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Adam A. Ambroziak

The New EU Industrial Policy

A paradigm shift in need of coordination and funding

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Preface

A paradigm shift appears to be taking place regarding the EU's industrial policy: more and more decision makers and academics believe that more joint efforts are required to boost productivity and enable a green transition in the EU. Professor Adam A. Ambroziak has, therefore, been commissioned to describe industrial policy and state aid in the EU and to discuss possible solutions to better distribute state aid throughout the EU, not primarily in the already more industrialised countries.

Ambroziak argues that the current way of financing industrial policy at EU level is not compatible with the Treaty objectives of competitiveness, cohesion and a level playing field in the internal market. The author puts forward a financing solution, partly based on the Letta and Draghi reports, which aims to address both climate change and competitiveness, while also complying with the basic acquis on the single market. The proposal includes the transfer of funding to the EU level, as the author argues that joint and decisive action is needed, which is in line with the principle of subsidiarity, given the major challenges facing the whole of the Union.

This report aims to provide an overview of the challenges of current EU industrial policy and a proposal for how to overcome them. An important conclusion is that the author highlights the need for more common industrial policy in the EU.

By publishing this report, SIEPS wants to contribute to the discussion on industrial policy in the EU by illustrating and problematising the industrial policy solutions that exist today.

Göran von Sydow

Director, SIEPS

About the author

Adam A. Ambroziak Ph.D. is an Associate Professor at SGH Warsaw School of Economics, specialising in the EU's internal market policy, industrial policy, state aid policy, cohesion policy, common commercial policy, and the use of EU funds. He is also an expert in decision-making processes in the European Union and in EU lobbying. He is the author of over 150 scientific books, chapters and science journals, published by prominent international publishers, as well as expert reports for public administration, international organisations and think-tanks.

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Executive Summary

The goal of the EU industrial policy is to ensure that the conditions necessary for the competitiveness of the Union's industry exist. In recent years, after decades of shifting away from sectoral industrial policy in favour of a horizontal one, with rather soft objectives and instruments, voices have been raised in the EU advocating a more ambitious industrial policy to re-industrialise Europe. Recently, there has been a distinct paradigm shift in industrial policy at the EU level: from passive, open, pro-competitive and horizontal to active, assertive, green and sectoral.

For the purpose of this study, and taking into account a legal basis for EU industrial policy (Article 173 TFEU), it has been assumed that industrial policy is a set of government (public) policy instruments, both non-financial (rules, legal acts, and platforms of cooperation) and financial (sources available at both national and EU levels), used to ensure the competitiveness of the Union's industry. From the perspective of EU business, this means that EU industrial policy should be a combination of horizontal and sectoral measures taken by European institutions to facilitate the structural adjustment of European industry and its capacity for efficiency and innovation, whilst promoting the growth and competitiveness of European enterprises globally, as well as ensuring workable competition within the European Single Market.

Coordination of EU Member States' industrial policy: a powerful tool carrying risks

The industrial policy conducted at EU level has, historically, been very limited. Today, the coordination of EU Member States' industrial policy activities appears to be a powerful integration tool of the new EU industrial policy. The coordinated areas include the decision-making processes in the areas of intervention and financing of the agreed projects.

With regards to the coordinated decision-making process, the Industrial Forum (including EU Member States and companies) focuses on the joint identification of problems and potential risks in individual industrial sectors. It should enable effective bottom-up operations, allowing the grassroots identification of key areas requiring support while ensuring validation of their significance and feasibility by EU Member States. The European Commission plays a coordinating role.

A good example of a coordinated financial instrument is the Important Projects of Common European Interests (IPCEIs). The projects bring together knowledge, financial resources and companies from various EU Member States, in a bid to address important market or systemic failures or societal challenges. To date, IPCEIs have provided few opportunities for peripheral EU Member States and their enterprises to participate in value chains. Against this background, there is a risk that, without substantial changes in funding, IPCEIs may have a limited or, even, negative impact on convergence within the EU framework or may generate costs, especially in terms of unfavourable outcomes, adverse selection and internal and external workarounds.

Financing the new EU Industrial Policy: ensuring cohesion and a level playing field

Financial support to enhance the position of domestic companies is the most obvious instrument of industrial policy. It can lead to an improvement in the competitive position but, also, to a distortion of competition and cohesion in the single market. Therefore, the Commission has gained a meaningful tool to indirectly influence this policy in EU Member States: it has the exclusive competence to authorise the granting of state aid.

However, on the one hand, there is no clear correlation between industrial state aid intensity and the level of industrialisation of any given EU Member State. On the other hand, Member States with higher rates of industrialisation are generally granted industrial state aid to achieve EU objectives (environmental, social and economic) while, in de-industrialising countries, categories unrelated to the above predominated. This means that the current formula of financing activities within industrial policy at the EU level is misaligned with the treaty objectives concerning competitiveness, cohesion and a level playing field within the single market. However, it is precisely the single market that must ensure the conditions necessary for the competitiveness of the Union's industry. The continuation of existing mechanisms to support industrial initiatives (e.g. IPCEI), without substantial changes in funding, creates a de facto segregation between countries that participate in innovative projects, due to their willingness to use, and the availability of, domestic financial measures, and those that either lack this capacity or do not share the rationale for financial intervention in the economy.

In order to mitigate differences in the intensity of state aid and the level of economic development, a new approach to a common/joint system for the

financing of the new EU Industrial Policy is needed. A potential solution, based on Letta's and Draghi's reports, could be the transfer of funding in certain areas of the new EU Industrial Policy to the EU level. These areas require acting together at the EU level, in accordance with the principle of subsidiarity, given the main challenges facing the entire Union, namely digital and energy transformation.

A new financial measure offered under the new EU Industrial Policy should consider both industrial competitiveness and the financial capacity and willingness of individual EU Member States to intervene in the market. Moreover, it should ensure that the ongoing industrial revolution associated with digital and clean technologies does not lead to a concentration of investments only in selected regions and countries that are better prepared and offer better conditions for doing business (in terms of infrastructure, private and public finances, including state aid, and labour resources).

The new approach should eliminate, or significantly reduce the possibility of, governmental failures, the distortion of competition, and the widening of the economic development gap among EU regions, as well as among Member States. At the same time, financing industrial projects at the EU level, as properly evaluated, managed, monitored and supervised by the independent EU institutions, could ensure compliance with formal competition rules as well as real conditions within the single market. Moreover, it could create synergy effects, where teamwork among the EU Member States and businesses can generate added value, exceeding the sum of individual efforts. The results of funding at the EU level should spill over to other actors in the EU production chain who are not directly involved in the funded project. Additionally, it should take into consideration the budgetary positions and willingness of EU Member State to intervene in the market.

Therefore, this report provides support for a new EU Industrial Policy that aims to strengthen the competitiveness of European economic entities without harming competition in the single market or undermining the EU's social, economic and territorial cohesion.

Introduction

After many years of a liberal approach to the conduct of economic policy, including industrial policy, there is now much discussion, as well as concrete government actions, regarding intervening in the market to improve the competitive position of domestic firms. Previously, at least before COVID-19, Industrial policy was less interventionist, due to its horizontal character (the existing solutions did not refer to specific sectors but to the pursuit of common objectives, especially in the European Union).

The concept of industrial policy has many definitions; long lists of different definitions can be found in Warwick (2013), Ambroziak (2017a) and Aiginger and Rodrik (2020). From a political point of view, industrial policy can be considered as the use of public powers to actively shape markets for the interests and values of a bounded political community, in a way that overtly represents the interventionist role of government (McNamara, 2023).

From an economic point of view, the most cited definition of industrial policy is that 'it is any type of selective intervention or government policy that attempts to redirect the structure of production towards sectors that are expected to offer better prospects for economic growth than would occur in the absence of such intervention in the market equilibrium' (Pack & Saggi, 2006, pp. 267–268). This approach was based on the concept of intervening in the market only when there is a so-called market failure, i.e. when market mechanisms do not work efficiently and do not lead to an optimal allocation of resources (Bator, 1958). This failure can result from various factors, such as imperfect competition, information asymmetries or the existence of public goods and externalities.

Industrial policy could be understood as a set of instruments that positively change the structure of production, employment or sales of goods and services, in line with the objectives set out by the government, which are deemed to be desirable for future development (Altenburg & Rodrik, 2017). Subsequent researchers have expanded these goals to include technological issues, as well as better prospects for social welfare (Warwick, 2013). In recent years, there has been an increasing focus on public (societal and environmental) objectives (Aiginger & Rodrik, 2020):

good jobs, lagging regions, export or import substitution (Juhász et al., 2024), or maximising public benefits (Mazzucato & Rodrik, 2023), as well as the high-tech and digital economy (general innovation), and securing supply chains (a more resilient economy) (Rodrik, 2022). In addition, there is another reason for governments and societies to accelerate structural change within industrial policy: economic development has been achieved at the cost of severe over-exploitation of natural resources (Altenburg & Rodrik, 2017). This is the space to discuss green industrial policy, defined as investments, incentives, regulations and policy support designed to stimulate and facilitate the development of green technologies due to market failure (Rodrik, 2022; Allan & Nahm, 2024).

It should be noted that, today, the industrial structure of the economy not only includes manufacturing but, also, industry-related services (Aiginger & Rodrik, 2020; Rodrik, 2022; Juhász et al., 2024). Indeed, in this era of servitisation (offering goods in combination with services), it is not possible to separate the product from the service, as they are often inextricably linked, both at the time of design, sale, use and after-sales service (Ambroziak, 2017b).

For the purpose of this study, and taking into account the legal basis for EU industrial policy (Article 173 TFEU), it has been assumed that industrial policy is a set of government (public) policy instruments, both non-financial (rules, legal acts, and platforms of cooperation) and financial (sources available at both national and EU levels), used to ensure the competitiveness of the Union's industries. From the perspective of EU business, this means that EU industrial policy should be a combination of horizontal and sectoral measures taken by European institutions to facilitate the structural adjustment of European industry and its capacity for efficiency and innovation, while promoting the growth and competitiveness of European enterprises globally (Felisini & Paesani, 2024), as well as ensuring workable competition within the European Single Market.

There are many arguments, both in favour of, and against industrial policy.

For the former, many researchers mention the following aspects: increasing competitiveness, protecting infant industries, increasing pollution (in traditional sectors), access to innovative technologies, a widening gap between modern and traditional industry (not taking into account climate challenges), much higher transition costs in the future,

lagging regions, agglomeration externalities, and the relatively lower costs of bringing new solutions to the market through government support (at consumer level). On the other hand, there are many criticisms of industrial policy in the context of state intervention in a market through subsidies in various forms of state aid, as well as protectionist measures (regulatory and administrative requirements) and picking winners.

Opponents of industrial policy argue that, in political debates, the term 'industrial policy' is used as a euphemism for the selective support of declining firms and industries, that any support is disproportionately given to sunset industries rather than sunrise industries, and that subsidies distort competition and lead to inefficient resource allocation, suppressed incentives for workers, rampant rent-seeking behaviour, worsening income distribution and poor economic performance. Finally, subsidies under industrial policy often do not meet the criteria of the aforementioned market failures; therefore, we have the most famous statement against industrial policy: 'the best industrial policy is none at all' (Becker, 1985). See Ambroziak (2017a) for a detailed discussion of the 'pros and cons' of industrial policy.

The new approach to redefined sub-objectives (concerning i.a. digital and energy challenges) and instruments (increasing acceptance of sectoral legal, administrative and financial interventions) for industrial policy can be observed around the world (Juhász et al., 2024), particularly in the three major economies: the United States of America (USA) (Bonvillian, 2021), China (Allan & Nahm, 2024), and the European Union (EU) (European Commission, 2024a; Terzi et al., 2022). The latter case is particularly interesting because the Union, consisting of 27 different Member States, does not have a common industrial policy. As a result, all national industrial policies of the EU Member States are not necessarily in line with EU objectives, including the ambitious goals of energy and digital transformation, which may distort competition within the Single Market. Therefore, today's discussion on industrial policy is more about the *how* rather than the *why* (Rodrik, 2022).

This raises the question as to whether it would be appropriate to continue the existing industrial policy in the EU with very limited instruments at the national levels or, rather, to look for tools at the EU level that, while interfering with the Single Market of the EU, still ensures a level playing field and cohesion within the EU. Taking into account the actions of the world's main trading partners (the US and China) and

the policy orientations adopted by the Member States at the level of the Council and the European Council, for the purposes of this report it is assumed that there is a need to develop an EU Industrial Policy at EU level (in the absence of positive effects of national policies on the EU as a whole) that could achieve the long-term objective of EU economic growth whilst ensuring a level playing field and cohesion within the Single Market. The main objective of this report is, therefore, to present the rationale, recent initiatives and scope for further common action at EU level in the field of industrial policy, considering the managerial, legal and financial dimensions. As a basis for the above considerations, an effectively functioning Single Market has been adopted, in accordance with the provisions of the Treaty, with a level playing field and cohesion being fundamental values of common action, to 'ensure the conditions necessary for the competitiveness of the Union's industry'. This report is not a paean to the industrial policy of the EU, as it may be an example of intervention that may distort competition in the Single Market. However, it provides a critical analysis of what has been done so far at EU level to make common/joint initiatives; the report provides a proposal for such instruments, including financial ones, which should not distort the level playing field in the EU.

The structure of the report

The report is structured as four chapters and conclusions. Each chapter begins with a summary, containing the main findings of the study, which are developed in detail in the subsequent sections.

The first chapter presents the concept of the new EU Industrial Policy within the current legal framework of the European Union. This is because it has been assumed that, to correctly define the scope of possible new EU Industrial Policy, it is necessary to identify the competence and scope of its conduct on the basis of the Treaty on the European Union (TEU) and the Treaty on the Functioning of the EU (TFEU). After a brief presentation of the evolution of industrial policy in the EU, elements of a new paradigm of the new EU Industrial Policy are elaborated, identifying the main changes that have taken place in recent years, not only in terms of the objectives set but, also, in terms of the legal and financial instruments of the new EU industrial policy.

The second chapter presents the non-financial instruments (legal acts and designated sectoral platforms for cooperation among EU countries and businesses) of the new EU industrial policy, whose mechanisms of

action *de facto* influence the concept of financing of the new EU Industrial Policy. Therefore, in addition to the presentation of the instruments related to indicators and their monitoring, the focus is on the process of coordination among EU Member States and companies with a key role for the European Commission. This makes it possible to understand the concept of the new legal acts governing procedural and financial sectoral support within the framework of the new EU Industrial Policy.

The third chapter is devoted to the (currently) most important financial instrument of industrial policy in the EU Member States: public financial support to enterprises in the form of national state aid, regardless of their primary origin of financial resources: national budget or EU funds. For this purpose, a distinction has been made within Industrial State Aid, which includes categories of state aid that directly affect the competitive position of European enterprises: state aid for environmental protection, including energy saving; regional (investment) state aid; state aid for research, development and innovation; state aid for SMEs, including risk capital; and state aid for sectoral development. A detailed statistical analysis of the above categories of state aid captures the accuracy, intensity and similarity of national approaches to financing national industrial policy objectives in EU Member States.

The fourth chapter is devoted to our recommendations on how to conduct and finance the new EU Industrial Policy. It proposes solutions to the identified shortcomings in the implementation of industrial policy at a national level to achieve EU objectives, whilst ensuring workable competition and cohesion within the European Single Market.

Finally, in *Conclusions*, the report assesses the current legal and financial initiatives that form the framework of the new EU Industrial Policy, summarises proposals for recommendations for the joint financing of industrial initiatives at the EU level, and draws attention to the need to develop sources of funding for common EU actions that meet pre-defined political and economic conditions, while protecting the level playing field and cohesion in the EU.

1 The Concept of the new EU Industrial Policy within the Current Legal Framework

Main findings

The first provisions of an industrial policy within an EU dimension were not introduced until the Treaty of Maastricht in 1992. Nonetheless, actions in the field of Industrial Policy at the EU level do not fall within the exclusive competences of the EU, nor even within the competences shared between the EU and the EU Member States. There is only a generally formulated possibility of coordinating the actions of the EU Member States.

The goal of the EU industrial policy (according to Article 173 TFEU) is to 'ensure that the conditions necessary for the competitiveness of the Union's industry exist'. The industrial policy at the EU level, under the current legal framework and EU practices, lacks dedicated financial instruments, making it merely a set of economic objectives, sometimes combined with social, as well as climate-related, environmental and energy objectives, but without specific tools.

Financial intervention in the market (to enhance the position of domestic companies) is the most obvious instrument of industrial policy. It can lead to an improvement in the competitive position of the aid's recipients but can also distort competition in the European Single Market. Therefore, the treaty provisions on state aid clearly prohibit subsidies (with some exemptions) that would distort competition among companies within the EU. Therefore, the competitiveness of national entities in foreign markets should not be improved through state aided measures. The European Commission has gained a tool to indirectly influence this policy in the EU Member States: it has the exclusive competence to authorise the granting of state aid.

In the EU, a reduction in sectoral interventions began in the 1990s, with a shift towards promoting objectives related to broader industrial development and international competitiveness but without targeting

specific industries. At that time, *market failures* became the European Commission's main rationale for authorising state aid in the EU. It helped to ensure a level playing field in the Single Market.

In recent years, after decades of shifting away from the sectoral industrial policy in favour of a horizontal one, with rather soft objectives and instruments that were not overly invasive for the European Single Market (including state aid), voices have been raised in the EU advocating a more ambitious industrial policy to re-industrialise Europe. The repercussions of the European economy's dependence on untrustworthy partners outside the EU started to become apparent as early as the mid-2010s, which was particularly aggravated during the COVID-19 pandemic and the war in Ukraine.

These events triggered a shift from the EU's liberal approach to the market, focused on strict state aid rules that mostly allowed horizontal aid, towards broader permissibility of state assistance being granted to achieve sectoral goals.

Moreover, we are faced with a distinct paradigm shift in the EU Industrial Policy: from passive, open, pro-competitive and horizontal to active, assertive, green and sectoral.

In the era of retreat from globalism and concentrating on shorter dependency chains, higher production costs within the EU should be expected. Certain essential, if expensive, production stages will stay within the EU for security reasons, leading to higher prices of finished products.

Moreover, Europe's competitive advantages are eroding. The main price-driving commodity—electricity—is becoming expensive, partly due to the energy crisis caused by the war in Ukraine. The energy transition and increasing focus on renewable energy sources appear to be moves in the right direction, enabling significant reductions in energy costs and reducing the reliance on external, often unstable, energy supplies.

1.1 Competence in and Scope of the Industrial Policy in the EU

Competence to Pursue Industrial Policy in the EU

Theoretically, Industrial policy, like any other public policy within the EU framework, could be implemented at one of three levels: purely national, purely EU or mixed (national and EU). In a purely national action model, a wide range of instruments under broad industrial policy can be used to make national economic actors more competitive. Such instruments tend to be both interventionist (offensive) and protectionist (defensive). The first of these is primarily characterised by various legal and financial measures to intervene in the free market, such as financial support for domestic companies. This strengthens their position relative to external partners, providing protection from competitors at the same time. In contrast, the second approach (defensiveness) is predominant in trade policy tools and administrative policies that regulate market entry for products or traders. These instruments may be effective in protecting against third countries in the short term but could disrupt the targeted market and relations with external partners over time. Such solutions cannot be applied by EU Member States, as the EU has exclusive competence over state aid authorisation by the European Commission (under the Competition Policy) and the use of Common Commercial Policy tools. Hence, a purely national approach to industrial policy in the EU—pursuing individual national interests within the framework of EU law—is essentially unfeasible (Vander Bosh, 2014; Piechucka et al., 2024).

At the same time, despite the above arrangements at the EU level concerning trade and state aid, the EU does not have exclusive jurisdiction over industrial policy. Since the beginnings of the European Economic Community in 1958 (EEC), the concept of industrial policy was not defined in any way. The first provisions of industrial policy with an EU dimension were not introduced until the Treaty of Maastricht (Article 130 of the Treaty establishing the European Community of 1992, currently Article 173 of the Treaty on the Functioning of the European Union), along with EU Cohesion Policy, environmental policy, and a more detailed research and development policy. It is worth noting that the treaty provisions introduced in 1992 did not envisage particularly far-reaching or comprehensive involvement of the EU in conducting this policy. Therefore, actions in the field of Industrial Policy at the EU level do not fall within the exclusive competences of the EU, nor even within the competences shared between the EU and the Member States. The area of industrial

activities was classified, based on Article 6 of the TFEU, as one where 'the Union shall have competence to carry out actions to support, coordinate or supplement the actions of the Member States (...) at European level'. This means that the EU does not have the competence to conduct an EU-wide Industrial Policy or to exert a more open and direct influence on the policy pursued at the national level (Šmejkal, 2024). Hence, there is only a generally formulated possibility of coordinating the actions of the EU Member States.

The final mixed model of this policy in the EU is determined by the specific use of state aid as the most obvious instrument of industrial policy (Landesmann & Stöllinger, 2020; Terzi et al., 2022; Piechucka et al., 2024; Juhász et al., 2024). Article 3 of the TFEU explicitly states that 'The Union shall have exclusive competence in (...) the establishing of the competition rules necessary for the functioning of the internal market', including one of the key instruments of national industrial policies – the above-mentioned state aid. This instrument became the only governmental tool for rapidly improving the financial performance of domestic companies. Therefore, it is prohibited under Article 107 of the TFEU, with certain important exceptions, as set out in the following provisions, including those from the obligation to notify each aid measure (European Commission, 2008, 2014c, 2023d). EU Member States can support companies using both the national and European funds available to them (including the financial resources of the EU Cohesion Policy or the National Recovery Resilience Plan). However, if these measures qualify as state aid under Article 107(1) of the TFEU (they originate from public resources, are selective, give the undertaking an advantage, and affect trade between Member States), then their permissibility is determined by EU legislation.

The use of State aid by Member States, in the context of EU industrial policy, has at least five characteristics. First, state aid can improve the competitive position of the aid recipient. Second, it can also distort competition in the European Single Market. Third, the European Commission has exclusive competence to decide only on the permissibility of granting state aid in the context of maintaining undistorted competition in the Single Market. Fourth, the Commission does not decide on the objectives of aid measures and the real need to improve the competitiveness of companies as part of the national industrial policies of all EU Member States. Fifth, the very wide range of state aid categories available allows Member States to engage in a wide variety of financial interventions, not necessarily in line with EU objectives.

A certain novelty worth mentioning is the proposal by the European Parliament from November 2023, to include the area of *Industry* within the scope of the EU's and Member States' shared competences (European Parliament, 2023). This would significantly strengthen the EU institutions' role in making decisions regarding Industrial Policy at the EU level. However, the European Parliament did not propose any significant changes concerning the current Article 173 of the TFEU, which defines the scope of objectives and the available instruments for cooperation in Industrial Policy at the EU level. It seems that, without a radical reform of this article, which currently limits the possibilities for legislative harmonisation, the competences of the EU (and the Commission) remain restricted.

Scope and measures of the Industrial Policy in the EU

The goal of the EU Industrial Policy, as set out in Article 173(1) TFEU, is that 'The Union and the Member States shall ensure that the conditions necessary for the competitiveness of the Union's industry exist'. Assuming that the competitiveness of industry means the ability to compete in international markets (in terms of price, quality, and quantity), the issue of competitors seems to be a key factor within the European Single Market, as well as globally (Di Carlo & Schmitz, 2023). The treaty provisions on state aid clearly prohibit subsidies that would distort competition within the EU. Therefore, the competitiveness of national entities in foreign markets should not be improved through state aid measures.

Additionally, the aforementioned competitiveness of the Union's industry should be ensured while maintaining 'a system of open and competitive markets' (Article 173(1) TFEU) (Piechucka et al., 2024). This means that any efforts to enhance competitiveness may not lead to trade protectionism but openness, when conducting the EU's common commercial policy.

As part of the measures envisaged to improve the competitiveness of EU industry, Article 173 TFEU provides four actions without specific instruments.

- The first of these measures involves accelerating the adjustment of industry to structural changes. Although these provisions were introduced in 1992, it is still necessary to implement changes in production structures, both in response to consumer expectations and the need for new challenges, including energy and digital transformation.

- The second of the mentioned measures to enhance the competitiveness of EU industry relates to the need to improve the business environment, particularly for SMEs. However, this has not yet materialised, as despite relatively advanced liberalisation of the flow of goods, the services market still encounters many national administrative and regulatory barriers. In addition, the European Commission continues to call for the better implementation of EU legislation and measures by EU Member States (European Commission, 2024h).
- Particular attention should be paid to the third measure, which focuses on fostering an environment which is conducive to cooperation between companies. This objective is currently being realised through the creation of product alliances supported within *Important Projects of Common European Interest* (see Chapter 2).
- The fourth measure is dedicated to taking into account the needs of industry in research, development, and innovation (RDI) policy. The aim is to ensure that new techniques and technologies, often significantly supported by public funds, including EU funds, can be applied in the EU's manufacturing industry. This is a valid goal, as the biggest challenge for current innovative solutions is their commercialisation, i.e. their implementation in production and sales. At the same time, these provisions point to a broad understanding of industrial policy, encompassing RDI aspects.

Finally, it should be noted that industrial policy at the EU level, under the current legal framework and EU practices, lacks dedicated financial instruments, making it merely a set of economic objectives, sometimes combined with social, as well as climate-related, environmental, and energy objectives, but without specific tools to influence entrepreneurs' competitiveness directly.

1.2 Evolution of the industrial policy in the EU

The first decades of existence of the European Economic Community were marked by sectoral market intervention at the level of Member States (Pender, 2017). In the 1950s and 1960s, support for the EEC could be seen in the form of the regulation and authorisation of financial aid for the construction of large steel, automotive, or chemical facilities. In the post-crisis 1970s, there was financial aid for the then state-of-the-art electronics and pharmaceutical industries (Warwick, 2013). This, however, increased

the risk of distorting competition in the common market, as the Member States of the European Economic Community (EEC) overestimated the risks and costs of market failures and underestimated those associated with government failures (Owen, 2012). It seems that subsidising certain industries in the EEC during these years was rather counterproductive in the long term and did not contribute significantly to industrial innovation, modernisation or economic development (Grabas & Nützenadel, 2013).

The global wave of liberalisation in the mid-1980s also reached the EU, in the form of the resumption of the construction of a European Single Market. With this aim in mind, the EEC Treaty was amended, allowing the gradual establishment of the Internal Market (European Single Market) by 31 December 1992, an area without internal borders where the free movement of goods, persons, services, and capital is assured (Ambroziak, 2017a; Pender, 2017; Felisini & Paesani, 2024). The next step was establishing the European Community (EC Treaty), which expanded the economic objectives to include social and environmental objectives. These changes indicated the choice of a mixed approach to the free market economy by incorporating interventions in market mechanisms intended

Table 1. **Evolution of Industrial Policy in the EU**

	Sectoral policy at the EEC level	**Horizontal policy at the EC/EU level**	**Towards a new EU Industrial Policy**
Sub-periods	1958–1980s	1990s–2010s	– 2008–2019: a discussion without tangible solutions – from 2020: in-depth discussion and intensification of concrete measures
Extent of state influence	Mainly sectoral approach	Mainly horizontal approach	– a sectoral approach incorporating horizontal elements (environment, energy) and regional elements (cohesion)
Rationale	Reconstruction after the Second World War and competition with other economies	Market failures	– loss of competitiveness of EU industry – dependence on untrustworthy third-country partners – increased unfair competition from third-country partners – climate change and energy transformation (traditional market failures not included)
General characteristics	Active, assertive, sectoral	Passive, open, pro-competitive and horizontal	– active, assertive, green and sectoral

Source: Own elaboration.

to achieve not only economic (in the short term) but, also, social objectives, including those 'linked to the promotion of a high level of employment, the guarantee of adequate social protection, the fight against social exclusion, and a high level of education, training and protection of human health', as well as sustainable development and consumer protection (Articles 9, 11 and 12 of the Treaty on the Functioning of the European Union – TFEU).

In the 1990s and 2000s, the legislative changes coincided with changes in the EU's approach to market interference, including industrial policy. Indeed, the nature of authorised financial interventions by EU Member States, in the form of state aid, has gradually started to change. The magnitude of sectoral (vertical) aid decreased in favour of a rise in horizontal aid, as a reduction in sectoral interventions was initiated, with a shift towards promoting objectives related to broader industrial development and international competitiveness but without targeting specific industries (Ambroziak, 2017; Wigger, 2018).

The European Commission's main rationale for authorising state aid in the EU became *market failures*, meaning failure of competition, the existence of public goods, external effects, the incompleteness of markets and information, coordination problems, market power, and unemployment, inflation, and imbalance (European Commission, 2005). The European Commission issued a wide range of detailed guidelines, developed since the 1990s, on the permissibility of state aid. In many cases, this directly or indirectly affected the competitiveness of the EU's industry: research, development and innovation, environmental and energy objectives, employment and training, small and medium-sized enterprises, and regional investment state aid. The meticulous observance of the support admissibility rules for specific horizontal objectives, i.e. without indicating specific affected sectors, helped to ensure a level playing field in the Single Market, until the end of the 2010s.

1.3 Elements of a new Paradigm of the new EU Industrial Policy

In recent years, after decades of shifting away from a sectoral Industrial Policy in favour of a horizontal one, at the EU level, with rather soft objectives and instruments that are not overly invasive for the European Single Market, voices have been raised advocating more ambitious goals and measures to re-industrialise the EU. The spark that ignited this discussion was the 2008–2010 crisis, when many EU Member States experienced significant declines in GDP growth, combined with a drop in

their share of industry within the economic structure (Ambroziak, 2017b). The repercussions of the European economy's dependence on single (and sometimes unreliable) partners outside the EU started to become apparent as early as the mid-2010s, which was particularly aggravated by the COVID-19 pandemic and the war in Ukraine (including the energy crisis). It was then that the disrupted supply and production chains made companies, alongside policymakers, realise that relying solely on single external suppliers might not ensure economic security.

At the same time, EU companies operate under very restrictive requirements, imposed on them in areas such as social, environmental, energy, and climate, as well as adherence to European values. These principles are mandatory and costly for companies located within the EU, while third-country suppliers are not subject to these requirements. Third-country businesses can benefit from state subsidies and operate under more lenient (or even non-existent) social, environmental, energy, or climate regulations. As a result, the operating conditions in both the European Single Market and the global market are not identical for European businesses and those from third countries. Consequently, the competitive position of European industry has been under significant and unfair pressure from third countries for many years (Davidson et al., 2021; Amaroli et al., 2024; Olasehinde-Williams & Akadiri, 2024; Nurski & Alcidi, 2025).

The current situation for European industry is also influenced by the behaviour and policies of non-EU countries, including industrial ones. Alongside the EU, the US and China have their own industrial concepts, some elements of which have been in place for a long time. In China, following the launch of the *Belt and Road Initiative* in 2013 (World Bank, 2018), the *Made in China 2015* programme was introduced 'to comprehensively upgrade Chinese industry, with a significant role for the state in providing an overall framework, utilising financial and fiscal tools, and supporting the creation of manufacturing innovation centres' (CSIS, 2015). It is also noteworthy that China has historically prioritised the advancement of electric technology as a means of ensuring its energy independence, particularly given its limited access to oil reserves. This strategic focus has contributed to China's current leading position in the field of electric technology (Allan & Nahm, 2024). The US has observed the development of many industrial policy programmes (Bonvillian, 2021). The US has passed legislation such as the *Chips and Science Act*, committing USD 280 billion to boost domestic semiconductor research

and manufacturing (White House, 2022a), and the *Inflation Reduction Act* (IRA), allocating USD 663 billion for climate-related investments (White House, 2022b). The IRA introduced various intervention mechanisms, including tax credits and subsidies for business investments and clean-tech products for consumers. A major issue is the discriminatory system of preferences which only cover North American products, hindering those from outside the region while encouraging foreign investors to enter the US market. This makes the EU less attractive, investment-wise, not only for third country companies but, also, for European ones (Scheinert, 2023; Leonelli & Clora, 2024).

The EU responded to these initiatives by shifting its liberal approach – focused on restrictive state aid rules that mostly allow horizontal aid – towards a broader permissibility of state support for sectoral objectives (McNamara, 2023). It seems that there are at least four arguments for this revision:

- loss of competitiveness of European Union industry;
- dependence on untrustworthy third country partners. The high dependence on a single or only a few countries (the US, China, Russia) became especially clear during recent crises, when production and supply chains were disrupted by the COVID-19 pandemic and the war in Ukraine;
- increased unfair competition from third country partners, including export subsidies and support for the domestic production of components and finished products in specific industries;
- energy transition to address issues arising from climate change;
- growing pressure on governments to intervene in specific sectors of the economy during crises.

Industrial policy in the EU in the 1990s and 2010s was based on the concept of following the worldwide trend of offshoring and outsourcing as part of globalisation, allowing production costs, including environmental and social costs, to be reduced by avoiding compliance with strict EU regulations. Nowadays, we are faced with a distinct paradigm shift in the EU Industrial Policy (Table 1), from passive, open, pro-competitive, and horizontal to active, assertive, green and sectoral. However, in this era of retreat from globalism and concentrating on shorter dependency chains, higher production costs within the EU should be expected, as certain essential (even if expensive) production stages will stay within

the EU for economic security reasons, leading to higher prices of finished products. This may create negative assessments and opinions among some customers, due to limited information on the need to take measures to protect the environment and European industry resilience, or simply low financial resources.

Nowadays, Europe's competitive advantages are eroding, partly due to increasingly expensive price-driving commodities such as electricity, partially caused by the war in Ukraine. Therefore, new advantages over third country partners need to be sought within the EU. Energy transition and an increasing focus on climate neutrality appear to be the new direction, enabling significant reductions in energy costs and reducing reliance on external, often unstable, energy supplies. The 'greening' of industry should be recognised as the flywheel and direction of productive change in the EU. Governments use it as a catalyst for technological change, as it is specifically strong in manufacturing (Lütkenhorst et al., 2014; Aiginger & Rodrik, 2020). On the one hand, green industries could be identified as infant industries (which may only become profitable after a period of protection) with all the characteristics of traditional infant industries and subject to the same opportunities and challenges for their promotion, especially when new (clean) technologies are applied (Schwarzer, 2013; Warwick, 2013; Juhász & Steinwender, 2024). On the other hand, a rich literature in state science shows that states that engage in green industrial policies generate long-term benefits, including primarily political benefits (Breetz et al., 2018). This is achieved by persuading the public to accept the changes being made (Finnegan, 2022) and by responding to expectations to decarbonise the economy, protect the environment (Meckling et al., 2015; Allan & Nahm, 2024) and to meet international obligations such as the Paris Agreement (Landesmann & Stöllinger, 2020), as well as to respond to pervasive market failures (Lütkenhorst et al., 2014).

2 Coordinated Instruments of the new EU Industrial Policy

Main findings
Industrial Policy conducted at the EU level has historically been very limited. However, the Treaty of Lisbon introduced a notable change, adding three specific areas of action: establishing guidelines and indicators, preparing the necessary elements for periodic monitoring and evaluation, and organising the exchange of best practices. However, no instruments were introduced that had a direct or quantitative impact (e.g. of a financial nature); rather, the actions were focused on refining the previously envisaged coordination of Member States' actions.

Nowadays, the coordination of EU Member States industrial policy activities appears to be a powerful integration tool of the new EU industrial policy. There are two key areas of coordination: agreement on the areas of intervention and the financing of the agreed projects.

In terms of coordinated decision-making processes, although not part of the Treaty mandate, the Commission is responsible for chairing and steering an expert group – the Industry Forum (comprising EU Member States, industry and EU institutions) – which focuses on the joint identification of problems and potential risks in individual industrial sectors.

The operationalisation of the results of the discussions at the Industrial Forum takes place within the framework of sectoral thematic industrial alliances that bring together different businesses and officials from EU Member States. The purpose of this is to enable effective bottom-up operations, allowing the grassroots identification of key areas requiring support, whilst ensuring validation of their significance and feasibility by EU Member States – with the European Commission playing a coordinating role. This enables the Commission to steer the discussions and work of the alliances, in order to achieve the EU policy objectives – most recently in the context of energy and digital transformation and ensuring economic security, as well as respecting competition rules

(eliminating subsidy races), non-discrimination principles, and fostering social, economic and territorial cohesion.

A good example and template for a new, value chain-oriented EU Industrial Policy on which to build a (coordinated) financial instrument is the Important Projects of Common European Interests (IPCEIs). This assumes that it is possible to bring together knowledge, financial resources, and companies from various EU Member States, in a bid to address important market or systemic failures or societal challenges that could not otherwise be addressed. Their benefits must not be confined to the financing EU Member States but must extend to a wider part of the Union, which effectively shapes industrial policy at the EU level in this area.

Nowadays, EU Member States' interest in IPCEIs is either determined by a relatively high share of manufacturing in GDP or high R&D expenditure indicators, which, in principle, fits into the idea of this instrument. So far, IPCEIs have provided few opportunities for peripheral EU Member States and their enterprises to participate in value chains. Against this background, there is a risk that, without substantial changes in funding, IPCEIs may have a limited or a negative impact on convergence within the EU framework or generate costs, especially in terms of unfavourable outcomes, adverse selection and internal and external workarounds.

It was only after the outbreak of COVID-19 and the subsequent broken production and supply chains that important industrial policy legislation was developed at the EU level, to ensure economic security. However, these measures are primarily reactive rather than proactive: i.e. the European Chips Act, the Critical Raw Materials Act and the Net-Zero Industrial Act (NZIA). These measures implement the idea of cooperation between the EU Member States and their companies in sectoral initiatives, including investments in strategic sectors, with the European Commission playing a central role. These legal acts provide for many responsibilities for the EU Member States, including the reduction of administrative burdens. They do not envisage substantial financial measures to support the main economic actors although, for example, the NZIA, together with temporarily relaxed state aid rules, allow for more investment subsidies that, so far, have mainly been offered in cohesion countries.

2.1 Indicators

Industrial Policy conducted at the EU level has historically been very limited. It mainly involved mutual consultations and coordinated actions, primarily due to the provisions of Article 130 of the Treaty establishing the European Community of 1992. However, the Treaty of Lisbon introduced a notable change, adding three specific areas of action (Article 173 TFEU): establishing guidelines and indicators (on the performance of industry in EU Member States), preparing the necessary elements for periodic monitoring and evaluation (of the results of the industry sector), and organising the exchange of best practices (of EU Member States dealing with industry). However, no instruments were introduced that had a direct or quantitative impact (e.g. of a financial nature); rather, the actions were focused on refining the previously envisaged coordination of Member States' actions.

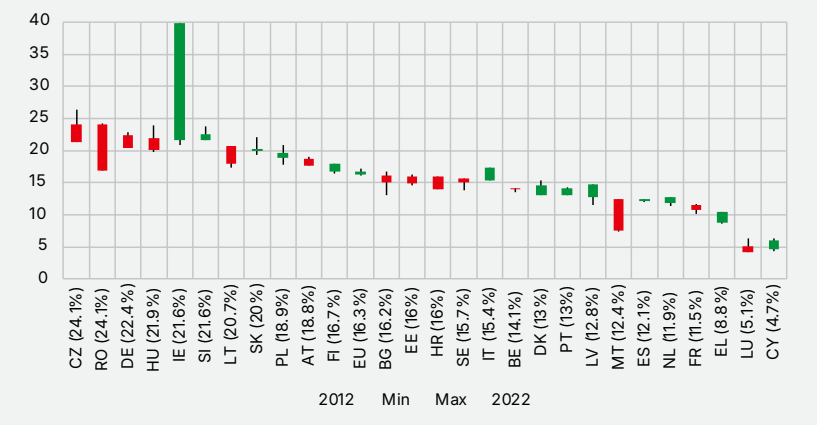
With regard to the industrial policy indicators, well-constructed indexes can assist in monitoring and evaluating the implementation of specific actions and measures. Therefore, as early as 2012, the European Commission stated in a communication that it 'seeks to reverse the declining role of industry in Europe from its current level of around 16% of GDP to as much as 20% by 2020' (European Commission, 2012). The Commission referred to this indicator in its communication of 2014 on industrial competitiveness, stating that one priority was that 'the objective of revitalisation of the EU economy calls for the endorsement of the re-industrialisation efforts, in line with the Commission's aspiration of raising the contribution of industry to GDP to as much as 20% by 2020' (European Commission, 2014b; Vander Bosh, 2014). In response to the Commission's suggestions, the Council of the EU merely agreed that it 'takes note of the Commission's intention to see the share of industry at the level of as much as 20% of GDP by 2020' (Council, 2013), without specifying how this target would be achieved. This was a clear indication that the Council was divided into at least two groups of EU Member States: a) those supporting the concept of an active EU industrial policy and a relaxation of state aid rules; and b) those in favour of a reduced role for governments in the economy and, thus, a reduction in the intensity of state aid (Ambroziak, 2017b).

From a substantive point of view, the proposal for a 20% target of the share of industry in GDP had many shortcomings. Firstly, in its proposal, the European Commission referred to *industry*, while simultaneously presenting statistical data for *manufacturing* (European Commission,

2012). This represents a significant flaw in the Commission's proposal, as it makes it difficult to clearly determine which activities were being discussed, according to the statistical classification of economic activities in the EU (fr. Nomenclature statistique des activités économiques dans la Communauté européenne – NACE). Secondly, this proposal has significant implications for many EU Member States, as their economic structures are extremely diverse and evolving in different directions (Figure 1) (Wigger, 2018; Aiginger & Rodrik, 2020). Thirdly, in the context of the servitisation process – offering goods together with services – the gradual decline in the share of manufacturing in GDP is nothing new and has been occurring for many years (Ambroziak, 2017b).

In terms of monitoring activities, the European Commission has not established a system or reporting mechanism dedicated exclusively to industry or the impact of industrial policy in the EU. However, recognising the existence of many obstacles to the proper functioning of the European Single Market, the Commission announced the adoption of an annual Single Market Enforcement Strategy Report to identify areas requiring intervention and to prioritise enforcement actions, taking into account the results of the European Semester (European Commission, 2020c, 2020e). As a result, the current monitoring process focuses primarily on the proper functioning of the Single Market (European Commission, 2023a, 2024j) although, in 2024, the reporting process was extended to include

Figure 1. **Change in the share of (C) manufacturing in GDP in EU Member States in the years 2012–2022 (%)**



Note: The shares of manufacturing in GDP in 2012 are shown in brackets.The red bars represent a decrease in the share, while the green bars represent an increase.
Source: Own elaboration based on Eurostat Database.

the European Monitor of Industrial Ecosystems (European Commission, 2024b)[1] for the first time. These initiatives go hand in hand with Letta's proposals for monitoring mechanisms (Letta, 2024).

2.2 Coordination of Member States' Actions

The problem of the lack of coordinated action by countries around the world, including the then EEC, in the area of industrial policy was identified in the 1970s, with the end of the post-war reconstruction boom. At that time, industrial policy faced a strategic *prisoner's dilemma*: in the absence of transnational coordination to reduce overproduction, the dominant strategy of individual countries was to support their own industries through public intervention, to gain a stronger market position and to protect them from unfair competition (Pender, 2017). Although, from a production point of view, the opposite situation can be observed in the EU today, the key instrument – the coordination of EU Member States – has been missing (Scheinert, 2023; Hodge et al., 2024; Wolf, 2024). Indeed, the coordination of Member States' industrial policy activities at the EU level appears to be a powerful integration tool in the new EU industrial policy (Piechucka et al., 2024). There are two key areas of current coordination mentioned above: agreement on the areas of intervention and the financing of the agreed projects. Therefore, we discuss new forms of coordination of EU industrial policy activities in strategic areas: Industrial Forum, Industrial Alliances, and Important Projects of Common European Interests, as tools to guide EU Member States' decisions on their national state aid objectives.

Industrial Forum and Thematic (Industrial) Alliances

Industrial Forum

The Commission's treaty-based competence under Article 173(2) TFEU regarding the 'coordination, in particular initiatives aiming at (...) the organisation of exchange of best practice' of EU Member States dealing with industry is currently being implemented through the Industrial Forum, as

[1] Ecosystems are a set of interconnections between industries and the businesses that represent them, operating throughout the value chain: from start-ups to large companies and from those involved in research activities to service providers and manufacturers. This approach allows for the consideration of the specifics of business models, the size structure of entities, and their interdependencies. The European Commission, in its working document *Repair and Prepare for the Next Generation* of 2020, identified fourteen ecosystems, representing approximately 70% of the EU economy but as much as 90% of the value of business activities. These ecosystems included Tourism, Mobility-Transport-Automotive, Aerospace & Defence, Construction, Agri-food, Energy Intensive Industries, Textile, Creative & Cultural Industries, Digital, Renewable Energy, Electronics, Retail, Proximity & Social Economy, and Health (European Commission, 2020e).

proposed by the Commission in *A New Industrial Strategy for Europe* of 2020 (European Commission, 2020c). Aware of its very limited competences, in its report, the Commission emphasised that the work of this body must be based on a partnership between the EU Member States, social partners, industry, and other relevant stakeholders, both within and across industrial ecosystems, relying on an open and inclusive Industrial Forum. Its main aim is to support the development of transition pathways, analyse strategic dependencies, promote best practices and solutions within ecosystems, and identify cross-border and cross-ecosystem investment needs and cooperation opportunities (European Commission, 2021b). Within the Industrial Forum, five task forces have been established:

- Task Force 1 – Economic assessment of the impact of industrial policy measures on the European Single Market, industrial ecosystems, and key performance indicators (KPIs);
- Task Force 2 – Support the development of transition pathways;
- Task Force 3 – Support the analysis of strategic dependencies;
- Task Force 4 – Identify and advise on cross-border and cross-ecosystem investment needs and cooperation opportunities;
- Task Force 5 – Support the uptake of advanced manufacturing processes by EU industry.

In essence, they focus on the joint identification of problems and potential risks in specific industrial sectors. It should be noted, however, that they do not provide direct opportunities for action at EU level, although they do provide forums for the exchange of views and best practices between EU Member States and a basis for further Commission initiatives, including legislation. Nevertheless, all industrial policy measures in the real economy remain the responsibility of EU Member States, with the relevant state aid rules applying to financial instruments. The operationalisation of the results of the Industrial Forum discussions takes place within the framework of sectoral thematic alliances.

Industrial alliances

The concept of building industrial alliances that bring together different businesses, officials from EU Member States, and companies began to be more strongly developed in the second half of the 2010s. It involves creating a forum for the exchange of information and developing cooperation between various economic actors. This approach aims at collaboration in the creation of value chains and the commercialisation of research results. However, like the Industrial Forum, these alliances do not

have a firm Treaty mandate to take binding decisions for the EU, although they are examples of the Commission's executive powers to coordinate Member States' actions. When analysing the characteristics of different industrial alliances, certain similarities can be identified that effectively shape them as an instrument of the new EU Industrial Policy managed by the European Commission (European Commission, 2024d):

- the thematic scope and objectives of individual industrial alliances align fully with both the general and specific goals set at the EU level (especially regarding the implementation of the energy and digital transition, mitigating the negative impacts of climate change, and ensuring economic security in areas such as microelectronics and health);
- the partners involved include EU Member States, selected regions, entrepreneurs, financial institutions, private investors, academic and research communities, as well as NGOs and, in some cases, trade unions. This approach should ensure inclusivity and the participation of virtually all entities involved in a given area, which should not only enable the gathering of knowledge and opinions from all interested partners but also facilitate the dissemination of information about the needs and scope of actions undertaken;
- due to their inclusive nature, industrial alliances are open to all interested entities on the basis of openness, transparency, and diversity. This approach prevents the creation of closed alliances that exclude new entities that may not yet have entered the market, thus avoiding the 'locking in' of the market;
- they do not have a formal role in EU decision-making, including funding or legislation concerning the given area; however, these forums provide an excellent space for presenting opinions, discussing new initiatives, and persuading decision-makers to adopt certain positions;
- the alliances serve as a source of reliable information for the European Commission about market specifics, the needs and expectations of entrepreneurs concerning support instruments, as well as existing standards and requirements, which can subsequently be translated into EU law;
- membership of alliances does not guarantee any funding for the initiatives developed or discussed. However, the alliances help build groups of entrepreneurs and EU Member States interested in seeking funding, for example, under IPCEIs.

So far, most alliances have been created based on the provisions of the relevant sectoral strategies of the European Commission (Table 2). This highlights the need for industry involvement and the engagement of relevant governmental administrative bodies responsible for identifying areas of intervention as part of the new coordinated EU Industrial Policy

Table 2. **Industrial alliances within the new EU Industrial Policy**

	Name of the industrial alliance	Date of establish-ment	Number of actors	Reference in the European Commission's document
1.	European Battery Alliance	October 2017	440	Europe on the move - Sustainable Mobility for Europe: safe, connected and clean, COM(2018) 293 final (European Commission, 2018b)
2.	Circular Plastics Alliance	December 2018	336	A European Strategy for Plastics in a Circular Economy, COM(2018) 28 final (European Commission, 2018a)
3.	European Clean Hydrogen Alliance	July 2020	1767	A hydrogen strategy for a climate-neutral Europe, COM(2020) 301 final (European Commission, 2020b).
4.	European Raw Materials Alliance	September 2020	738	Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability, COM(2020) 474 final (European Commission, 2020d)
5.	European Alliance for Industrial Data, Edge and Cloud	July 2021	57	A European strategy for data, COM(2020) 66 (European Commission, 2020a).
6.	Processors and Semiconductor Technologies	July 2021	n/a	
7.	Renewable and Low-Carbon Fuels Value Chain Industrial Alliance	April 2022	244	
8.	Alliance for Zero-Emission Aviation (AZEA)	June 2022	143	(Destination 2050, 2021): The European Aviation Sector's Climate Mission, A Route to Net Zero European Aviation – Industry Commitments
9.	European Solar Photovoltaic Industry Alliance	December 2022	n/a	EU Solar Energy Strategy, COM(2022) 221 final (European Commission, 2022a)
10.	Critical Medicines Alliance	January 2024	286	Addressing medicine shortages in the EU, COM(2023) 672 final, (European Commission, 2023b)
11.	European Industrial Alliance on SMRs (Small Modular Reactors)	May 2024	277	Securing our future. Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society, COM(2024) 63 final (European Commission, 2024g)

Source: Own elaboration based on European Commission information (2024d)

actions. Industrial alliances emerged that were initiated from the bottom up, particularly in recent years, by industry rather than by the European Commission or EU Member States.

In summary, with the managerial involvement of the European Commission, thematic alliances have become a new tool of Industrial Policy at the EU level. This is due to the fact that they are permitted under treaty provisions (Article 173(2) TFEU) as forums for the 'exchange of best practice', effectively guiding European businesses and EU Member States towards actions favoured by the European Commission. Indeed, the Commission is the initiator of the alliances, often taking on administrative and secretarial functions and guiding the activities of the members of these initiatives. This enables the Commission to steer the discussions and work of the alliances in a way that harnesses the potential of the companies and EU Member States involved to achieve the EU objectives – most recently in the context of energy and digital transformation and ensuring economic security. This concept reflects the idea that industrial policy in the EU should not be delegated to special envoys, ministers and EU commissioners alone – it may be a government task, with the prime minister or the Head of the EU Commission in the driver's seat (Aiginger & Rodrik, 2020). Moreover, the concept presented above fulfils some basic principles of effective industrial policy that should be applied to the design and implementation of industrial policy (Altenburg & Rodrik, 2017; Terzi et al., 2022): a) embeddedness (maintaining a close relationship with the public sector to understand existing barriers, needs, and expectations); b) discipline (there should be a clear line between cooperation in the public interest and favouritism, which can be achieved by ensuring a key oversight role for an independent European Commission); c) accountability (ensuring transparency in decision-making); d) fairness (protecting competition within the Single Market); e) forward-looking and technology-driven (responding to digital and energy challenges).

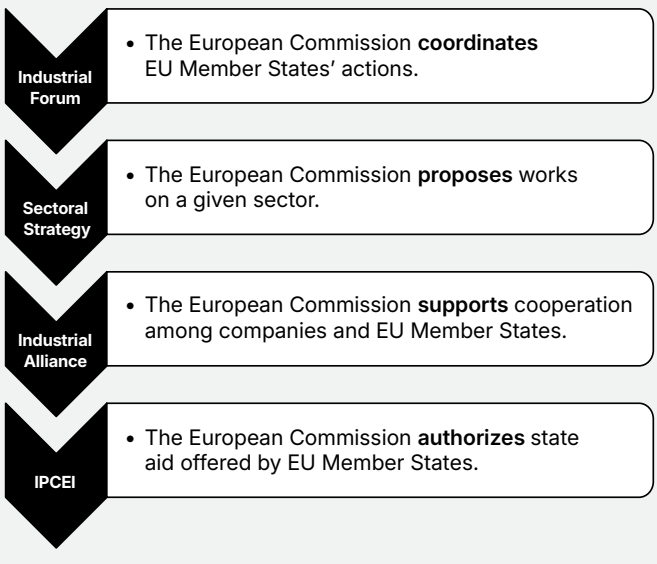
2.2.1 Important Projects of Common European Interest

Important Projects of Common European Interest (IPCEI) is a framework that allows countries to grant higher levels of state aid than under normal rules but under certain conditions. First, it requires cross-border cooperation on research, development and investment projects of the highest importance for the EU. Second, it must involve at least four countries, to ensure a level playing field and the inclusive nature of the project. Third, they should target new areas that are under-exploited due to various market failures (although there are proposals to broaden their

scope). It seems that a good example on which to build a (coordinated) financial instrument is the Important Projects of Common European Interest (IPCEI) (Di Carlo & Schmitz, 2023; McNamara, 2023; Hodge et al., 2024, Boronat, 2024; Piechucka et al., 2024). The original legal framework for their operation dates from 2014 (European Commission, 2014a) but was amended in 2021 (European Commission, 2021a), due to numerous interpretative doubts and significant administrative burdens that led to delays in the approval of these initiatives by the European Commission. The need for approval stems from the fact that these projects involve the granting of classical state aid under Article 107(3) (b) TFEU (Eisl, 2024).

It is assumed that, within such projects, it would be possible to gather knowledge, financial resources (including private funds), as well as economic entities from various EU Member States, 'in a bid to address important market or systemic failures or societal challenges that could not otherwise be addressed' (European Commission, 2014a, 2021a). Recently, IPCEIs must represent a significant contribution to the EU's strategic objectives, including those set out in the EU strategies concerning research areas, key enabling technologies, energy saving and efficiency,

Diagram 1. **Simplified example of European Commission coordination of EU Member States' and businesses' activities as the EU Industrial Policy instrument**



Source: Own elaboration.

climate change, and general global opportunities and challenges. In the 2021 document, the Commission additionally listed current sectoral and horizontal strategies (which often form the basis for the aforementioned sectoral alliances) but explicitly stated that 'IPCEIs can be established within all fields of economic activities with an innovation potential' (Diagram 1).

It is important to highlight the fact that the Commission stressed that any benefits resulting from the project should not be concentrated solely on the beneficiary, a specific sector, or even at the level of individual Member States where the projects will be implemented. They should have a much broader impact on the entire economy and society of the EU through 'having systemic effects on multiple levels of the value chain, or up or downstream markets, or having alternative uses in other sectors or modal shift' (European Commission, 2021a). The Commission links IPCEIs to addressing shortcomings, with clear compatibility criteria such as necessity, proportionality and balancing of impacts (Boronat, 2024). IPCEIs are intended to be projects with a very broad direct and indirect geographical, product, and market reach.

One of the key components of IPCEIs is the previously mentioned issue of co-financing projects using Member States' public funds. For each project, the European Commission determines the maximum level of state aid based on the identified funding gap, as is the case with traditional state aid. However, for IPCEIs, the Commission has stipulated a permissible level of up to 100% of eligible costs related to research, development, and innovation activities (at higher levels than would otherwise be possible). This highlights the assumption of risk by the EU Member States for the potential failure of the project but it also raises concerns about the possible distortion of competition in the European Single Market. This is particularly relevant for businesses which are either already active in, or entering, a given market, whose position may be considerably weaker compared to those participating in a given IPCEI.

To increase interest in this instrument, the Strategic Forum on Important Projects of Common European Interest was established in 2018 (European Commission, 2018b). It comprises experts and representatives from academia, business, finance, workers, and EU Member States, all of whom are led by the Commission. The work of this forum resulted in the identification of six key strategic value chains to prepare coordinated action and investment: connected, clean and autonomous vehicles,

smart health, low-carbon industry, hydrogen technologies and systems, the Industrial Internet of Things, and cyber-security (Council, 2019). In 2020, this body was replaced by the Joint European Forum for IPCEI (JEF-IPCEI), composed of representatives of the Member States under the leadership of the European Commission.

Work is currently underway to further institutionalise JEF-IPCEI through the establishment of Working Groups dedicated to specific areas in which IPCEIs operate (European Commission, 2024e). Their task is to develop IPCEI concepts, in collaboration with external stakeholders (ensuring full transparency to limit improper lobbying), concerning a given technology (pre-screening phase) and then to consult industry and academics on the results of their work (in-depth assessment phase). Final decisions are made by representatives of the EU Member States at a high-level meeting of JEF-IPCEI.

On the one hand, the above-mentioned mechanism of cooperation and collective decision-making reduces the risk of wrongly selecting a sub-sector/product to be supported by public funds: the risk is shared by all participants (EU Member States and companies) and the impact of lobbying on individual EU Member State governments is significantly reduced. On the other hand, it allows for the significant influence of both the EU Member States and interested businesses in shaping subsequent IPCEIs. This means that the final outcome, in the form of the selected technology and concept of a given IPCEI, depends on the involvement of both national authorities and the knowledge and skills of companies. Moreover, the IPCEIs mechanism enables these entities, which are at the forefront of technological advancement, to assume a leading role in business and EU Member State collaboration within a given thematic alliance and/or IPCEI. It is important to note that, while some companies may currently be leading specific subsectors, they may not be able to maintain their competitive advantage in the long term without collaborating with other EU-based entities.

IPCEIs are emblematic of the complexities of the new EU Industrial Policy (Schmitz et al., 2025) and serve as an excellent example of how the European Commission coordinates conceptual efforts carried out by EU Member States based on their initiatives, the specialised knowledge of companies regarding untapped potential and development opportunities, the absorptive capacities of companies, and, importantly, the fiscal capacities to support the businesses involved in IPCEIs with public funds.

It is a very good example of a new approach to industrial policy aimed at growth within a public-private partnership based on pre-established conditions (Mazzucato & Rodrik, 2023) and, by addressing dependencies and failures, it stimulates competition across various sectors (Boronat, 2024). At the same time, it is worth noting that IPCEIs may generate costs, especially in terms of unfavourable outcomes, adverse selection and internal and external workarounds (Schmitz et al., 2025).

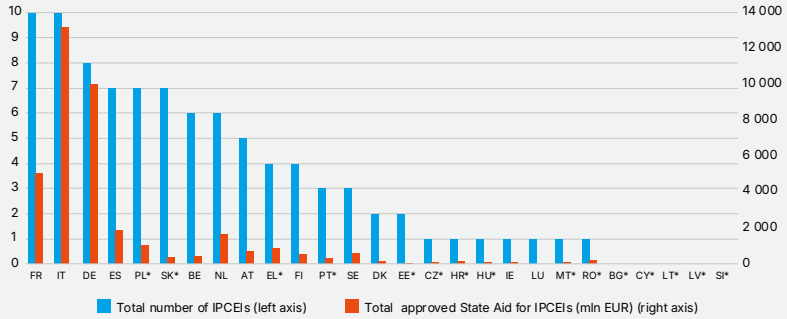
In addition, it is necessary to accept that IPCEIs will rely less on traditional top-down policy instruments, such as subsidies and tax incentives for firms, and more on collaborative, iterative interaction in which public authorities provide a portfolio of customised public services in return for firms making soft commitments on the quantity and quality of employment (Rodrik, 2022). Therefore, IPCEIs can be recognised as a template for a new, value chain-oriented EU Industrial Policy (Lopes-Valenca, 2024).

To date, ten IPCEIs have been launched, involving 247 companies (some of which participate in more than one IPCEI, increasing the number of entities to 283) from 22 Member States (as well as one from the United Kingdom and Norway), who have submitted 334 individual projects together. The Commission has approved EUR 37.2 billion in state aid for these projects, representing about one-third of the total project value (the remainder coming from private business funds). The substantive scope and proposed actions of the IPCEIs approved so far address EU-level objectives, primarily in relation to the energy and digital transitions, as well as the need to ensure health security.

The distribution of IPCEIs among the EU Member States is far from even. France and Italy participate in all ten IPCEI projects, Germany in eight, Spain, Poland, and Slovakia in seven, and Belgium and the Netherlands in six. Meanwhile, Bulgaria, Cyprus, Lithuania, Latvia, and Slovenia have not joined any of the IPCEIs launched so far. However, the countries providing the largest amounts of state aid under IPCEIs are Italy (EUR 13.1 billion), Germany (EUR 10 billion), and France (EUR 5 billion), while only Spain (EUR 1.8 billion), the Netherlands (EUR 1.6 billion), and Poland (just over EUR 1 billion) exceed the one billion euro mark (Figure 2).

The situation seems slightly different when comparing the value of state aid within all IPCEIs approved by the Commission, in relation to GDP in 2023, with the R&D expenditure in 2023. Higher relative participation

Figure 2. **Total number and approved State Aid for IPCEIs (mln EUR)**



Note: (*) asterisk denotes cohesion countries
Source: Own elaboration based on European Commission information (2024c).

Figure 3. **Approved State Aid for IPCEIs (% GDP) and research and development expenditure (% GDP)**

Note: Green squares denotes cohesion countries.
Source: Own elaboration based on information from the European Commission (2024c).

in IPCEIs was observed in countries that also recorded slightly higher indicators of R&D expenditure (Germany, Belgium, the Netherlands, Austria, Finland, Sweden, Denmark, and France). Conversely, the least interest in IPCEIs was shown by countries that also registered the lowest values for R&D expenditure (Romania, Cyprus, Bulgaria, Lithuania, Latvia, Luxembourg, Hungary, Croatia, Czechia and Slovenia) (Figure 3).

IPCEIs can be recognised as an important instrument for those countries that cooperate closely and are open to supporting their national companies with large amounts of financial resources. It seems that two countries,

Germany and France, have recently fully met these criteria. These two countries cooperate closely, based on the Aachen Treaty, and have acceded to a political declaration in the form of the Manifesto of 2019 (Manifesto, 2019). IPCEIs have provided few opportunities for peripheral/cohesion EU Member States and their enterprises to participate in value chains. Against this background, there is a risk that, without substantial changes in funding, IPCEIs may have a limited, or even negative, impact on convergence within the EU framework (Eisl, 2024; Lopes-Valenca, 2024).

2.3 Legislation on the new EU Industrial Policy

Legal basis in the Treaty

In addition to monitoring and coordination instruments, since the insertion of Article 130 (on the EU industrial policy) into the Treaty establishing the European Community in 1992 (now Article 173(3) TFEU), the EU has been able to adopt legislation to achieve industrial policy objectives related to the competitiveness of the European Union's industry. The original wording required a unanimous decision by the Council but the Treaty of Lisbon changed the decision-making mechanism in this area, to an ordinary legislative procedure. Between 1992 and 2009, only a few legal acts were adopted on the basis of the above-mentioned Article 130 TEC. These were mostly Council decisions on industrial cooperation with third countries or multi-annual support programmes for SMEs. The new Article 173 TFEU, as amended by the Treaty of Lisbon, has become the legal basis for acts relating to the establishment of European institutions and agencies, as well as European support programmes in the field of industry, in addition to the above-mentioned areas (Szczepański & Zachaiandis, 2019).

The small amount of interest in legislative solutions in this area was a reflection of the fact that the concept of industrial policy in the EU was oriented towards a horizontal approach with limited government/EU intervention (legal and financial). Moreover, provisions of Article 173(3) TFEU prevent the development of any substantial legislation addressing the primary objective of making European industry more competitive through the approximation of Member States' laws. Such harmonisation is envisaged in Article 114 TFEU, in relation to the European Single Market, now interpreted as much more than merely a space offering the free movement of goods, services, capital, and people. These provisions have formed the basis for the introduction of not only the aforementioned four fundamental freedoms but, also, many stringent and restrictive

regulations in areas such as the environment, social policy, and consumer protection. Although these have a direct impact on the functioning of industrial enterprises, including their competitiveness, Article 173 TFEU was not cited among the legal bases for their introduction.

It is also important to note that any legislative or non-legislative measures introduced under Article 173(3) TFEU may not distort the level playing field within the European Single Market. This seems to be a clear reference to the prohibition of state aid that distorts competition in the European Single Market (Article 107(1) TFEU). The problem, however, is that any intervention in the Single Market, whether regulatory or especially financial, or allowing greater subsidies, can result in market distortion (Šmejkal, 2024).

Examples of secondary law
Recent EU legislation concerning industrial policy, including state aid, is a response to actions taken by external partners (US and China). The new pieces of legislation that form the basis of a new EU Industrial Policy are given below (Scheinert, 2023; McNamara, 2023; Šmejkal, 2024; Shivakumar et al., 2024; Wolf, 2024):

- the European Chips Act – ECA (Regulation 2023/1781) (based on Article 114 and 173 TFEU), which aims to ensure the necessary conditions for the competitiveness and innovation capacity of the European Union and to establish a consistent legal framework in the EU, to increase the long-term resilience and security of supply of semiconductor technologies;
- the Critical Raw Materials Act – CRMA (Regulation, 2024/1252) (based on Article 114 TFEU), which was adopted to ensure access to and free movement of raw materials, including those essential for the implementation of the climate change agenda and in the face of supply problems from third countries;
- the Net Zero Industry Act – NZIA (Regulation 2024/1735) (based on Article 114 TFEU), which was adopted to ensure the Union's access to a secure and sustainable supply of net-zero technologies, including by expanding the manufacturing capacity of net-zero technologies and their supply chains to ensure their resilience.

Although the above-mentioned legal acts cover different sectors, they have a similar structure and provide for similar implementation and monitoring mechanisms, with the European Commission playing a key role (Šmejkal, 2024). Moreover, they are developed in the form of regulations, i.e. directly binding legal acts in all EU Member States, without the need for implementation at the national level.

First and foremost, these regulations provide the cooperation formula previously applied in the industrial alliances and verified in the IPCEIs, in terms of content. The key element is the established coordination mechanism between the EU Member States and the Commission for the mapping and monitoring of the respective sector in the Union (semiconductors, raw materials or clean technologies), as well as for crisis prevention and a response to bottlenecks and, where appropriate, the consultation of stakeholders. Moreover, in order to ensure equal treatment of projects at EU level, a set of criteria has been introduced for each of these areas, recognised as needing support: integrated production facilities and open foundries in microelectronics, strategic projects for critical raw materials, and net-zero technology manufacturing (Wolf, 2024).

A separate and particularly sensitive issue is the question of funding for these projects (Šmejkal, 2024). The current legislation emphasises that any financial intervention by EU Member States will be assessed under the state aid provisions of Article 107 TFEU. Nonetheless, two of the three regulations under discussion provide for specific financing arrangements. On the one hand, with regards to the area of microelectronics, additional funding is foreseen for the projects represented by the Chips for Europe initiative, supported by the Horizon Europe and Digital Europe programmes. On the other hand, in the case of the NZIA, targeted public (national) support in the form of state aid for the development of the industry was foreseen. It was considered by the Commission to be justified in view of the low investment attractiveness of Europe compared to the US or China. Consequently, the European Commission amended the Temporary Crisis and Transition Framework for State Aid measures, to support the economy following the aggression against Ukraine by Russia, adding a further allowable earmarking of public support for investment in zero-emission technology-based manufacturing projects in all EU Member States (European Commission, 2023c, 2023f; Piechucka et al., 2024). This new formula has become a competitor to the existing investment incentives offered within the regional state aid map in less

developed areas and EU Member States (including the cohesion regions of Central and Eastern Europe). In addition, important factors in attracting cleantech investment are a high knowledge intensity and a high-quality research infrastructure, which are mainly found in the more developed EU countries (Netherlands, Denmark, France, and Germany) (Wolf, 2024).

3 Existing Industrial State Aid as a Key Financial Instrument of Industrial Policy in the EU

Main findings
Industrial State Aid constituted 76.3% of the cumulative value of Regular State Aid in the EU Member States between 2004 and 2022. This share is made up of the percentage shares of the following state aid objectives: environmental protection, including energy saving (38.3%), regional investment (13.0%), research, development, and innovation (10.1%), SMEs including risk capital (4.3%), and sectoral development (10.6%).

In order to capture the relationship between the state aid granted and the degree of industrialisation of each EU Member State, they were ranked according to their share of the industrial component of Gross Value Added (GVA) over the period 2004–2022. On the one hand, there is no clear correlation between Industrial State Aid intensity and the industrial component in the GVA of a given EU Member State. On the other hand, in general, Member States with higher rates of industrialisation generally granted Industrial State Aid to achieve EU objectives (environmental, social and economic), whilst in de-industrialising countries, categories unrelated to the above predominated. With regard to forms of Industrial State Aid, the industrial component in GVA did not play a significant role here.

State aid for environmental protection and energy savings appears to be a relatively new category of support, whose importance within the structure of Industrial State Aid and intensity is either already high or, at least, gradually increasing. This is especially true for the leading industrialising countries. Generally, de-industrialising countries have shown a much weaker growth trend and, ultimately, poorer results. Taking into account rising energy prices, the visible gap between countries with a high and low share of the industrial component in their GVA may grow.

With regard to regional investment state aid, neither its share in Industrial State Aid, nor the intensity depends on the current level of industrial contribution in the GVA. However, there is a noticeable correlation with membership in the group of cohesion countries, where the regional aid map covers larger areas.

The clear leaders in providing state aid for research, development, and innovation are countries that have long promoted this type of support, including those with the longest tenure in the EU. However, EU Member States with the shortest membership in the EU have significantly increased their public investment in RDI. These trends do not in any way reflect the degree of industrialisation of these countries; it is possible to find both leading industrialising and de-industrialising countries in the group of EU Member States intensifying interventions or reducing support in this area.

Among all EU countries providing aid to the SME sector, those with a low and declining share of the industrial component in their GVA stand out. However, the vast majority of leading industrialising countries have generally recorded an increase in the intensity of this aid, although still significantly lower compared to the EU average. This suggests that, as a rule, EU Member States came to realise the need to support SMEs and most of them have started to do so, particularly in recent years.

Due to the highly varied state aid allocations for sectoral development, it is difficult to clearly identify development trends for this support in the EU Member States. On the one hand, most de-industrialising countries have significantly increased their engagement in supporting specific industries, as they have been concerned with selected businesses in order to maintain their existing industrial base. On the other hand, leading industrialising and modestly industrialising countries have generally moved away from sectoral state aid.

An analysis of both the structure of Industrial State Aid and the intensity of its various categories reveals significant disparities among the EU Member States. Moreover, it is difficult to identify convergence (similarity) in areas of intervention relative to the EU average or within groups of EU Member States categorised by the share of the industrial component in the GVA, geographical location, informal groupings, or EU membership tenure.

This means that the current formula of financing activities within the Industrial Policy in the EU level is fundamentally misaligned with the Treaty objective to ensure the conditions necessary for the competitiveness of the Union's industry. Furthermore, the observed lack of strong alignment in the allocation of aid suggests that industrial goals, such as those related to energy and digital transitions, are being pursued to varying extents by EU Member States.

3.1 Scope of Industrial State Aid

As mentioned above, state aid that fulfils the conditions set out in Article 107(1) TFEU is considered incompatible with the European Single Market and is, in principle, prohibited. However, there are a number of mandatory and optional exemptions that allow aid to be granted but usually only after approval by the European Commission. An exception to this rule is the possibility of granting aid on the basis of the General Block Exemption Regulation, which makes it possible to bypass the Commission's decision but requires strict compliance with the conditions set out therein (European Commission, 2014c). At this point, it is worth emphasising that the Commission has the exclusive competence, on the basis of the Treaty provisions, to assess the compatibility of a given state aid measure with the EU rules it has established. In fact, the Commission's task is to ensure that the conditions of competition in the Single Market are not disturbed.

The problem of the legal compatibility of state aid actually granted with EU rules is relatively minor, given the number of cases before the European Union Court of Justice. During the period of the COVID-19 pandemic and the war in Ukraine, when the Commission made many of the rules for granting financial support more flexible, a significant disproportion in not only nominal but, also, relative values in the amount of funds provided to entrepreneurs was revealed (Ambroziak, 2023). Additionally, the problem of the effectiveness of state aid at the enterprise level was already present before the crisis period (e.g. in terms of improvements in labour productivity or the incidence of spillover effects on competitive firms, see Brandão-Marques and Toprak, 2024). Therefore, in order to assess the level of EU Member States' involvement in State aid, its intensity and convergence with EU objectives, we carried out a detailed analysis of state aid granted to date. As *gross* financial support to entrepreneurs does not necessarily take the form of direct aid affecting their competitiveness, we focused on selected categories of aid. Given the scope of this study, concerning only industrial policy, an analysis of the available data from

the European Commission's State Aid Scoreboard (see Annex I) allows four concepts of state aid to be distinguished:

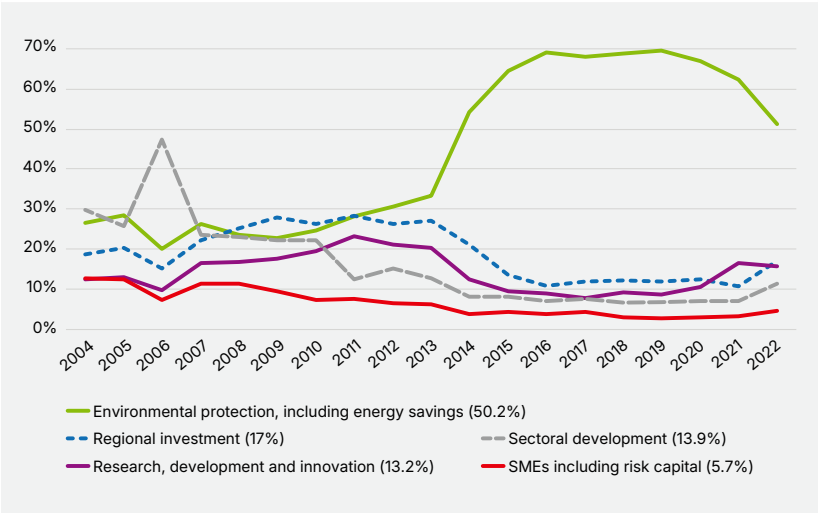
- Total State Aid, including all state aid available in the European Commission State Aid Scoreboard;
- Regular State Aid, comprising Total State Aid less Crisis State Aid in relation to the COVID-19 pandemic and the war in Ukraine;
- Crisis State Aid, comprising COVID-19 State Aid granted in the context of the SARS-CoV2 virus pandemic (European Commission, 2020f) and TCTF State Aid granted under the Temporary Crisis and Transition Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia (European Commission, 2022b);
- Industrial State Aid, covering five selected objectives of Regular State Aid, which are included in the new EU Industrial Policy objectives [2]:
  - Environmental protection, including energy savings,
  - Regional (investment) development,
  - Research, development and innovation,
  - SMEs including risk capital,
  - Sectoral development.

Industrial State Aid constituted 76.3% of the cumulative value of Regular State Aid in the EU Member States between 2004 and 2022[3]. This result was made up of the percentage shares of the selected objectives of state aid, including environmental protection and energy savings (38.3%), regional investment (13.0%), research, development and innovation (10.1%), SMEs including risk capital (4.3%) and sectoral development (10.6%).

[2] While it is recognised that aid for training or for the rescue and restructuring of firms in financial difficulty and closure aid can affect the ability of beneficiaries to compete in international markets, the effects of such aid are much less direct and less obvious. Aid to the agri-food and fisheries sectors has also been excluded, as these sectors, due to their specific nature, are covered by other regulations under the Common Agricultural and Fisheries Policy.

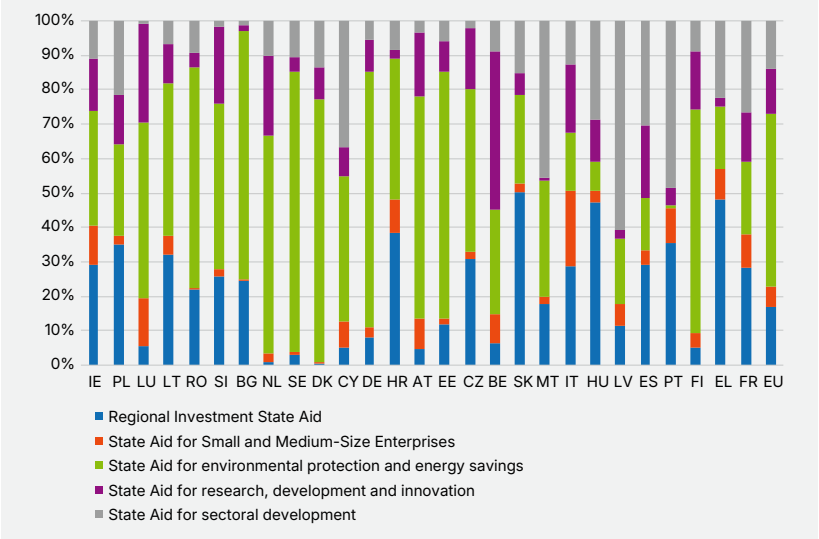
[3] The data contained in the annual State Aid Scoreboard cover the period 2000–2022. However, the study takes 2004 as its starting point, marking the first year of the enlarged European Union, including the membership of the Central and Eastern European countries. Although the Commission's database contains most of the data for these countries for the period 2000–2003, there are many errors in the classification of aid measures, so it is incomplete and includes instruments granted just before accession under industrial restructuring programmes. As a result, it may significantly distort the true picture of state aid policy in the EU. The latest data available are from 2022 (as of 1 September 2024).

Figure 4. **Trends of shares of Industrial State Aid categories in the EU in 2004–2022**



Note: Percentages in brackets represent the share in cumulative value of a given Industrial State Aid in 2004–2022.
Source: Own elaboration based on State Aid Scoreboard (European Commission, 2024i)

Figure 5. **Shares of Industrial State Aid categories cumulative in the EU Member States in 2004–2022**



Source: Own elaboration based on State Aid Scoreboard (European Commission, 2024i)

Between 2004 and 2022, the share of public support earmarked for the implementation of specific objectives of Industrial State Aid changed significantly (see Figure 4 and Figure 5). At the beginning of the period under review, the largest share of Industrial State Aid was for sectoral development (29.7%), which was largely due to the completion of restructuring processes prior to the accession of the Central and Eastern European countries to the EU. However, the role of this type of aid decreased significantly in the following years. In second place in 2004 was aid for environmental protection and energy savings (26.5%), whose share rose dramatically from 2014 to almost total 70% of Industrial State Aid before gradually declining to 51.2% in 2022. It was followed by regional investment, with a share of 18.6% in 2004, which (despite rising to almost 30% in the first decade of the period under review) fell to 17.2% in 2022. A slight, albeit smaller, decline was also observed for aid for research, development and innovation, whose share grew steadily until 2011 but then started to decline, only to increase again from 2020 onwards, reaching 16.7% in 2022. Similarly, the share of support for small and medium-sized enterprises, including risk capital, saw a significant decrease from 12.8% to 4.5% over the period under review.

3.2 Importance, Intensity and Similarity of Industrial State Aid in the EU Member States

In order to capture the relationship between the state aid granted and the degree of industrialisation of each EU Member State, they were ranked according to their share of the industrial component of GVA over the period 2004–2022 (see Annex II). As the EU is not a uniform organisation in political, social, or economic terms, it is not surprising that there are differences in the structure of its GDP, including the uneven share of the industrial component in GVA[4]. During the period under review, the share

[4] In order to focus on the new EU Industrial Policy issues, instead of referring to the total value of GDP expressed in current prices, we used Gross Value Added (GVA), which measures the total production and income in the economy (the total value of goods and services minus the cost of inputs and raw materials). This is the sum of a country's GDP minus subsidies and taxes in the economy. Furthermore, for the purposes of our calculations, we limited our consideration to the industrial component of GVA: those NACE sections of economic activities that are demonstrably related to industrial policy and that impact its effectiveness, in terms of making EU industry more competitive (in line with Article 173(1) TFEU): Industry (Section B-E), Construction (F), Wholesale and retail trade, transportation, accommodation and food service activities (Section G-I), Information and communication (Section J), Financial and insurance activities (Section K), Professional, scientific, and technical activities, and support service activities (Sections M–N).

of the industrial component of GVA at the EU level increased slightly from 65.9% in 2004 to 66.4% in 2022. Seen in comparison to the EU average, EU Member States can be divided into three groups (Figure 6):

- the **leading industrialising countries**, where the share of the industrial component (economic activities) in GVA increased to a level above the EU average;
- the **modestly industrialising countries**, where the above-average share of industrialised economic activities declined; and
- the **de-industrialising countries**, where the already low percentage of this indicator decreased even further below the EU average.

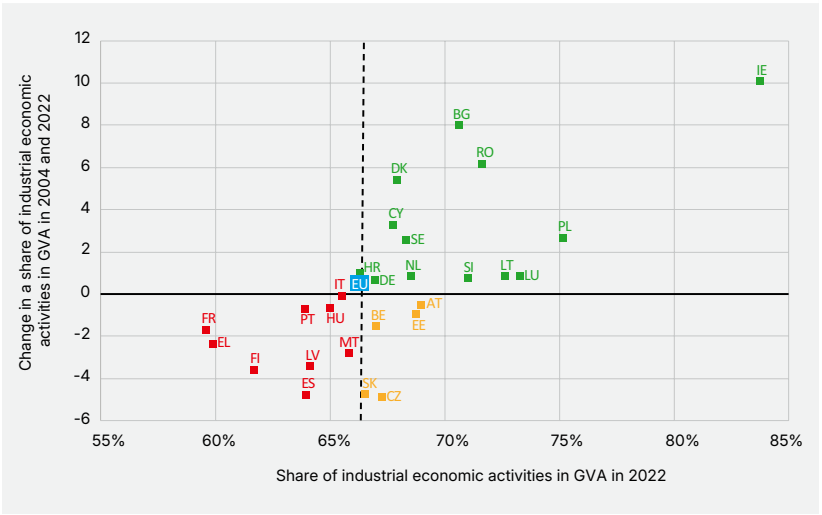
In **the first group, the leading industrialising countries**, there are three Member States where the indicator rose by more than 6 percentage points, reaching over 70%: Ireland (up 10.1 pp to 83.8%), Bulgaria (up 8 pp to 70.6%) and Romania (up 6.2 pp to 71.6%). In the next four countries, the increase was somewhat lower, but still significant for a relatively high final score: Denmark (up 5.4 pp to 67.9%), Cyprus (up 3.3 pp to 67.8%), Poland (up 2.7 pp to 75.2%) and Sweden (up 2.6 pp to 68.3%). This group also includes countries which recorded an increase of less than 1 pp, keeping the indicator above the EU average: Germany, the Netherlands, Slovenia, Lithuania, Luxembourg and Croatia.

The second group, the modestly industrialising countries, consists of five states where the indicator decreased but remained above the EU average: Austria (-0.5 pp to 69%), Estonia (-0.96 pp to 68.8%), Belgium (-1.5 pp to 67%), Czechia (-4.9 pp to 67.2%) and Slovakia (-4.7 pp to 66.5%).

In **the third group, the de-industrialising countries** with the lowest and declining share of the industrial component in GVA in 2022, are: France (-1.7 pp to 56.9%), Greece (-2.4 pp to 59.9%), Finland (-3.6 pp to 61.7%), Portugal (-0.7 pp to 63.9%), Spain (-4.8 pp to 64%), Latvia (-3.4 pp to 64.1%), and Malta (-2.78 pp to 65.8%). Italy and Hungary also showed slightly lower decreases.

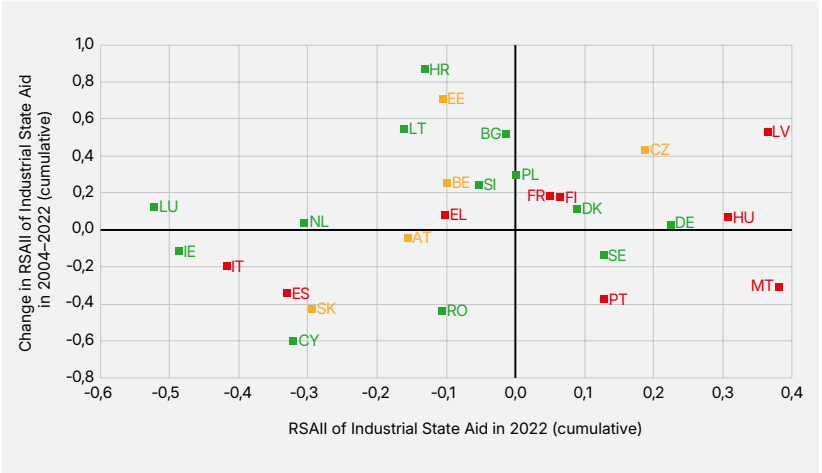
An analysis of the **intensity of Industrial State Aid** based on the Revealed State Aid Intensity Index (RSAII) (see Anex II) in the period 2004–2022 exposed that the highest value of this indicator was recorded by only three countries with the highest share of the industrial component in GVA (Germany, Sweden and Denmark), as well as the de-industrialising

Figure 6. **Changes in the industrial component of GVA in EU Member States in 2004–2022**



Note: the **green** squares denotes Member States that are leading industrialising countries, **yellow** – the modestly industrialising countries, **red** – de-industrialising countries.
Source: Own elaboration based on State Aid Scoreboard (European Commission, 2024i) and the Eurostat Database.

Figure 7. **Revealed State Aid Intensity Index for Industrial State Aid in EU Member States in 2004–2022**

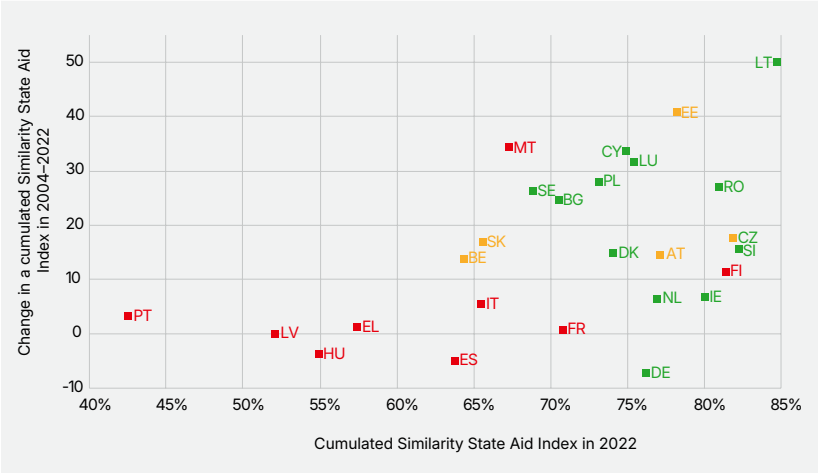


Note: the **green** squares denotes Member States that are leading industrialising countries, **yellow** – the modestly industrialising countries, **red** – the de-industrialising countries.
Source: Own elaboration based on State Aid Scoreboard (European Commission, 2024i) and the Eurostat Database.

countries (Latvia, Malta, Hungary, Portugal, Finland and France) (Figure 7). In the remaining countries, the intensity of Industrial State Aid was much lower although, in most cases, it was increasing, irrespective of the level of industrialisation. Thus, **there is no clear correlation between Industrial State Aid intensity and the industrial component of GVA in EU Member States.**

The **State Aid Similarity Index** (SASI) (see Anex III) enables the identification of similarities in the structure of Industrial State Aid objectives across EU Member States, compared to the EU average and its main goals (Figure 8). In 2022, the highest cumulative SASI was observed in EU Member States that, in general, were the leading industrialising countries, indicating the greatest alignment with the EU average. With the exception of Germany, these countries also exhibited an increase in the cumulative SASI, most notably Lithuania (up 50 pp to 85%), as well as Cyprus, Luxembourg, Sweden, Bulgaria, Poland and Romania (with SASI between 69% and 81%, and increases ranging from 24 to 34 pp). A comparable trend was identified in Denmark, Slovenia, the Netherlands and Ireland, although in these instances, the relatively elevated SASI was not accompanied by a notable increase. Germany is a notable

Figure 8. **Similarity State Aid Index for Industrial State Aid of the EU Member States in 2004–2022**



Note: the **green** squares denotes Member States that are leading industrialising countries, **yellow** – the modestly industrialising countries, **red** – the de-industrialising countries.
Source: Own elaboration based on State Aid Scoreboard (European Commission, 2024i) and the Eurostat Database.

exception, demonstrating a relatively high SASI whilst concurrently exhibiting a decline of over 7.1 pp. The lowest SASI values, indicating the least alignment with the EU average for the structure of Industrial State Aid, were observed in the de-industrialising countries: Portugal, Latvia, Hungary, Greece, Spain, Italy and France. Thus, in general, countries with higher rates of industrialisation tended to grant Industrial State Aid in a structure that was more closely aligned with the EU average; whereas, the structure of support in the de-industrialising countries diverged considerably from the EU structure.

State aid, including Industrial State Aid, can be granted in various forms. The European Commission identifies four main types: grants, fiscal measures, guarantees, and equity instruments. The permissibility of these forms is usually determined by the European Commission's guidelines, which are designed to minimise distortion of competition while achieving the best outcomes for financial intervention, i.e. the intended objectives.

Grants include simple cash subsidies and interest-reimbursable grants, repayable advances, and all kinds of subsidised services. They represent direct inflows for businesses, providing immediate financial benefits to the beneficiary (improving liquidity or stimulating investment and job creation) (Alecke & Mitze, 2023). This is highly advantageous for them, as it is not dependent on other factors, such as achieving profit (as they are often transferred *ex ante*). Giving a selected undertaking a financial advantage constitutes a benefit in the form of improved liquidity, which they can utilise immediately. Although their effectiveness can be high, this type of aid can have the greatest negative impact on competition within the Single Market of the EU.

A distinct category is that of fiscal measures, which encompasses instruments that diminish the financial obligations of businesses vis-à-vis public budgets. These include, but are not limited to, the reduction of social security contributions, tax advantages, tax exemptions, tax allowances, tax base reductions, tax deferments, tax rate reductions, and other forms of tax advantage. In such cases, certain public levies are waived for the business. These instruments are safer for the budget because they require the business to take specific actions and often work *ex post*. The loss of revenue for the state budget and the budgets of territorial self-government units, due to the use of tax and parafiscal instruments, can be compensated by the pro-development effects of such aid but these effects occur only in the long term (Woźniak, 2016). Fiscal measures are generally

considered slightly less attractive to businesses but also carry a little lower risk of negatively impacting competition within the Single Market.

Another form of state aid that has been identified by the European Commission is a *soft loan*. This includes various types of preferential loans, repayable advances, interest subsidies, debt write-off, and subordinated debt. In all of these cases, state aid constitutes a benefit derived from the reduction in the liabilities towards the lending institution. From the perspective of the state, this typically involves covering the difference between the market offer and the preferential one. For the beneficiary, however, it means easier access to cheaper external funds, which are necessary to finance specific activities. From a competition perspective, this instrument requires the beneficiary to undertake certain actions based on which state intervention occurs. Consequently, soft loans, as a repayable instrument, are assumed to be less likely to distort competition compared to grants. Additionally, this form of state aid usually involves the engagement of private capital, which significantly eases the state's obligations towards the beneficiary. Therefore, repayable financial tools can be recognised as the most efficient form of state aid, although they may still distort competition in the Single Market.

Another category of permissible aid is that of guarantees and sureties, which are even less likely to have an adverse effect on competition. They serve merely as collateral for the lender, thereby ensuring that the funds obtained by the borrower, along with the agreed interest, will be repaid. The institution providing the guarantee for the repayment of these financial resources should conduct analyses that limit the risk of the instrument being utilised. Therefore, they can be recognised as the most efficient instruments for achieving the goals set by donors. However, in the case of guarantees provided by the state treasury based on political guidelines, there may be instances where such guarantees are granted solely to selected entities, such as state-owned companies, under conditions that significantly derogate from the market.

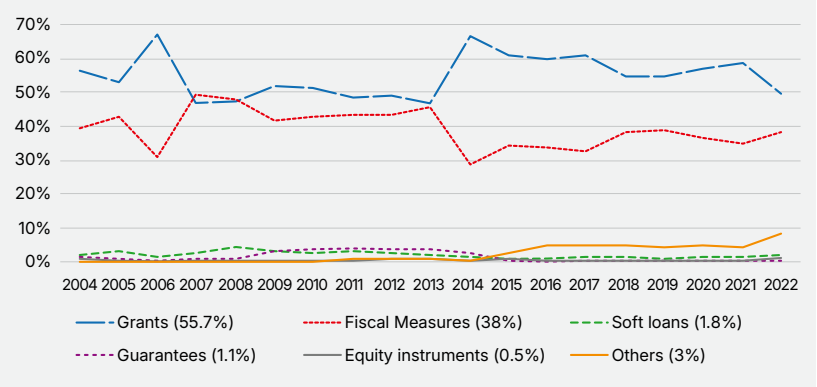
The fifth category of permissible aid is equity instruments, which involve the commitment of public funds to equity ventures. These include hybrid capital instruments (convertible bonds), the provision of risk capital and finance, and recapitalisation. This often serves as a mechanism for the state to enter the market by partially (or less frequently, entirely) taking over a business. The admissibility of this type of aid also includes a mechanism for the state to 'exit' the entity it has supported in this

manner. The presence of public funds in a private project is considered to enhance its credibility, as well as its financial liquidity and access to other sources of financing. On the one hand, this mechanism was introduced by the Commission to limit the negative effects of the state's entry and temporary presence in the market but, on the other hand, the state's presence in the market itself poses a significant threat to competition.

During the period under review, grants and fiscal measures played the most significant role in Industrial State Aid within EU Member States (Figure 9). From 2004 to 2022, grants almost always dominated over all other instruments, except during the 2007–2008 period, when the share of fiscal measures was higher. Generally, changes in the share of these two forms were interdependent, such that an increase in the share of grants was accompanied by a corresponding decrease in fiscal measures. Conversely, a decrease in the share of grants led to an increase in the share of fiscal measures. In recent years, the shares of both guarantees and equity instruments in Industrial State Aid have started to slowly increase.

As a rule, EU Member States have preferred providing grants as part of Industrial State Aid which, in some cases, led to exceptionally high shares of this form of support in the cumulative values for the years 2004–2022, such as in Luxembourg (99.4%), Slovenia (87.3%), Latvia (87.4%) and

Figure 9. **Changes in forms of Industrial State Aid in 2004–2022 in the EU**

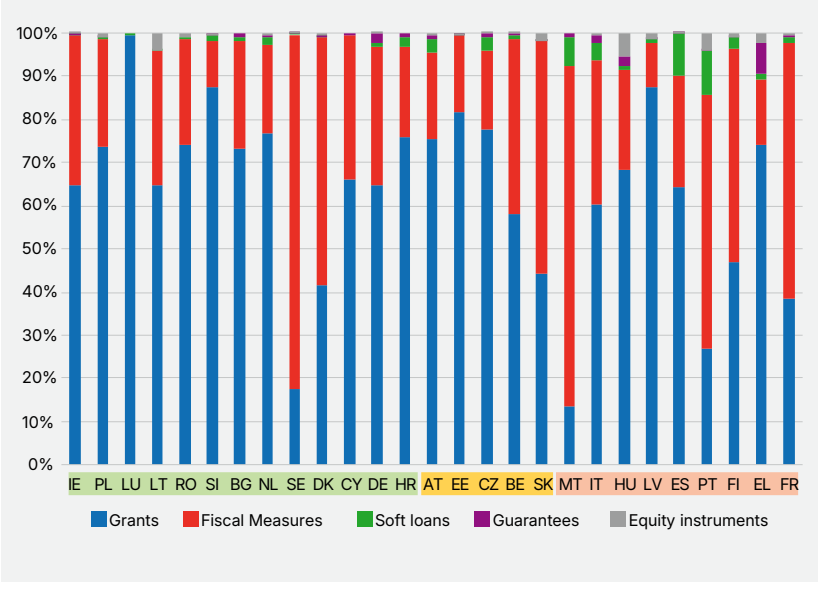


Note: The percentages in brackets indicate the share of forms in the cumulative value of Industrial State Aid in 2004–2022 in the EU.
Source: Own elaboration based on State Aid Scoreboard (European Commission, 2024i) and the Eurostat Database.

Estonia (81.6%) (Figure 10). On the other hand, there are also countries that recorded significantly lower shares of grants in the structure of Industrial State Aid: Malta (13.7%) and Sweden (17.6%). These countries opted for using fiscal measures on a much larger scale (78.7% and 82.1%, respectively), as did Portugal (59%), Denmark (57.6%) and Slovakia (53.9%). These represented countries from various industrialisation groups within the EU, indicating that the industrial component in GVA did not play a significant role here.

As for other forms of state aid, their shares were the lowest, particularly in leading industrialising countries (with the exception of Lithuania, which had a 3.9% share of equity instruments, Croatia with a 2.1% share of soft loans, and Germany with guarantees at 2%). Larger shares of these forms of aid were observed in the de-industrialising countries, including, for example, soft loans reaching 9.9% in Portugal, 9.5% in Spain and 6.7% in Malta. Guarantees reached 6.9% in Greece, while equity instruments accounted for 5.5% in Hungary and 4.2% in Portugal.

Figure 10. **Structure of cumulative Industrial State Aid broken down by form in EU Member States in 2004–2022**



Note: the **green** background denotes Member States that are leading industrialising countries, **yellow** – the modestly industrialising countries, **red** – the de-industrialising countries.
Source: Own elaboration based on State Aid Scoreboard (European Commission, 2024i) and the Eurostat Database.

The aforementioned individual forms of state aid were offered to varying extents within different categories of Industrial State Aid. Grants were initially offered predominantly in the field of research, development, and innovation. This trend continued until 2013, when environmental protection and energy savings became leaders of support ranking. Aid in the form of fiscal measures was also most frequently offered to support the environmental and energy goals, followed by regional investment state aid and sectoral development state aid. Soft loans were primarily offered in support of RDI and regional development. Government guarantees were mainly observed in regional investment until 2015 but, from 2016 onwards, they shifted predominantly towards aid for SMEs and risk capital. This latter area of aid also became the primary targeted equity instrument.

3.3 Categories of Industrial State Aid

State aid for environmental protection and energy savings encompassed the two areas, which were particularly significant in light of the EU's ambitious climate goals over the past two decades. However, it appears to be a relatively new category of support, whose importance within the structure of Industrial State Aid is either already high or gradually increasing in 2004–2022. This is especially true for the leading industrialising countries. Generally, the de-industrialising countries have shown a much weaker growth trend and, ultimately, poorer results (Table 3). Given that the vast majority of the aid in question is earmarked for energy-related purposes, this may be partly due to having such a structure of the energy sector that does not require state aid. However, taking into account rising energy prices (not only due to the war in Ukraine, which the data does not fully reflect), the visible gap between countries with a high and low share of the industrial component in their GVA may grow. Regarding the most commonly used forms of state aid for environmental protection and energy savings, it is difficult to establish a clear link between them and the level of industrialisation or geographical location. Smaller countries have offered more aid in the form of grants (in relative terms). However, due to the comprehensive nature of the aid, encompassing both environmental and energy-related aspects, it is difficult to draw definitive conclusions in this area.

Regional investment state aid accounted for the largest share of the cumulative Industrial State Aid (ISA) over the period 2004–2022, at 24.1%. This aid is provided to address market failures related to the low investment attractiveness of underdeveloped regions. It is worth noting

that neither its share in Industrial State Aid nor the intensity (RSAII) depend on the current level of industrial contribution in the GVA. However, there is a noticeable correlation with membership in the group of cohesion countries, where the regional aid map covers larger areas. Less developed countries from Central-Eastern and Southern Europe, which are covered by the EU Cohesion Policy, as well as French overseas departments, make use of the opportunity to offer regional investment state aid to encourage businesses to invest in their territories. For forms of regional investment state aid, the key factor was not the source of funds but, rather, the established practices of those providing this support, as a different approach was observed in the aforementioned countries.

State aid for research, development, and innovation (RDI), between 2004 and 2022, encompassed areas such as fundamental research, industrial research, experimental development, feasibility studies for the aforementioned activities, and research infrastructure. The clear leaders in providing state aid for RDI are countries that have long promoted this type of support: Belgium, Luxembourg, Spain and Italy. However, Member States with the shortest membership in the EU have significantly increased their public investment in RDI, leading to above-average intensity of this support in their economies in some cases (e.g. Poland and the Czech Republic). On the other hand, a group of countries, mainly more developed ones, has maintained a relatively consistent level of intensity in this type of aid over the years (e.g. Germany and Austria) or even recorded a significant decline (e.g. France). Also, the above trends do not in any way reflect the degree of industrialisation of these countries; indeed, it is possible to find both leading industrialising and de-industrialising countries in the group of EU Member States intensifying interventions in this area or reducing their support. In terms of forms of state aid, the vast majority of EU Member States rely almost exclusively on grants when providing state aid for research, development, and innovation. This preference is driven by the nature of the purpose of the state aid. It is primarily intended to support activities at the early stages of research due to the relatively high risk of failure. Nevertheless, a few EU Member States have adopted other instruments, including fiscal measures and soft loans. Considering the excellent results achieved by Belgium and Luxembourg, as with other categories of Industrial State Aid, the forms used typically depend on the existing experience of each EU Member State.

Small and medium-sized enterprises (SMEs) are a crucial component of the EU economy. This is due to their specific characteristics, which

impact the nature of their business operations, and their relatively fast adaptation to new conditions. Additionally, they often face challenges in accessing capital and various services due to their weaker negotiating position. Among all the EU countries providing aid to the SME sector, those with a low and declining share of the industrial component in their GVA stand out. This is especially true for France, Italy and Portugal, where such support is significant compared to the overall Industrial State Aid, and also shows relatively high intensity within the economy. On the other hand, the vast majority of the leading industrialising countries have generally recorded an increase in the intensity of this aid, although still significantly lower compared to the EU average. This suggests that, as a rule, EU Member States have come to realise the need to support SMEs and most of them have started to do so, particularly in recent years, primarily through risk capital state aid. As for the forms of aid, neither the size of the country, geographic location, nor the share of the industrial component in GVA determined the preferred form of state aid for SMEs. This means that, as with regional aid, the choice of preferred instruments is influenced by the availability of resources and prior experience in their use. However, in addition to the generally dominant grants, EU Member States have also utilised other forms, particularly equity instruments, which include risk capital state aid.

Currently, following changes in EU legislation, the dominant allocations of **state aid for sectoral development** are those defined by the General Block Exemption Regulation (GBER) (European Commission, 2014c, 2021a): broadband infrastructure, sport and multifunctional recreation infrastructure, digital media, ports and regional airports, and some specific transport activities. Due to the highly varied state aid allocations for sectoral development, it is difficult to clearly identify development trends for this support in the EU Member States. On the one hand, most de-industrialising countries have significantly increased their engagement in selectively targeted economic activities, thereby supporting specific industries. France and Hungary are good examples of this approach. Therefore, it can be assumed that they have been concerned with the selective support of certain companies/industries in order to maintain their existing industrial base, rather than attracting new ventures to their territory. On the other hand, the leading (and modestly) industrialising countries have generally moved away from strictly sectoral support, though there are exceptions, such as Poland and Denmark, which have taken a different approach.

In recent years, increasing amounts of state aid have been granted under the GBER (European Commission, 2008, 2014c, 2023d), although two points must be emphasised. Firstly, this regulation serves only as an administrative simplification for both Member States and the European Commission, by exempting from the notification requirement those instances of aid that the Commission, based on its experience, has assessed as having a negligible effect on competition distortion. This was precisely the goal set by the Commission when adopting the first GBER in 2008. Secondly, the GBER currently includes provisions governing sixteen different categories of state aid, including selected subcategories of Industrial State Aid. Thus, this regulation only minimally channels public spending at the national level towards achieving EU industrial goals, including competitiveness, as well as those related to energy and digital transitions. It could even be argued that the national objectives supported by EU Member States do not necessarily align with EU objectives.

An analysis of both the structure of Industrial State Aid and the intensity of its various categories reveals significant disparities among the EU Member States. Moreover, it is difficult to identify convergence (similarity) in areas of intervention relative to the EU average or within groups of EU Member States categorised by the share of the industrial component in the GVA, geographical location (North–South, East–West, Scandinavia versus Central and Eastern Europe), informal groupings (Visegrad Group), or EU membership tenure (founding states, those that joined in 1995, or after 2004).

This means that the current formula for financing activities within the Industrial Policy at the EU level is fundamentally misaligned with the Treaty objective to ensure the conditions necessary for the competitiveness of the Union's industry (Article 173(1) TFEU). Furthermore, the observed lack of a strong alignment in the allocation of aid suggests that even industrial-related goals, such as those related to energy and digital transitions, are being pursued to varying extents by EU Member States.

Table 3. **Structure and intensity of Industrial State Aid in EU Member States in 2004–2022**

	EU Member States	Share of Industrial GVA in Total GVA		State Aid Similarity Index (%) (range from 0 to 100%)	Share of selected categories of Industrial State Aid (cumulative for 2004–2022) in %				
		2022 (%)	Change 2004–2022 (percentage points)		Regional Investment State Aid	State Aid for Small and Medium-Sized Enterprises	State Aid for environmental protection and energy savings	State Aid for research, development and innovation	State Aid for sectoral development
The leading industrialising countries	IE	83.8%	10.1	29.20%	29.20%	11.50%	33.30%	15.20%	10.80%
	PL	75.2%	2.7	34.90%	34.90%	2.80%	26.30%	14.40%	21.70%
	LU	73.3%	0.9	5.50%	5.50%	13.90%	51.10%	28.70%	0.90%
	LT	72.6%	0.9	32.30%	32.30%	5.40%	44.30%	11.10%	6.90%
	RO	71.6%	6.2	22.10%	22.10%	0.40%	64.20%	3.90%	9.40%
	SI	71.0%	0.8	25.60%	25.60%	2.20%	48.10%	22.40%	1.70%
	BG	70.6%	8.0	24.70%	24.70%	0.40%	72.00%	1.80%	1.10%
	NL	68.5%	0.9	0.80%	0.80%	2.40%	63.20%	23.30%	10.30%
	SE	68.3%	2.6	3.20%	3.20%	0.50%	81.40%	4.20%	10.70%
	DK	67.9%	5.4	0.40%	0.40%	0.70%	76.10%	9.30%	13.60%
	CY	67.8%	3.3	5.00%	5.00%	7.70%	42.00%	8.50%	36.90%
	DE	67.0%	0.6	8.10%	8.10%	3.00%	74.00%	9.40%	5.40%
	HR	66.3%	1.0	38.40%	38.40%	9.60%	41.00%	2.80%	8.30%
The modestly industrialising countries	AT	69.0%	-0.5	4.50%	4.50%	8.90%	64.50%	18.60%	3.50%
	EE	68.8%	-1.0	12.00%	12.00%	1.40%	72.00%	8.60%	6.00%
	CZ	67.2%	-4.9	30.70%	30.70%	2.10%	47.40%	17.70%	2.10%
	BE	67.0%	-1.5	6.30%	6.30%	8.60%	30.40%	45.90%	8.90%
	SK	66.5%	-4.7	50.20%	50.20%	2.70%	25.50%	6.50%	15.10%
The de-industrialising countries	MT	65.8%	-2.8	17.80%	17.80%	2.00%	33.70%	0.70%	45.70%
	IT	65.5%	-0.1	28.90%	28.90%	22.00%	16.80%	19.60%	12.70%
	HU	65.2%	-0.4	47.20%	47.20%	3.60%	8.40%	12.00%	28.80%
	LV	64.1%	-3.4	11.30%	11.30%	6.50%	18.80%	2.50%	60.90%
	ES	64.0%	-4.8	29.00%	29.00%	4.20%	15.50%	21.10%	30.20%
	PT	63.9%	-0.7	35.40%	35.40%	10.20%	0.70%	5.30%	48.40%
	FI	61.7%	-3.6	5.00%	5.00%	4.30%	64.90%	17.10%	8.80%
	EL	59.9%	-2.3	48.00%	48.00%	9.00%	18.00%	2.90%	22.20%
	FR	59.6%	-1.7	28.50%	28.50%	9.40%	21.00%	14.50%	26.60%
	EU	66.3%	0.5	17.00%	17.00%	5.70%	50.20%	13.20%	13.90%

Note: the **green** background denotes the highest values, **yellow** – average values, **red** – the lowest values.
Source: Own elaboration based on State Aid Scoreboard (European Commission, 2024i) and the Eurostat Database.

	EU Member States	Share of Industrial GVA in Total GVA		State Aid Similarity Index (%) (range from 0 to 100%)	Revealed State Aid Intensity Index in selected categories of State Aid (cumulative for 2004–2022) (range from -1 to +1)				
		2022 (%)	Change 2004–2022 (percentage points)		Regional Investment State Aid	State Aid for Small and Medium-Sized Enterprises	State Aid for environmental protection and energy savings	State Aid for research, development and innovation	State Aid for sectoral development
The leading industrialising countries	IE	83.8%	10.1	29.20%	-0.26	-0.18	-0.63	-0.43	-0.58
	PL	75.2%	2.7	34.90%	0.33	-0.36	-0.32	0.03	0.21
	LU	73.3%	0.9	5.50%	-0.82	-0.13	-0.52	-0.19	-0.96
	LT	72.6%	0.9	32.30%	0.16	-0.18	-0.22	-0.25	-0.47
	RO	71.6%	6.2	22.10%	0.02	-0.88	0.02	-0.61	-0.29
	SI	71.0%	0.8	25.60%	0.15	-0.48	-0.07	0.21	-0.8
	BG	70.6%	8.0	24.70%	0.17	-0.86	0.17	-0.77	-0.86
	NL	68.5%	0.9	0.80%	-0.95	-0.63	-0.2	-0.03	-0.44
	SE	68.3%	2.6	3.20%	-0.61	-0.8	0.35	-0.41	0
	DK	67.9%	5.4	0.40%	-0.95	-0.75	0.29	-0.09	0.08
	CY	67.8%	3.3	5.00%	-0.74	-0.18	-0.4	-0.51	0.15
	DE	67.0%	0.6	8.10%	-0.14	-0.08	0.4	0.06	-0.23
	HR	66.3%	1.0	38.40%	0.27	0.13	-0.23	-0.72	-0.37
The modestly industrialising countries	AT	69.0%	-0.5	4.50%	-0.68	0.07	-0.03	0.01	-0.69
	EE	68.8%	-1.0	12.00%	-0.27	-0.67	0.07	-0.31	-0.48
	CZ	67.2%	-4.9	30.70%	0.45	-0.29	0.16	0.32	-0.63
	BE	67.0%	-1.5	6.30%	-0.54	0.11	-0.34	0.48	-0.31
	SK	66.5%	-4.7	50.20%	0.23	-0.59	-0.57	-0.58	-0.25
The de-industrialising countries	MT	65.8%	-2.8	17.80%	0.4	-0.11	0.2	-0.78	0.76
	IT	65.5%	-0.1	28.90%	-0.18	0.23	-0.76	-0.24	-0.45
	HU	65.2%	-0.4	47.20%	0.68	0.09	-0.52	0.26	0.59
	LV	64.1%	-3.4	11.30%	0.17	0.43	-0.11	-0.42	0.81
	ES	64.0%	-4.8	29.00%	-0.08	-0.46	-0.73	-0.11	0.05
	PT	63.9%	-0.7	35.40%	0.46	0.4	-0.97	-0.32	0.64
	FI	61.7%	-3.6	5.00%	-0.5	-0.08	0.19	0.19	-0.16
	EL	59.9%	-2.3	48.00%	0.39	0.13	-0.55	-0.7	0.13
	FR	59.6%	-1.7	28.50%	0.3	0.29	-0.37	0.1	0.36
	EU	66.3%	0.5	17.00%					

4 Common Financing as an Option for the new EU Industrial Policy

Main findings
Taking into account both the provisions of Article 173 TFEU and the new climate challenges, the new EU industrial policy should, above all, aim at securing the competitive position of industry (including services) vis-à-vis products from third countries, using cutting-edge technologies, including clean technologies. It may, therefore, be appropriate to prioritise and support those industries that are broadly linked to innovation (as proposed in the Lisbon Strategy) as well as the energy transition. At the same time, basic rules, such as those governing the permissibility of state aid and the protection of fair competition in the European Single Market, should be guaranteed as a precondition for all activities within the EU.

It is precisely the European Single Market that can ensure the conditions necessary for the competitiveness of the Union's industry. A tangible confirmation of this approach's validity is the adoption of numerous legal acts based on Article 114 TFEU, which, through the harmonisation of EU Member States' legal systems within the Single Market, directly impact the competitiveness of EU companies, which is a key domain of EU Industrial Policy (Article 173 TFEU). To make it work, two basic criteria must be met: a level playing field and cohesion among the 27 EU Member States.

At the same time, the continuation of existing mechanisms to support industrial projects, without substantial changes in funding, creates a *de facto* segregation between countries that are able to participate in innovative projects, due to their willingness and the availability of domestic financial measures, and those that either lack this capacity or do not share the rationale for financial intervention in the economy.

Therefore, new financial measures offered under the new EU Industrial Policy should consider both: industrial competitiveness (including a well-functioning Single Market), as the EU objective, and the financial capacity and willingness of individual EU Member States to intervene in the market.

Moreover, it should ensure that the ongoing industrial revolution associated with digital and clean technologies does not lead to a concentration of investments only in selected regions and countries that are better prepared and offer better conditions for doing business (in terms of infrastructure, private and public finances, including state aid, and labour resources).

In order to mitigate differences in intensity of state aid and the level of economic development, a new approach to a common/joint system for the financing of the new EU Industrial Policy is needed. A potential solution could be the transfer of funding in certain areas of the new EU Industrial Policy to the EU level. These areas require acting together at the EU level, in accordance with the principle of subsidiarity, given the main challenges facing the entire Union, namely digital and energy transformation.

On the one hand, such an approach can eliminate or significantly reduce the possibility of governmental failures, distortion of competition (subsidy races), and widening the economic development/cohesion gap within EU regions and Member States. However, some risks remain.

On the other hand, financing industrial projects at the EU level, as properly managed and supervised by the European Commission (as an independent EU institution), could ensure compliance with formal competition rules and real conditions within the European Single Market. Moreover, it could create synergy effects, where teamwork among the EU Member States and businesses can generate added value, exceeding the sum of individual efforts. The results of funding at EU level should spill over to other actors in the EU production chain who are not directly involved in the funded project. In addition, it should take into consideration the budgetary positions and willingness of EU Member State to intervene in the market.

The implementation of the concept of common financing of the new EU Industrial Policy initiatives may encounter significant obstacles in various EU Member States, either preferring individual state aid to national companies and industrial initiatives or opposing public intervention in the free market.

Therefore, consideration should be given to building support mechanisms within the new EU Industrial Policy, based on well-established programmes managed directly at the EU level, including, but not limited

to, those under the European Commission's oversight. These mechanisms should incorporate industrial indicators related to productivity and resilience, recommendations from industrial alliances, and treaty provisions, as well as the willingness of the EU Member States. Thus, the new EU Industrial Policy would support the competitiveness of European economic entities without harming competition in the Single Market or undermining the EU's social, economic and territorial cohesion.

Finally, the current debate should not focus on the redistribution of existing funds, including national sources available in EU Member States in the form of state aid or through the EU Cohesion Policy, but rather on the identification of new sources of funding to ensure the competitiveness of European industry within the framework of the new EU Industrial Policy. Common financing, managed by the European Commission, would not constitute state aid and would not distort competition within the EU. Moreover, they should be granted within the framework of an evidence-based policy with both ex-ante and ex-post evaluation.

4.1 Level Playing Field and Cohesion as Basic Arguments for Common Financing of the new EU Industrial Policy

The nature of the permissibility of state aid as a current financial instrument of EU Member States' industrial policy stems from the European Union's historical reliance on the European Single Market. From the economic, social and political perspectives, in principle, the Single Market offers benefits to all EU Member States, businesses, consumers and citizens (Lehtimäki & Sondermann, 2022; European Commission, 2023a; Bauer et al., 2024). It should not, therefore, be treated as a separate, independently functioning European project but, rather, as a fundamental element of economic integration in all areas, including industrial policy (Hodge et al., 2024). The free movement of products (goods and services) and factors of production (labour and capital) should ensure the optimal allocation of production resources, as well as the distribution of components and finished goods/services. The most important and unifying feature of the EU's Single Market is competition policy, which can be seen as being primarily concerned with consumer welfare, while industrial policy is concerned with competitiveness (under Article 173 TFEU). In the long term, however, both objectives should be consistent but, in the short term, maximising consumer welfare may lead to different priorities than productive diversification and dynamism (Aiginger & Rodrik, 2020).

It is precisely the European Single Market that can ensure the conditions necessary for the competitiveness of the Union's industry, which is the major objective of EU Industrial Policy (Article 173 TFEU) in accordance with open trade policy. A tangible confirmation of this approach's validity is the previously mentioned adoption of numerous legal acts based on Article 114 TFEU, which, through the harmonisation of EU Member States' legal systems within the Single Market, directly impact the competitiveness of EU companies—a key domain of EU Industrial Policy. These assumptions hold true if the integrated area is homogeneous, meaning that, among other factors, the relative level of economic development is convergent across all EU regions and Member States. However, this is not the case, as the accession of countries with varying levels of development and societal wealth to the EU has led to significant disparities in economic, social and territorial cohesion within the EU.

Unfortunately, even before the recent crisis, there were tendencies for production to be concentrated in more developed regions, leaving less developed regions on a slower and lower growth path (Storper, 2011; Floerkemeier & Spatafora, 2021). From an economic point of view, this is not surprising, as capital in the form of investment tends to flow to areas where its return is both secure and highest. Thus, the European Single Market was already experiencing negative phenomena related to its lack of cohesion (Landesmann & Stöllinger, 2020), including, on the one hand, the relocation of selected production sectors to EU Member States with lower labour costs and, on the other hand, a brain drain to more developed countries (see Atoyan et al., 2016; Hoftijzer & Gortazar, 2018; Toptsidou et al., 2024; European Commission, 2024f). The latter is particularly sensitive and significant, from the perspective of highly skilled workers leaving the countries where they acquired their knowledge and skills. These countries, constrained by financial limitations, often prioritise significant investment in education, including specialised training, but cannot allocate substantial resources to RDI activities and investment in new (including clean) technologies (Zacharewicz, 2019; European Commission, 2023e). This dynamic exacerbates developmental disparities between EU regions and Member States, contradicting both treaty provisions and the goal of building a comparative advantage for European industry over third countries (Terzi et al., 2022).

Taking into account the provisions of Article 173 TFEU and the new environmental challenges, the new EU industrial policy should aim at securing the competitive position of industry and industry-related services,

vis-à-vis products from third countries, using cutting-edge technologies, including clean technologies. It may therefore be appropriate to prioritise and support those industries that are broadly linked to innovation (as proposed in the Lisbon Strategy), as well as the energy transition. This would include support for the development of innovative methods for the generation and distribution of renewable energy sources (RES), low-carbon manufacturing technologies, environmental awareness measures, services for RES equipment and more. Such an approach can be in line with the broader trend of climate change mitigation efforts.

New development drivers, such as the introduction of new technologies, may reinforce current tendencies to locate digital and clean technology industries in more developed EU Member States (attracting a better skilled workforce). Moreover, new industrial initiatives allow for more public financial intervention compared to previous horizontal industrial policy in the EU, thus enhancing the competitiveness of entrepreneurs in those countries where such practices are politically acceptable and supported by actual expenditures (Piechucka et al., 2024).

Without ensuring a level playing field and cohesion within the European Single Market, the aforementioned new industrial initiatives financed by richer EU Member States can only deepen the current developmental disparities in the EU. The continuation of existing mechanisms to support innovative products, without substantial changes in funding, creates a *de facto* segregation between countries that are able to participate in innovative projects using highly skilled personnel, due to their willingness and the availability of domestic financial measures, and those that either lack this capacity or do not share the rationale for financial intervention in the economy. This has resulted in marked disparities in the participation of EU Member States in IPCEI (see Figure 2 in Chapter 2.2) (Lopes-Valença, 2024; Schmitz et al., 2025) or other sectoral projects (including NZIA), both in terms of numbers and values. This trend intensifies economic and social disparities between EU regions and Member States—disparities that had been steadily reduced through the use of EU funds since the early 1990s (Kyriacou & Roca-Sagalés, 2012; European Commission, 2024l). However, in the context of the new EU Industrial Policy and the re-industrialisation process, this division is not only driven by the current level of economic development (as is the case with the Cohesion Policy in the EU) but, above all, by the relative availability of factors essential for the digital and clean-tech industry, the structure of the economy whether

focused on services or industry and, most importantly, access to domestic public funds available to enterprises.

Therefore, new measures, including financial ones offered under the new EU Industrial Policy, should take into account both EU objectives and the capacities of individual EU Member States, as reflected in the interest of economic entities and their willingness to offer public funding support. The goal is to ensure that the ongoing industrial revolution associated with digital and clean technologies does not lead to a concentration of investments in selected regions and countries that are better prepared and offer better conditions for doing business (in terms of infrastructure, private and public finances and labour resources). In the short term, this might improve the competitiveness of selected businesses, regions and countries, but it would come at the expense of other actors within the EU. In the long term, instead of gradually reducing Cohesion Policy-related funding due to the genuine socio-economic convergence of all regions and EU Member States, even larger funds would need to be allocated to cohesion in the EU, financed by the EU budget.

Consequently, given the current trends, the divide between countries actively investing in re-industrialisation (based on digital and clean technologies) and those unable, unwilling, or otherwise constrained in allocating substantial public resources, to enhance their investment attractiveness and the competitiveness of their domestic firms, could pose significant challenges to the process of European integration. In order to mitigate these challenges, a new approach to a common/joint system for the financing of the new EU Industrial Policy is needed.

4.2 Advantages and Disadvantages of Common Financing of the new EU Industrial Policy

The current EU legal framework allows for a significant change in the method of financing the new EU Industrial Policy, in order to reduce the potential negative effects (concerning competition and cohesion) of the recent expansion of national state aid in EU Member States.

First, in order to ensure that the 'conditions necessary for the competitiveness of the Union's industry exist' (Article 173(1) TFEU), the EU should take into account at least two other socio-economic objectives concerning: a) the European Single Market, which should 'work for the sustainable development of Europe based on balanced economic growth

and price stability, a highly competitive social market economy (...)', and promote b) 'economic, social and territorial cohesion, and solidarity among Member States' (Article 3(3) TEU).

Second, given that 'the Union shall have competence to carry out actions to support, coordinate or supplement the actions of the Member States', including in the field of industry (Article 6 TFEU), it should act when the above-mentioned objective of the EU Industrial Policy 'cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level' (Article 5(3) TEU).

The coordination of the new EU Industrial Policy is of significance in the prevention of risks to the integrity and competitiveness of the European Single Market. However, it is unlikely to be sufficient in view of the common challenges faced by EU countries and the significant fiscal capacity differences between them (Piechucka et al., 2024). Thus, the above legal basis should allow for decisions on the financing of certain areas of the new EU Industrial Policy to be devolved to the EU level (Diagram 2). The results of previous studies suggest that, if state aid is to be provided to companies in the European Union, it should be provided at European level rather than at Member State level, in order to mitigate negative spill-over effects. Pooling resources and distributing aid competitively across the Union could preserve market competition, encourage new entry and ensure a more efficient allocation of resources (Brandão-Marques & Toprak, 2024).

These would be areas that require collective action at EU level, in light of the major challenges facing the new EU Industrial Policy, including digital and energy transformation. This approach is consistent with the idea that a key aspect of a new approach to industrial policy is to incorporate the directionality of growth (i.e. reduce inequality and enhance sustainability) within the instruments that are situated at the intersection of public-private partnerships, i.e. subsidies, loans, grants, public inputs, and intellectual property rights (Mazzucato & Rodrik, 2023). Such an approach eliminates or significantly reduces (although there is always a certain risk of their occurrence) the **potential for negative effects** arising from the joint funding of initiatives aimed at enhancing the competitiveness of EU industry by the EU:

- governmental failures, which could lead to the government supporting projects at the national level that are wrongly chosen due to informational asymmetries (Meunier & Ponssard, 2023; Juhász et al., 2024), either from an economic point of view or in terms of achieving EU goals. The potential risk of government failure should be reduced by introducing detailed impact ex-ante and ex-post assessment and evaluation of the results achieved, including the impact on the market. Moreover, decision-making at the EU level, with the participation of other EU Member States, the European Commission and other businesses, reduces the possibility of making a wrong decision under the influence of national lobbying of the entity (sometimes state-owned). It seems that the Europeanisation of national interest group activities, together with the multi-stakeholder EU decision-making process, can reduce the influence of national lobbying and lead to more balanced outcomes (Borragán, 2004). Moreover, European governance (supranationalism and intergovernmentalism) explains successful European policy-making as a function of centralised power resources, either by the European institutions (supranationalism) or a coalition of dominant Member States (intergovernmentalism) (Neyer, 2004). There are areas of European integration where the EU Member States (at least occasionally) favoured cooperating in certain international negotiating forums, in order to maximise their bargaining power and to reach the best possible deals (with third countries) (Basedow, 2014). This is proved by the temporary differentiated integration preferred in smaller EU Member States, whilst being supported by larger countries (Telle et al., 2023). Therefore, with regards to industrial policy, the state should not pick winners. However, appropriately structured governance arrangements can act as an information revelation mechanism facilitating learning about what works and what fails, allowing government agencies to abandon failing initiatives and focus on supporting those with the most potential (Rodrik, 2022).
- distorting competition in the European Single Market (a subsidy race), which would otherwise result in a loss for other entrepreneurs and sectors, along with social costs ultimately covered by the benefits gained by the recipients of support (Heim, 2019; Schito, 2021; Bauer, 2023; Di Carlo & Schmitz, 2023);

- widening the economic development/cohesion gap within EU regions and Member States (including brain drain), which could lead to social tensions, a lack of acceptance for the European project, and general losses in areas not necessarily directly linked to the new EU Industrial Policy. Under the current Cohesion Policy, this could lead to the need for additional resources for social, economic and territorial cohesion in the EU at the expense of, among others, resources that could be allocated within the new EU Industrial Policy (Szczepański & Zachaiandis, 2019; Molica, 2025).

At the same time, the financing of industrial projects at the EU level could have a **positive impact on the EU economy,** in terms of:

- compliance with not only formal competition rules (as funds under the control of EU institutions, including the European Commission, do not constitute state aid under Article 107(1) TFEU) but also real conditions within the European Single Market, comprising 27 Member States;
- inclusion of the budgetary positions and willingness of EU Member State governments to intervene in the market, which should limit the subsidy race among the EU Member States in competing for new investors and supporting national enterprises. Such a mechanism would also reduce the budgetary burden on EU Member States, from the perspective of the Stability and Growth Pact, including the launch of the excessive deficit procedure;
- the creation of synergy effects (instead of a subsidy race), where teamwork between the EU Member States and businesses can generate added value exceeding the sum of individual efforts of countries/companies in the EU. This not only applies to business projects during the design, production and after-sales phases but, also, to investments in human capital (the education of highly skilled workers) and research, development and innovation. These areas are particularly crucial for conducting the new EU Industrial Policy for three reasons: a) they are essential for introducing new technological solutions; b) past experience with EU-level unmanaged research programmes (e.g. Horizon Europe) indicates project concentration in a few countries at the expense of others; c) they would allow for the inclusion of

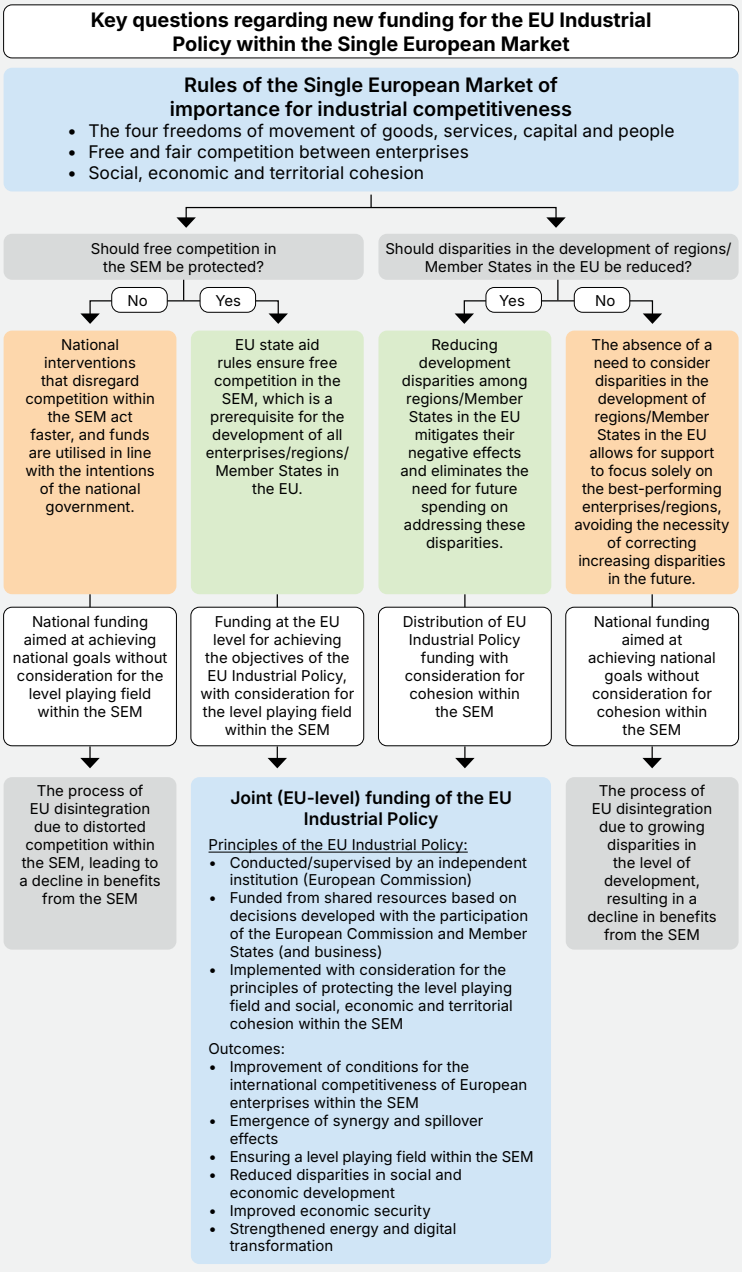
countries with excellent educational and research facilities but weaker industrial and financial bases into industrial projects;
- the occurrence of spill-over effects, whereby the results of EU-level financing extend to other entities in the EU within the production chain not directly involved in the supported project. This effect would not only be felt within a given Member State but, due to EU-level financing, would also be perceptible in other EU Member States.

The implementation of the concept of conducting the new EU Industrial Policy (including jointly determining, financing and managing) at the EU level may encounter significant obstacles in various Member States:

- first, it forces the acceptance of and participation in the common funding mechanism of all EU Member States, both those who see the benefits of joint action and those who do not, either preferring individual state aid to national companies and industrial initiatives or opposing public intervention in the free market;
- second, it eliminates the attribution of successes related to the introduction of new technologies and the development of strategic industries to national governments (politicians), as large projects would be implemented at the EU, rather than national, level;
- third, traditional industries, which are often socially (high employment levels exceeding actual demand) or economically burdened (relying on traditional, relatively expensive, and unreliable energy sources), would remain under the influence of national governments;
- fourth, the above-mentioned actions at the EU level in industry, research and development, and education do not fall under the exclusive competence of the EU.

It is, therefore, necessary to precisely define the targets to be implemented at EU level that would be acceptable to all EU Member States, including the most frugal. Next, the extent of the impact in each EU Member State, the type of instruments available and their permissible intensity should be determined. Finally, potential positive (spill-over) and negative (distortion of competition) effects within the Single Market should be monitored and, if necessary, appropriate (compensatory) measures should be taken.

Diagram 2. **Framework for addressing questions on the method of financing of the new EU Industrial Policy**



Source: Own elaboration.

4.3 How to finance?

The common funding mechanism for the new EU Industrial Policy requires the cumulative fulfilment of the following key conditions:

a. compliance with the provisions of the Treaties, including the main objective of ensuring that the conditions necessary for the competitiveness of the Union's industry exist, while respecting, as an imperative criterion, the level playing field and the coherence of the European Single Market;
b. built on efficiency, the EU Industrial Policy needs measurable objectives evaluated *ex ante* and *ex post* to ensure that public funds are being used efficiently and add value for industrial development;
c. the whole process of identifying areas for action, assessing the need for the measures to be taken, defining their scope, subject matter and time horizon should be supervised and managed by an independent EU institution (the European Commission), in order to comply with the current Treaty provisions. The EU Member States would have to be significantly involved in this process, not only at the level of coordination (Industrial Forum, industrial/thematic alliances) but, also, at the level of joint financial decisions. It is also necessary to involve industry and academia in the coordination process, to take account of current market expectations and challenges;
d. the availability of funding at EU level through the independent body mentioned above.

Each of these criteria is crucial and, while the first three seem relatively straightforward, the fourth may pose the most problems for EU decision-makers. By December 2024, no clear decisions had yet been made within the EU regarding the sources and methods of financing the new EU Industrial Policy (even in its current rudimentary form), which appears to be crucial for effectively achieving its Treaty objective. However, in its April 2024 conclusions, the Competitiveness Council called on 'the Commission, without pre-empting the next Multi-annual Financial Framework, to evaluate and, if necessary, improve existing European funding mechanisms, to explore structural ways to increase private investment in strategic technologies and in scaling up industrial capacities, and then assess whether the financing toolbox for industry is effective to reach the Union's common goals in a timely manner' (Council, 2024a).

Two current proposals for funding sources remain available, partly for the new EU industrial policy being proposed at EU level, based on the

proposals and recommendations outlined in two reports. So far, the European Commission has not put forward concrete solutions for building up dedicated financial resources for activities at EU level, including those that can support actions under the new EU industrial policy. At the same time, the reports commissioned by the European Commission for the design of activities within the new institutional cycle have proposed two different approaches to raising funds at EU level.

The first option, mentioned by Enrico Letta in his report, *Much more than a market*, concerns 'the progressive expansion of EU-level funding support' and the report suggested 'a state aid contribution mechanism, requiring Member States to allocate a portion of their national funding to financing pan-European initiatives and investments' (Letta, 2024). This concept could be further developed towards the 'Europeanisation' of a part of the state aid allocated for businesses in a given EU Member State. It would require determining the amount of aid provided under the new EU Industrial Policy by each EU Member State and transferring a certain percentage to the EU level, so that these funds could then be used to finance cross-border projects within the EU, achieving the main objectives of the new EU Industrial Policy. The introduction of this solution would mean taking over part of the national financial resources of individual Member States, e.g. for national industrial policy activities (as state aid is also granted for other purposes). Such an approach would definitely go beyond the Treaty framework of the coordination of EU Member States' industrial policy actions by the European Commission. It would also mean taking over resources from these countries which, under the principle of subsidiarity, could perhaps be better allocated to the objectives defined by the country concerned. In addition, the transfer of these resources to the EU level would *de facto* mean the introduction of an additional national contribution to the EU budget. Given the very different economic structures, the share of Industrial State Aid in the total value of public intervention, and the needs, budgetary possibilities and willingness to intervene in the market, this solution would probably meet with resistance from many groups of EU Member States, ranging from the thrifty to the supporters of national state aid.

The second option was presented by Mario Draghi in his report, *The future of European competitiveness*. He unequivocally stated that 'a minimum annual additional investment of EUR 750 to 800 billion is needed, based on the latest Commission estimates, corresponding to 4.4-4.7% of EU GDP in 2023', as necessary for improving the competitiveness of EU industry

and which could be raised, similarly to the Next Generation Fund, through loans on the international market (Draghi, 2024). Without discussing the proposed amount, and particularly the sources of its calculation, it is worth noting that, in this case, compared to Letta's proposal, the problem of 'taking over part of the national financial resources' is eliminated. Debt repayment should only be imposed on countries participating in joint initiatives under the new EU Industrial Policy. Indeed, there is no justification for countries not participating in those initiatives (e.g. IPCEI) to co-finance them, although they could benefit from them due to the spill-over effects. However, the above solution has its drawbacks: the potential economic development divergence can increase between countries that participate in joint initiatives and those that have opted out (for various reasons, including the structure of the economy, or reluctance to engage in common projects, or resistance to market intervention). In a negative scenario, this could lead to disintegration and the development of a two-speed European process; however, in this case, with the consent of the EU Member States not participating in the joint industrial initiatives.

Summing up, it is fundamental that appropriate funding pathways are established at the EU level, e.g. under the supervision of the European Commission, with a strong decision-making role for EU Member States via the EU Council, which should eliminate issues of fair competition with third countries. The aim is to facilitate the allocation of European funds to industrial projects (with the participation of companies, universities and research institutes), in order to ensure that the new EU industrial policy objectives are achieved. The provision of support for investment, research and development, as well as the training of highly skilled workers for digital and clean technology projects, is to be instrumental in achieving this. The maintenance of a level playing field and coherence within the European Single Market is imperative.

Therefore, consideration should be given to building support mechanisms within the new EU Industrial Policy, based on well-established programmes managed directly at the EU level, including (but not limited to) those under the European Commission's oversight. These mechanisms should incorporate industrial indicators related to productivity and resilience (dependent on non-EU partners), recommendations from industrial alliances, and Treaty provisions ensuring both economic freedom with undistorted competition in the European Single Market and social, economic and territorial cohesion. Finally, the current debate should not focus on reallocating existing funds, including those available

under the Cohesion Policy, but should concentrate on identifying new sources of financing to ensure the competitiveness of European industry within the framework of the new EU Industrial Policy.

Conclusions

Industrial policy has become an important topic of debate in recent years, both on an academic, journalistic and political level. With the disruption of production and supply chains resulting from the COVID-19 pandemic, the war in Ukraine, and the unfair behaviour of the world's main trading partners (US and China) in subsidising their own exports, this discussion has definitely come alive in the European Union.

Therefore, the main objective of this report is to answer the question of the legitimacy of common actions at EU level in the field of industrial policy, taking into account the managerial, legal and financial dimensions. As a basis for the above considerations, an effectively functioning European Single Market has been adopted, in accordance with the provisions of the Treaty, with a level playing field and cohesion as fundamental values.

The current treaties do not provide for shared or exclusive competence for the EU, including the European Commission, to conduct industrial policy at the EU level. However, they do define the main objective of this policy, which is 'to ensure that the conditions necessary for the competitiveness of the Union's industry exist'. The EU is a specific economic organisation consisting of 27 different economies governed by common economic rules within the European Single Market, including ensuring a level playing field and cohesion among all EU Member States. Therefore, any instrument or initiative undertaken within the EU, whether at national or EU level, must take into account the union dimension.

After decades of shifting away from the sectoral industrial policy in favour of a horizontal one, voices have been raised in the EU advocating a more ambitious industrial policy to re-industrialise Europe (a shift from the EU's liberal approach towards broader permissibility of state assistance granted to achieve sectoral goals). Nowadays, we are faced with a distinct paradigm shift in the EU Industrial Policy: from passive, open, pro-competitive and horizontal to active, assertive, green and sectoral.

To this end, the European Commission has begun to use the industrial policy instruments at its disposal. This primarily concerns the possibility of coordinating the activities of the EU Member States, both through joint (coordinated) agreement on areas for action and through the

establishment of joint (coordinated) financial projects. In the first case, the Commission uses forums, such as the Industrial Forum, or broader platforms involving not only EU Member States but, also, interested businesses (thematic alliances) to identify areas for intervention. On the one hand, these structures do not have a formal position in the decision-making process within the EU institutions but, in the absence of competences in this area at EU level, they are an excellent place to develop common industrial projects. On the other hand, they involve industry, which ensures that a market-based and bottom-up approach is taken into account, although, at the same time, this allows solutions to be promoted that may not necessarily be supported by all or most EU Member States.

In terms of financial coordination, Important Projects of Common European Interest is increasingly being used. While ensuring cooperation between European companies in R&D, they require the participation of at least four EU Member States, which should limit potential distortions of competition in the Single Market. At the same time, experience has shown that only a few of the richest EU Member States are significantly involved, leaving aside countries that do not have sufficient financial or R&D capacity or are unwilling to intervene financially in the market.

In addition, the European Commission has started introducing legal acts, in the form of regulations, to create further markets for selected goods: microelectronics (chips), raw materials and clean industrial products. On the one hand, they systematise the market and allow for the expected incentives and simplifications on the supply and demand side but, on the other hand, they are a reaction to steps taken by third countries and are, therefore, not the result of an EU industrial policy developed and accepted by all or most Member States.

An important element of industrial policy is the financial instrument, which is currently the granting of state aid by EU Member States. On the one hand, the EU's exclusive competence in this area allows the European Commission to either approve individual cases of financial support to entrepreneurs or to exempt selected state aid measures from this procedure under certain conditions. On the other hand, the intensity of aid granted and its convergence with EU objectives varies considerably between EU Member States, reflecting the pursuit of national rather than EU objectives.

Given the shortcomings of national state aid, it seems a good solution to seek the necessary funding at EU level. It should be subject to a number of criteria, to ensure that the objective of the new EU Industrial Policy is met and that the principles of the European Single Market are respected. On the one hand, they should make it possible to support projects carried out at EU level to promote the competitiveness of European industry, with a substantive and coordinating involvement of the European Commission, Member States and industry. However, they must be organised in such a way that a transparent decision-making process takes into account the will of the Member States and enterprises concerned. In addition, the potential risk of government failure, due to lobbying by national companies, should be reduced, e.g. by introducing detailed impact ex-ante and ex-post assessment and evaluation of the results achieved, including the impact on the market. On the other hand, these projects should eliminate the current phenomenon of a subsidy race to protect competition from distortion and the widening gap in socio-economic development in the Single Market.

A separate issue, not addressed in this report, is the financing of joint actions, including under the new EU Industrial Policy. It is clear that the current debate should not focus on the redistribution of existing funds, including national sources available in EU Member States, in the form of state aid or through the EU Cohesion Policy but, rather, on the identification of new sources of funding at the EU level to ensure the competitiveness of European industry. The current state aid framework is financed irrespective of national or EU budgets and allows EU Member States to grant financial incentives to companies to both mitigate economic and social problems or/and meet national goals, which are not necessarily shared by the EU, particularly concerning digital and energy challenges. Moreover, national measures, although applied under EU law, are not indifferent to competition on the SEM, whereas funds in the hands of the European Commission should be free from the above problems and should be granted within the framework of an evidence-based policy with both *ex-ante* and *ex-post* evaluation.

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Methodology notes

Annex I

This study focuses on issues related to the development of the new EU Industrial Policy. Therefore, the statistical analysis of state aid was conducted using data that were pertinent to the subject matter of the study and so the analysis only covers state aid that directly contributes to the achievement of the EU Industrial Policy objectives and represents a noteworthy share of the total value of state aid granted. As a result, it does not cover all categories of state aid granted by EU Member States (data on which are available in the annual State Aid Scoreboard).

The data on state aid is taken from the European Commission's State Aid Scoreboard (https://competition-policy.ec.europa.eu/state-aid/scoreboard/scoreboard-state-aid-data_en), which is the only official compilation of state aid granted in EU Member States, enabling comparative analysis. The objectives of state aid, as developed by the European Commission, serve as the foundation for the annual State Aid Scoreboard. The document primarily contains information about the expenditure of EU Member States on all existing state aid measures in favour of industries and services (including agriculture, fisheries and aquaculture, as well as transportation). This information has been compiled by the Commission, either from formal decisions that it has adopted or from summary information sheets that it has received from Member States.

The Scoreboard excludes most state aid expenditure related to railways, services of general economic interest, and schemes approved under the temporary frameworks. These categories are subject to limited reporting obligations at the Member State level; whereas, aid to railways and crisis aid to the financial sector are presented separately. Furthermore, the data in the Scoreboard do not include funding granted under the de minimis rules. As mentioned above, most of the available data come from EU Member States whose systems for verifying and reporting data to the European Commission vary considerably. As a result, the available data are presented with at least a 1–2-year lag. It is also important to note that historical data (from previous years) are sometimes modified by EU Member States, e.g. in relation to the reimbursement of certain aid measures, which, in turn, affects the data analysed.

Annex II

Revealed State Aid Intensity Index

To ensure the comparability of the value of state aid granted by individual EU Member States, the European Commission calculates the value of this support relative to gross domestic product (GDP). This indicator makes it possible to identify the countries that grant the most and the least state aid in relative terms, something that European leaders have been calling for since the beginning of the 21st century (European Council, 2001, 2005). There are at least two drawbacks to this indicator (regularly published by the Commission as part of the State Aid Scoreboard, European Commission, 2024i), stemming both from the concept of GDP and, more importantly, from the lack of reference to the EU average.

We decided to apply an indicator: the *Revealed State Aid Intensity Index* (RSAII) (Ambroziak, 2021), which is based on the well-known Revealed Comparative Advantage (RCA) index in international trade (Balassa, 1965). While the traditional RCA measures a country's exports relative to its total exports and the corresponding export performance of a reference group of exporters in the same market, the RSAII, is calculated as the ratio of the value of state aid (in our case – Industrial State Aid) in a given EU Member State or in the EU as a whole, to the cumulative GVA of selected economic activities related to industrial policy (industrial component) in that Member State or the EU. Since the standard RCA index represents the relative specialisation of trade in a given product compared to a reference group of countries, our RSAII provides information on the relative intensity of state aid (in our case – Industrial State Aid and its categories) in a given country compared to the intensity of the same category of state aid (in our case – Industrial State Aid and its categories) in the European Union. The formula for the traditional RCA is as follows:

$$RCA_j^i = \left(\frac{x_j^i}{\sum x_j^i}\right) / \left(\frac{x_j^G}{\sum x_j^G}\right) \quad (1)$$

where:

x_j^i – value of exports of goods *j* of a country *i* to a reference group of countries;
x_j^G – value of exports of goods *j* of all countries to a reference group.

The standard RCA is non-symmetric (values only above 0 with the neutral point at 1), therefore many researchers used to apply the Revealed Symmetric Comparative Advantage (RSCA) index proposed by Laursen (1998) with the following formula:

$$RSCA = \left(RCA_j^i - 1\right)/\left(RCA_j^i + 1\right) \quad (2)$$

In order to ensure that the output of our calculation of the Revealed State Aid Intensity Index is symmetric, we applied the aforementioned Laursen approach, which allowed us to construct the final formula:

$$RSAII_i = \left(\left({}^{x_i}/_{v_i}\right)/\left({}^{X_{EU}}/_{V_{EU}}\right) - 1\right)/\left(\left({}^{x_i}/_{v_i}\right)/\left({}^{X_{EU}}/_{V_{EU}}\right) + 1\right) \quad (3)$$

where:

x_i – value of state aid (Industry State Aid or a category of Industry State Aid) in a country *i*;

v_i – value added (cumulative industrial component of GVA) of a country *i*;

X_{EU} – value of state aid (Industry State Aid or a category of Industry State Aid) in the EU;

V_{EU} – value added (cumulative industrial component of GVA) of the EU.

When the final value of the RSAII is above 0, it means that state aid intensity in each country in relation to GVA is higher than for the EU average. When it is below 0, it means that the intensity is lower than the EU on average.

Moreover, due to the nature of this study covering the entire period 2004–2022, we decided to take the cumulative values of granted Industrial State Aid and GVA of industrial NACE sections of economic activities in subsequent years, starting from 2004, and calculate the RSAII on this basis each year. This approach provides a comprehensive picture of the interventionist policy of a given EU Member State within industrial policy. It is important to note that the state aid reported each year may, depending on its form, be disbursed gradually over the following years. In addition, some countries have significantly increased or decreased their involvement at the start of subsequent multiannual financial perspectives or during crisis situations, only to reduce state aid in the following years. The cumulative values for 2022 provide an overall picture of EU Member States' involvement in state aid for industry and its selected categories

over the period 2004–2022, considering individual, sometimes one-off, anomalies (both increases and decreases in aid).

Annex III

State Aid Similarity Index

In order to identify structural similarities and differences of Industrial State Aid, in terms of objectives, we applied a *State Aid Similarity Index* (SASI) (Ambroziak, 2021) based on the Finger and Kreinin measure (1979). Although these authors applied this index to a structure of exports, we used it to assess the similarity between structures of Industrial State Aid in terms of objectives in the EU Member States. The formula for the SASI is as follows:

$$SASI_j^i = \left\{\sum_i \min\left[X_j^i, X_{EU}^i\right]\right\}100 \quad (4)$$

where:

X_j^i – represents the share of an objective *i* in state aid (Industrial State Aid) in *j* EU Member State;

X_{EU}^i – represents the share of an objective *i* in state aid (Industrial State Aid) in the European Union.

The SASI ranges from 0%, indicating no similarity of state aid structure by objectives, to 100%, representing a structure identical to the EU average.

Sammanfattning på svenska

Målet med EU:s industripolitik är att skapa goda förutsättningar för unionens konkurrenskraft. Efter årtionden av sektorsspecifik industripolitik, och därefter en övergång till en relativt vag horisontell politik, har det under senare år höjts röster inom EU som förespråkar en mer ambitiös industripolitik för att återindustrialisera Europa. På senare tid har det därmed skett ett paradigmskifte vad gäller industripolitiken på EU-nivå: från passiv, öppen, konkurrensfrämjande och horisontell till aktiv, tydlig, grön och sektoriell.

I denna studie, och med hänsyn tagen till den rättsliga grunden för EU:s industripolitik (artikel 173 i EUF-fördraget), definieras industripolitik som en uppsättning offentliga politiska instrument, både icke-finansiella (regler, rättsakter och samarbetsplattformar) och finansiella (tillgångar på både nationell nivå och EU-nivå), som används för att säkra unionens konkurrenskraft. För att stödja konkurrenskraften bör EU:s industripolitik utgöras av gemensamma horisontella och sektoriella åtgärder i syfte att underlätta för den europeiska industrins effektivitet och innovationskraft. Industripolitiken ska främja tillväxt och konkurrenskraft för europeiska företag globalt men också stärka konkurrensen på den inre marknaden.

Samordning av EU-medlemsstaternas industripolitik: ett kraftfullt verktyg som medför risker

EU:s industripolitik har historiskt varit begränsad. Men i dag ser samordningen av EU-medlemsstaternas industripolitiska åtgärder ut att utvecklas till ett kraftfullt integrationsverktyg. Dagens samordnade områden omfattar såväl beslutsprocesser som marknadsintervention och finansiering av de överenskomna projekten.

När det gäller samordning av beslutsprocesser fokuserar EU:s industriforum (som omfattar EU:s medlemsstater och företag) på att identifiera problem och risker i enskilda industrisektorer. Det innebär att man på gräsrotsnivå identifierar (viktiga) områden i behov av stöd. EU:s medlemsstater ska därefter bekräfta att dessa områden har betydelse och att stöden gör att genomföra. Europeiska kommissionen har en samordnande roll.

Ett tydligt exempel på ett samordnat finansiellt instrument är viktiga projekt av gemensamt europeiskt intresse (IPCEI). Projekten sammanför

kunskap, finansiella resurser och företag från olika medlemsstater i syfte att hantera marknads- och systemfel samt olika samhällsutmaningar. Hittills har IPCEI emellertid främst nyttjats av mer välbeställda EU-medlemsstater och företag i dessa länder. Därmed finns det risk att IPCEI, utan genomgripande förändringar i finansieringen, kan få en begränsad eller till och med negativ inverkan på EU:s sammanhållning. IPCEI riskerar att medföra kostnader, ogynnsamma resultat, negativ selektion och tillfälliga lösningar.

Finansiering av EU:s nya industripolitik: säkerställande av sammanhållning och lika villkor

Det tydligaste instrumentet i industripolitik är ekonomiska stöd till inhemska företag. Dessa kan leda till en förbättrad konkurrensposition för det enskilda företaget, men de kan också medföra att konkurrensen snedvrids och att sammanhållningen på den inre marknaden hotas. Kommissionen har därför fått exklusiv behörighet att godkänna beviljande av statsstöd i medlemsländerna.

Å ena sidan finns det inget tydligt samband mellan storleken på statsstöden och industrialiseringsgraden i en given EU-medlemsstat. Å andra sidan beviljas medlemsstater med högre industrialiseringsgrad oftare statsstöd för att uppnå EU:s mål (miljömässiga, sociala och ekonomiska), medan länder som genomgår en avindustrialisering oftare drivs av mindre ändamålsenliga processer. Detta innebär att den nuvarande finansieringsmodellen för industripolitiska åtgärder på EU-nivå sammantaget inte svarar upp mot fördragets mål om konkurrenskraft, sammanhållning och lika villkor på den inre marknaden. Om de befintliga mekanismerna (exempelvis IPCEI) fortsätter att fungera som de gör idag skapas därmed en de facto-segregering mellan länder som deltar i innovativa projekt, på grund av tillgången till inhemska finansiella åtgärder och deras vilja att använda dem, och de som antingen saknar denna kapacitet eller som inte kan svara upp mot EU:s mål för finansiella ingripanden i ekonomin.

Det behövs en ny strategi för gemensam industripolitik

För att minska skillnaderna i statsstöd och ekonomisk utveckling behövs ett nytt, gemensamt finansieringssystem för EU:s industripolitik. En möjlig lösning, baserad på Lettas och Draghis rapporter, är att överföra finansieringen inom vissa områden till EU-nivå. Strategin bör innefatta områden som dels kräver gemensamma åtgärder på EU-nivå (i enlighet med subsidiaritetsprincipen), dels fokuserar på de viktigaste utmaningarna

för hela unionen, nämligen digitalisering och energiomställning. Vidare måste en sådan ny finansiell strategi både upprätthålla konkurrenskraften och ta hänsyn till enskilda EU-medlemsstaters finansiella kapacitet och vilja att intervenera på marknaderna. Dessutom är det viktigt att en ny strategi inte leder till ytterligare koncentration av investeringar i några få utvalda regioner och länder, vilka redan är bättre förberedda och vars industrier har relativt goda förutsättningar.

Den nya finansieringsstrategin bör förvaltas, övervakas, kontrolleras och utvärderas av oberoende EU-institutioner. Dessa ska säkerställa att formella konkurrensregler efterlevs och bidra till att den inre marknaden fungerar ändamålsenligt. Dessutom skulle den gemensamma strategin kunna skapa synergieffekter, vilket innebär att samarbete mellan EU:s medlemsstater och företag kan medföra resultat som vida överstiger de enskilda kostnaderna. Resultaten av den gemensamma finansieringen kan också spridas till andra aktörer som inte nödvändigtvis är direkt involverade i det finansierade projektet.

Sammanfattningsvis förordar denna rapport en ny gemensam industripolitik som syftar till att stärka konkurrenskraften – utan att skada konkurrensen på den inre marknaden eller undergräva EU:s sociala, ekonomiska och territoriella sammanhållning.

‘Nowadays, we are faced with a distinct paradigm shift in the EU Industrial Policy, from passive, open, pro-competitive, and horizontal to active, assertive, green and sectoral. However, in this era of retreat from globalism and concentrating on shorter dependency chains, higher production costs within the EU should be expected, as certain essential (even if expensive) production stages will stay within the EU for economic security reasons, leading to higher prices of finished products.’

Adam A. Ambroziak

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