
 - consider whether there is concrete, serious, and reliable evidence of a semiconductor crisis allowing it to activate the crisis stage by means of an implementing act,
 - consider the joint purchase of semiconductors, intermediate products or raw materials by the Member States, and
 - contact third countries to find cooperative solutions to manage supply chain disruptions.
- ▶ In the crisis stage, the Commission may
 - request representative organisations of undertakings or individual undertakings operating along the semiconductor supply chain to report on their production capabilities, production capacities and current primary disruptions and provide other existing data necessary to assess the nature of the semiconductor crisis or assess potential mitigation measures [Art. 20]; such information may not be disclosed by the Commission or national authorities [Art. 27 (1)];
 - oblige Integrated Production Facilities, Open EU Foundries and other semiconductor companies, that have accepted the corresponding option in return for receiving public support, to accept and prioritise, for a fair and reasonable price, EU orders for crisis-relevant semiconductors, intermediate products or raw materials; this obligation takes precedence over all other performance obligations, releases the company from any liability for non-performance of other contracts and may only be objected to if the company is de facto unable to perform the order [Art. 21]; and
 - at the request of at least two Member States, assume the procurement of crisis-relevant semiconductors, intermediate products and raw materials on these Member States’ behalf [Art. 22].

- ▶ In the crisis stage, where appropriate in order to address the semiconductor crisis in the EU, the European Semiconductor Board – a body made up of representatives of the Member States to advise and assist the Commission – may [Art. 19 (3)],
 - assess the impact of the possible imposition of export controls and issue an opinion on this to the Commission, and
 - “assess and advise on further appropriate and effective emergency measures.”

The application of these measures "should be proportionate and restricted to what is necessary for addressing serious disruptions and in the best interest of the EU" [Recital 45].

6 Enforcement

- ▶ Each Member State shall designate one or more authorities to ensure the application and implementation of the Chips Act at national level, and a single point of contact to liaise with other Member States, the Commission and with the European Semiconductor Board [Art. 26 (1), (3)].
- ▶ Where a company or representative organisation fails to respond to a request for information or, at least through gross negligence, supplies incorrect, incomplete or misleading information, the Commission may impose a fine of up to € 300,000 [Art. 28 (1) (a), (2)].
- ▶ Where an undertaking fails, at least through gross negligence, to comply with an obligation to prioritise the production of crisis-relevant products, the Commission may impose periodic penalty payments of up to 1.5% of the company's average daily turnover in the preceding business year [Art. 28 (1) (c), (3)].

B. Legal and political context

1 Status of legislative procedure

8 February 2022 Adoption by the Commission

Open Adoption by the European Parliament and the Council, publication in the Official Journal of the European Union, entry into force

2 Options for exerting political influence

Directorates General:	DG Communications Networks, Content & Technology
Committees of the European Parliament:	Industry, Research and Energy (leading), Rapporteur Dan Nica (S&D Group, ROM)
Federal Ministries:	Economy (leading)
Committees of the German Bundestag:	Economic Affairs (leading)
Decision-making mode in the Council:	Qualified majority (acceptance by 55% of Member States which make up 65% of the EU population)

3 Formalities

Basis for legislative competence:	Art. 173 (3) TFEU (Industry), Art. 182 (1), Art. 183 TFEU (Research), Art. 114 TFEU (Internal Market)
Form of legislative competence:	Shared competence (Art. 4 (2) TFEU)
Procedure:	Art. 294 TFEU (ordinary legislative procedure)

C. Assessment

1 Economic Impact Assessment

The problems of European companies regarding the supply of chips lead to production deficits, higher prices and consequently to a fall in prosperity for consumers. Against this backdrop, it is understandable that the

Commission wants to improve supplies to European companies by way of the Chips Act. However, ensuring an adequate supply of chips is principally the companies' responsibility. There are three reasons why they are currently unable to do so: Firstly, they underestimated the demand for chips resulting from inter alia the increased demand for laptops following the rise in working from home. Secondly, chip production is unable to react quickly to this because, as a result of the high utilisation of chip factories, the expansion of production capacities is slow. Thirdly, on the supply side, fires, power outages, storms, droughts and earthquakes have led to shortfalls in chip production. None of these causes constitutes the sort of market failure that would justify the state intervention in this market which the Commission is proposing by way of the Chips Act. On the contrary, it is the companies' responsibility to draw the right conclusions from the current chip shortage and improve management of the chip supply chain, such as by diversifying and building up stock. The Commission should ensure that companies can obtain all the necessary information in this regard because, due to the strong division of labour in the production of chips, it is currently in fact difficult for companies to obtain all the information about the value chain of the chips they need.

In addition, the Chips Act aims to help to ensure that chip production is greatly expanded in the EU and thus reduce the EU's dependence on other economic regions for the production of chips. Complete self-sufficiency in the production of chips is not the EU Commission's goal in this regard, which is appropriate since self-sufficiency would make chip production very expensive. The desired reduction in the EU's dependence on other economic regions will in itself be very costly for the EU as it will require considerable amounts of aid and huge public investment. Ultimately, it will be the taxpayer who has to bear these costs. Whether these costs are justified in order to reduce dependence on states such as Taiwan, South Korea or the USA is ultimately a political decision.

Irrespective of this fundamental evaluation, the individual measures of the Chips Act, proposed in the three pillars of the Regulation, can be assessed as follows:

Pillar 1

The proposed deployment of a virtual platform may simplify the design of a new chip by making it easier for chip design companies to use the know-how for the non-innovative parts of their chip, such as a Bluetooth module. This will give them more capacity to design the innovative part of their chip. It is unlikely, however, that companies that have not yet designed chips will start doing so simply because of the platform.

The proposed development or expansion of existing pilot lines may accelerate the development of chips and reduce the costs for companies because the public piloting facilities currently available are often unsuitable for state-of-the-art chips. State-of-the-art chips – with just a few exceptions – therefore have to be tested on private facilities. It remains unclear, however, how the money, needed to keep public pilot plants constantly abreast with the latest state of the art, is to be raised.

The proposed establishment of a network of competence centres may help to mitigate problems in chip research and development. In Europractice, there already is a network for chip research and development in the EU. The network already fulfils some of the tasks that the competence centres are supposed to fulfil. Europractice could be expanded to take in other members and tasks if necessary. It is appropriate that the network should help to combat the shortage of skilled workers because the current gap is jeopardising the goal of increasing the EU's share in the value of global chip production to 20%.

Financing the measures in Pillar 1 is problematic as this essentially involves a redeployment of funds that are already available. In this regard, the Commission should justify why it is more efficient to use the money for the "Chips for Europe" initiative than for increasing cyber security.

Pillar 2

With the possibility of financially supporting the development of Integrated Production Facilities and Open EU Foundries by way of State aid, the Member States are heading for a subsidy race with each other and with third

countries such as China, South Korea, Taiwan and the USA. The subsidy race risks building up overcapacities leading to production facilities not being fully utilised, which would make them uneconomic. The risk of uneconomic production facilities and foundries will be further increased by the fact that production costs for chips are lower in Asia, in particular, than in the EU due to lower energy and labour costs. If this remains the case, European end customers will continue to buy their chips in Asia. The fact that the Commission only wants to approve aid if the production facility is economically viable in the long term, will not prevent the establishment of uneconomic production facilities and foundries in the EU: Firstly, because to do so, the Commission would have to know where in the world similar facilities exist or are currently being built and at what costs they produce. This will be virtually impossible. Secondly, the EU would need to be able to accurately forecast the demand for certain chips because a production facility or foundry can often only produce certain types of chip. Even experts are not currently in a position to do this. And thirdly, the Commission's assessment clashes with the aim of the Chips Act to increase the share of chips produced in the EU to 20% by 2030. If uneconomic production facilities and foundries are built in the EU, the EU Commission should not allow operating support, like it did for example with respect to the Carbon Contracts for Difference, because inefficient companies would not then disappear from the market and would instead have to be permanently subsidised by the state.

The Commission's proposed definition of "first of a kind" facilitates state support for numerous technological innovations, such as the use of innovative materials or improved environmental sustainability. This is appropriate. Unfortunately, the Commission limits the opportunity to promote innovation by choosing to focus on chips with a node size of less than 10 nm. This focus is misguided because there are hardly any customers in the EU for chips with this node size. There is therefore a risk that many of the supported production facilities or foundries will not help to increase the security of chip supplies for European companies.

Pillar 3

Given the current shortages, it is understandable that the Commission is entrusting the monitoring of the semiconductor value chain to Member States. However, it is doubtful whether shortages in the supply chain can actually be predicted; chip manufacturers would have to disclose highly confidential data in this regard, relating to e.g. order volume and plant utilisation, because such data is necessary if the consequences of a natural disaster are to be assessed. Chip buyers must also provide information on how many chips they have in stock and how easily they can switch chip manufacturers. It is unlikely both that companies will provide this data voluntarily and that the Commission will be able to use this very detailed data to predict a possible shortage in the supply chain for each chip type.

The fact that Integrated Production Facilities, Open EU Foundries and other semiconductor companies which have accepted the corresponding option in order to receive public support should prioritise orders in the event of a crisis, may result in a corresponding backlash from other economic regions. This would not increase security of supply in the EU as the EU is dependent on other economic regions for the production of chips and will remain so for the foreseeable future. The EU Commission should therefore refrain from unilateral measures that threaten free trade. It should also refrain from introducing export controls for the same reason. Export controls not only restrict free trade but also freedom of contract. The benefit of export controls is in any case questionable since chips have to be produced individually for individual companies. Chips that are manufactured in the EU are therefore not necessarily usable by European companies. This is especially true for chips with very small node sizes as buyers of such chips primarily produce in Asia. Chip manufacturers whose customers produce in third countries are hardly likely to invest in the EU if there is a risk that they will not be allowed to export their chips in the event of a crisis.

Due to the high level of differentiation of chips and their limited substitutability, the proposal on joint procurement will be of limited value in a semiconductor crisis. Only when purchasing raw materials on the world market could it be advantageous to bundle the demands of European countries in order to increase buying

power. Generally, however, it is the responsibility of companies to look for possible solutions in the event of a semiconductor crisis, or to prevent a crisis in advance.

2 Legal Assessment

2.1 Legislative Competence of the EU

The competences for industry [Art 173 (3) TFEU] and for research [Art. 182 (1) and Art. 183 TFEU] are intended to constitute the appropriate legal basis for the "Chips for Europe" initiative; the other provisions are to be covered by the competence to harmonise the internal market [Art. 114 TFEU]. The support measures proposed as part of the "Chips for Europe" Initiative can be based on the competence for industry and research.

The measures to promote chip production and monitor value chains and crisis response may also be based on the competence to harmonise the internal market if the Member States have not yet adopted relevant rules in this regard. This is because the competence to harmonise the internal market also permits harmonisation measures in this case ("preventive harmonisation"¹) under certain conditions. It is only necessary to show that multifarious development of national law is likely to give rise to future obstacles to trade and that the rules to be adopted are designed to prevent the emergence of such obstacles.² Due to the significant economic impact of chip shortages, it is indeed likely that Member States will take such measures to safeguard the chip supply and better manage future shortages. Such plans already exist in some areas, e.g. Spain.

In addition to the competence for harmonising the internal market, however, the Chips Act must also be based on the competence for the common commercial policy [Art. 207 TFEU] because, with its export controls and cooperation with third countries to address supply chain disruptions, Pillar 3 contains measures that are not part of the regulation of the internal market but of foreign trade.

2.2 Subsidiarity

Unproblematic. The problems arising from a supply shortage of chips cannot be solved by any Member State acting alone.

2.3 Proportionality with Respect to Member States

Unproblematic.

2.4 Compatibility with EU law in Other Respects

The possible obligation to accept and give priority to European chip orders falls within the scope of protection of the freedom to conduct a business [Art. 16 CFR]. It does not, however, constitute an interference with this right because, under Art. 21 (1) and (2), this obligation can only be imposed on Integrated Production Facilities, Open EU Foundries or other semiconductor companies that have accepted this possibility in the context of receiving state support. The status of Integrated Production Facilities or Open EU Foundries under Art. 12 (1) is only granted upon application. Thus, if consent is an unequivocal part of the application, the obligation can only affect companies that have consented to this possibility. If the holder of the fundamental right consents to the obligation there is no interference with the fundamental right and thus no violation.³ Although consent is not voluntary if a company is existentially reliant on the subsidy,⁴ this is not applicable. It may be that a specific chip factory will not be built at all without subsidies. There is no indication, however, that chip producers as such depend for their economic existence on subsidies for the construction of additional factories.

¹ For definition see e.g. Schröder, M., in: Streinz, R. (ed.), EUV/AEUV, 3rd edition (2018), Art. 114 TFEU para. 42 et seq.

² ECJ, Case C-376/98 (Germany v Parliament and Council), [ECLI:EU:C:2000:544](#), para. 86.

³ ECJ, Joined Cases 41/79, 121/79 and 796/79 (Testa et al v Bundesanstalt für Arbeit), [ECLI:EU:C:1980:163](#), para. 19.

⁴ Wollenschläger, F. (2010), Budgetöffentlichkeit im Zeitalter der Informationsgesellschaft, Archiv des öffentlichen Rechts, Vol. 135, p. 363-403 (385 et seq.).

The situation is different for export controls and other emergency measures envisaged as a possibility under Art. 19 (3) because the imposition of export controls is not limited to chips from certain companies that have voluntarily consented to this possibility, so in this case there is interference with the freedom to conduct a business. However, the legal basis for this interference with a fundamental right is extremely vague. The Chips Act does not state what measures other than export controls can be taken and under what conditions. Art. 52 (1) CFR, however, requires that a legal provision must be sufficiently clear and precise with regard to the scope and application of the measure in question in order to be able to justify interference with fundamental rights.⁵ In addition, the Chips Act only requires that the emergency measures introduced are appropriate to address the semiconductor crisis. The Act does not require that they also be necessary and proportionate for this purpose. This is inconsistent with Art 52 (1) CFR, which states that interference with fundamental rights is only permitted if it is, among other conditions, necessary and proportionate. Necessity and proportionality are only mentioned in the Recitals, and even there only as a “should”.

Furthermore, the export controls are questionable under WTO law. Art. XI (1) GATT prohibits export restrictions in principle. Art. XI (2) GATT provides for exceptions permitting export restrictions. These include under (a) “Export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party”. According to the report of the WTO Appellate Body in the *China Raw Materials* case, essential products are food or otherwise absolutely indispensable or necessary products.⁶ The comparison with the importance of food serves as an indicator of whether a product is important within the meaning of Art. XI (2) (a) GATT.⁷ According to the WTO Appellate Body, a critical shortage exists where there are deficiencies in quantity that are crucial, that amount to a situation of decisive importance, or that reach a vitally important or decisive stage, or a turning point.⁸ An evaluation of whether a particular measure, such as the imposition of export controls, satisfies the requirements of Article XI (2) (a), necessarily requires a case-by-case analysis.⁹ The comparison with the existence of a food shortage shows, however, that a strict standard must be applied which will not be easy to satisfy.

In view of the wide-ranging options available to the Commission following activation of the crisis stage, the circumstances under which a semiconductor crisis exists, allowing the Commission to activate the crisis stage, are not sufficiently clear. The material criteria are that serious disruptions in the supply of semiconductors lead to significant shortages, which entail significant delays or significant negative effects on one or more important sectors of the EU, or prevent the supply, repair and maintenance of essential products used by critical sectors. None of the terms “serious disruptions”, “significant shortages”, “significant delays”, “significant negative effects” and “important sectors” are defined in detail by the Regulation. Even if the Commission comes to the conclusion that this collection of undefined legal terms indicates that a semiconductor crisis exists, it is not obliged to activate the crisis stage but can act according to its own discretion. As a result of all these ambiguities, it is not possible to specify, with the level of clarity required by the principle of legal certainty, under which conditions an activation of the crisis stage may be expected.¹⁰ The Regulation does not therefore comply with the requirements of the principle of legal certainty which is a fundamental principle of EU law¹¹.

Although compatibility with EU State aid law must be examined in the specific case of aid being granted, aid for the construction of chip factories can in principle be based on Art. 107 (3) (c) TFEU. According to this provision, aid to facilitate the development of certain economic activities, or of certain economic areas, may be considered

⁵ ECJ, Joined Cases C-293/12 and C-594/12 (Digital Rights Ireland and Seitlinger et al.), [ECLI:EU:C:2014:238](#), para. 54.

⁶ WTO Appellate Body, [AB-2011-5](#), China – Measures related to the exportation of various raw materials, para. 326.

⁷ Ibid.

⁸ WTO Appellate Body, [AB-2011-5](#), China – Measures related to the exportation of various raw materials, para. 324.

⁹ WTO Appellate Body, [AB-2011-5](#), China – Measures related to the exportation of various raw materials, para. 328.

¹⁰ Cf. ECJ, Case C-143/93 (Gebroeders van Es Douane Agenten v Inspecteur der Invoerrechten en Accijnzen), [ECLI:EU:C:1996:45](#), para. 27.

¹¹ ECJ, Case C-143/93 (Gebroeders van Es Douane Agenten v Inspecteur der Invoerrechten en Accijnzen), [ECLI:EU:C:1996:45](#), para. 27.

to be compatible with the internal market where such aid does not adversely affect trading conditions to an extent contrary to the common interest. According to the case-law, it is necessary that the aid serves the development of an economic sector which pursues an objective in the common interest and is necessary and proportionate for that purpose.¹² Increasing Europe's share of global chip production in order to reduce the European economy's dependence on third countries in the supply of chips is, in principle, a legitimate objective in the public interest. However it is important to note which chips are being produced because companies producing in the EU largely have no need for the latest generation of chips with the smallest node sizes but require technically mature chips that have already been in production for years.¹³ Where support is given to a factory that primarily or even exclusively produces chips, for which there is hardly any demand from European industry, the existence of a legitimate objective should be called into question. Even if existence of a legitimate objective is affirmed, it is doubtful whether the aid will be appropriate and necessary to achieve this purpose.

D. Conclusion

Securing the chip supply is primarily the responsibility of companies, not the EU. There is no market failure that would justify interventions like those foreseen for in the Chips Act. The desired reduction in the EU's dependence on other economic regions will be very costly for the EU. In addition, the Commission's choice of the internal market competence as legal basis is inadequate. The Chips Act must also be based on the competence for the common commercial policy.

The deployment of a virtual platform and pilot lines, proposed in Pillar 1, may lead to companies being able to develop and test chips more quickly. It remains unclear, however, how the money needed to keep public pilot plants constantly abreast with the latest state of the art is to be raised.

The support for chip factories, envisaged in Pillar 2, risks turning into a subsidy race with other countries and creating overcapacities. If companies cannot produce profitably as a result, they should under no circumstances receive operating support. The focus on chips with a node size of less than 10 nm is misguided because there are hardly any customers in the EU for chips with this node size. Whether aid for the construction of a chip factory is consistent with EU state aid law must be examined on a case-by-case basis. If support is given to a factory that primarily or even exclusively produces chips, for which there is hardly any demand from European industry, questions should be asked as to whether the aid serves a legitimate objective.

It is doubtful whether, as envisaged in Pillar 3, shortages in the supply chain can actually be forecast. Also, the proposed crisis response measures should be rejected. Firstly, the Chips Act is too vague about the circumstances under which the crisis stage is activated. In view of the wide-ranging options available to the Commission following activation of the crisis stage, this lack of clarity fails to meet the requirements of the principle of legal certainty. The fact that Integrated Production Facilities and Open EU Foundries are to give priority to European orders in the event of a crisis, may result in a corresponding backlash from other economic regions. This would not increase security of supply in the EU as the EU is dependent on other economic regions for the production of chips. Export restrictions should also be rejected. Their legal basis is too vague, they are questionable under WTO law and their usefulness is in doubt as chips have to be produced individually for individual companies. Due to the high level of differentiation of chips and their limited substitutability, joint procurement will also be of limited use in a semiconductor crisis.

¹² ECJ, Case R-177/07 (Mediaset v Commission), [ECLI:EU:T:2010:233](#), para. 125; Case T-356/15 (Austria v Commission), [ECLI:EU:C:2018:439](#), para. 48.

¹³ See Kleinhans, J.-P. (2021), [The lack of semiconductor manufacturing in Europe. Why the 2nm fab is a bad investment](#), p. 15 et seq.