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# EU industrial policy in the making

From *ad hoc* exercises to key instrument:  
how to make IPCEIs fit for the long run

## • Abstract

This policy paper analyses Important Projects of Common European Interest (IPCEIs) and their growing role in the making of a more active EU industrial policy. It starts out by discussing three waves of IPCEIs which are linked to particular phases in the development of this instrument. From 2018 to 2021 the first wave triggered an experimentation and learning phase which was followed by a second wave, in which IPCEIs could consolidate due to the availability of European funding and some improvements in their governance.

With the continued popularity and an emerging third wave of IPCEIs, we need to reflect on the question whether they are fit for the long run. This policy paper sets out to address this question based on an analysis of IPCEI development and implementation processes, interviews with stakeholders, and the available literature. It makes recommendations on how to best transform IPCEIs from repeated and strongly national *ad hoc* exercises to a more permanent and effective tool of EU industrial policy.

This policy paper suggests, first, that **the EU and its Member States need to agree on more predictable IPCEI funding**. In the best-case scenario, new European funding would substitute for the European recovery plan on a more permanent basis, allowing EU co-financing for future IPCEIs. In addition, more budgetary leeway should be given to Member States willing to invest in common industrial policy priorities. Further improvements for the predictability of IPCEI funding could also be achieved by modifications of national budgeting.

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Second, there is still significant room for improvement for the current IPCEI governance arrangements. At the national level, there should be further harmonisation and simplification of bureaucratic procedures. The **creation of a European exchange forum for Member States to discuss best practice examples** could be useful in this regard. In addition, an EU level support structure for IPCEI applicants and participants could help ensure that enterprises, especially from Member States with lower technical and administrative capacities, can have a **more equal access to IPCEIs**. Finally, the Commission needs to increase its resources to accelerate the lengthy notification processes of IPCEIs.

## I • The growing importance of IPCEIs in EU industrial policy

In recent years, the climate crisis and major changes in economic and geopolitical conditions have led to growing demands for a more active EU industrial policy. **In Europe, industrial policy is traditionally heavily circumscribed by the Single Market's comprehensive competition policy** framework (see [Eisl 2022](#)). Policymakers and public officials thus set out to identify treaty-conform means to subsidise economic activities to achieve common EU priorities such as the 'green and digital transition' and more 'strategic autonomy'. They realised that so-called Important Projects of Common European Interest (IPCEIs) ([Art. 107 3\(b\) TFEU](#)) could serve as a key instrument in this regard, allowing Member States to finance the early stages of industrial policy projects that are in line with European priorities. The [2014 IPCEI communication](#) from the Commission defined the scope of application of IPCEIs as well as the eligibility and compatibility criteria for enterprises seeking to participate in them.

### I FIRST WAVE OF IPCEIS (EXPERIMENTATION PHASE)

Starting from 2018, projects ([microelectronics 1](#), [batteries 1 & 2](#)) of the first wave of IPCEIs were set-up in a largely *ad hoc* manner, implying a lot of experimentation. Both interested Member States and the European institutions had to develop procedures for initiating IPCEIs, sharing information with other Member States and enterprises, identifying and selecting suitable participants, and fleshing out the pre-notification and notification processes of IPCEIs.

### I SECOND WAVE OF IPCEIS (CONSOLIDATION PHASE)

In the context of the European Green Deal, the Covid-19 crisis and NextGeneration EU's (NGEU) Recovery and Resilience Facility (RRF), IPCEIs received an additional boost. In parallel to the establishment of the RRF, the Commission held public consultations on the existing IPCEI framework. Responding partly to the concerns voiced by the various stakeholders, the Commission subsequently [revised](#) its IPCEI communication in 2021 (see [Eisl 2022](#), [Poitiers and Weil 2022](#)), which influenced the development of second-wave IPCEI projects.

Learning from the initial experiences with IPCEIs, the process for Member State participation was rendered more inclusive and transparent, requiring IPCEI initiators to inform other Member States early on in the development of such projects. European financing through the RRF also helped to enlarge the circle of Member States able to take part in IPCEIs, especially towards Central and Eastern Europe. Four IPCEIs are part of the second wave of IPCEIs; the [hydrogen 1 & 2](#) projects, which have been notified in mid-2022, as well as the [microelectronics 2](#) and [industrial cloud](#) ones, which have been pre-notified but still await final Commission approval. Together, these four IPCEIs receive €10.5bn in RRF funding (see Table 1). This amount is based on an analysis of the 25 national recovery and resilience plans (NRRPs) that have

been adopted by the end of 2022. The two hydrogen IPCEIs receive €5.5bn, the microelectronics 2 IPCEI €3.3bn and the cloud IPCEI €1.7bn. As some of the NRRP spending envelopes for IPCEIs are not clearly demarcated or earmarked, these numbers are estimates<sup>1</sup>.

**TABLE 1.** Spending for individual IPCEIs in NRRPs

Country	IPCEIs Hydrogen	IPCEI Micro-electronics 2	IPCEI Cloud Systems
Austria	€125m	€125m	
Belgium	€387.2m	€252m	
Bulgaria			
Cyprus			
Czechia		€181.64m	
Germany	€1500m	€1500m	€750m
Denmark			
Greece			
Estonia			
Spain	€1555m	€500m	
Finland	€156m	€15m	
France	€1275m		
Croatia			
Ireland			
Italy	€1500m		
Lithuania			
Luxembourg			
Latvia	>€98m		
Malta			
Poland			€11m
Portugal			
Romania		€500m	
Slovenia		€7.5m	
Slovakia		€73.5m	
Sweden			
Overall	~€5.5bn	~€3.3bn	~€1.7bn

▲ Notes: Spending envelopes for IPCEIs and extent of their earmarking. Dark blue: full earmarking of a specified IPCEI spending envelope, Light blue: possible/likely earmarking, White: IPCEI spending as part of a broader spending envelope.

▲ Source: Updated version of Eisl (2022: 17); own data analysis of IPCEI spending derived from NRRP Council Implementing Decisions, their annexes, and Commission Staff Working Documents

<sup>1</sup> The presented numbers of RRF IPCEI funding might be slightly overstated as, for this policy paper, I assumed that 100 per cent of relevant spending envelopes in NRRPs would be earmarked for IPCEIs.

Member State contributions to the two already notified hydrogen IPCEIs amount to €10.6bn. This means that **more than 50% of the overall public spending for these IPCEIs comes from European rather than national money**. This share differs starkly between Member States, as only 7 of the 15 Member States participating in at least one of the hydrogen IPCEIs have included IPCEI spending in their NRRPs.<sup>2</sup> While we do not know the exact public spending numbers for the microelectronics 2 and cloud IPCEIs, the dedicated NRRP spending envelopes indicate that they also will cover a significant share of national expenditures.

### I THIRD WAVE OF IPCEIS

While the microelectronics 2 and cloud IPCEIs are still in the notification process, there is already a third – post-RRF – wave of IPCEIs in the making. The Commission and EU Member States have launched calls for expressions of interest for several new IPCEIs, e.g. on [solar energy](#), [low-carbon industry](#), and [health](#). In addition, there are already demands for additional hydrogen IPCEIs. To get a better overview of the various notified, pre-notified and planned IPCEIs, Table 2 (p. 5) provides information on the size of public and private funding, their start/end dates IPCEIs, and the involved stakeholders.

The continued popularity of IPCEIs among European political decision-makers and enterprises shows the interest in this instrument, but makes it all the more important that IPCEI funding and governance are fit for the long run. As the following two sections highlight, **there are considerable shortcomings regarding the funding and governance arrangements for the third wave of IPCEIs**. These European industrial projects of strategic importance need to be transformed from repeated and strongly national *ad hoc* exercises to a permanent tool of EU industrial policy. Policymakers should redesign IPCEIs in a manner that allows them to play a key role in achieving the EU industrial policy objectives while minimising tensions with the functioning of the Single Market.

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<sup>2</sup> The NRRP of Latvia would have also allowed the country to co-finance a hydrogen IPCEI participation through the RRF but does not participate in the two already notified hydrogen IPCEIs.

**TABLE 2.** Notified, pre-notified and planned IPCEIs

IPCEI	Public funding	Private funding	Start date	End date	Member States (+ third countries)	Industry actors	Key actors
<b>First-wave IPCEIs</b>							
Micro-electronics 1	€1.75bn*	€6bn*	12/2018	2024	4: Austria, France, Germany, Italy + United Kingdom (Austria joined in March 2021)	32*	European Commission (EC), European Semiconductor Industry Association (ESIA)
Batteries 1	€3.2bn	€5bn	12/2019	2031	7: Belgium, Finland, France, Germany, Italy, Poland, Sweden	17	EC, European Battery Alliance
Batteries 2 (EuBatIn)	€2.9bn	€9bn	01/2021	2028	12: Austria, Belgium, Croatia, Finland, France, Germany, Greece, Italy, Poland, Slovakia, Spain, Sweden	42	EC, European Battery Alliance
<b>Second-wave IPCEIs</b>							
Hydrogen 1 (Hy2Tech)	€5.4bn	€8.8bn	07/2022	tbc	15: Austria, Belgium, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Italy, Netherlands, Poland, Portugal, Slovakia, Spain	35 (41 projects)	EC, European Clean Hydrogen Alliance
Hydrogen 2 (Hy2Use)	€5.2bn	€7bn	09/2022	2036	13: Austria, Belgium, Denmark, Finland, France, Greece, Italy, Netherlands, Poland, Portugal, Slovakia, Spain, Sweden + Norway	29 (35 projects)	EC, European Clean Hydrogen Alliance
Micro-electronics 2	tba	tba	tba	tba	20: Germany, tba	tba	EC, European Semiconductor Industry Association (ESIA)
Cloud 1	tba	tba	tba	tba	12: Belgium, Czechia, France, Germany, Hungary, Italy, Latvia, Luxembourg, Netherlands, Poland, Slovenia, Spain	tba	tba
<b>Third-wave IPCEIs</b>							
Solar energy, Health, Low-carbon industry, Hydrogen?	tba	tba	tba	tba	tba	tba	EC, European Solar Manufacturing Council, tba

▲ Source: Updated version of Eisl (2022: 9); own elaboration based on materials of the European Commission and involved Member States

▲ Note: \*Numbers refer to the original notification which did not include Austria yet.

## II • Secure more predictable IPCEI financing

The European recovery plan and its key financial instrument, the RRF, significantly lowered the entry barriers for Member States to participate in IPCEIs. It gave smaller countries with comparatively fewer budgetary capacities an opportunity to completely finance or at least co-finance IPCEIs with European money instead of having to rely exclusively on their national budgets. For example, while the first wave of IPCEIs was dominated by larger, economically advanced, Western European Member States, this picture has been attenuated by the financial support of the RRF, which was targeted particularly towards Southern, and Central and Eastern European (CEE) EU countries.

In the second wave of IPCEIs, 7 of the 17 Western, Northern and Southern European EU Member States made use of IPCEIs in their NRRPs (41%). Among CEE countries, 6 out of 10 included IPCEI spending in their NRRPs (60%). While the two hydrogen IPCEIs continue to be dominated by non-CEE EU Member States, CEE countries are heavily involved in the pre-notified microelectronics 2 and cloud IPCEIs (see Table 1).

This development should be welcomed as **it reduces the tensions between an increasingly more active industrial policy in the EU and the maintenance of a level playing field between the Member States of the Single Market.** It raises, however the question to which extent the third wave of IPCEIs currently under negotiation will be able to replicate this. As the RRF is a relatively rigid instrument of a temporary nature, it cannot be used to support additional IPCEIs. In the absence of other Europeans to (co-)finance future IPCEIs, there are thus major risks that the newest wave of IPCEIs might constitute a step backwards in the ambition to make EU industrial policy and competition policy more compatible with each other.

In her 2022 [State of the Union address](#), Commission President Ursula von der Leyen acknowledged this issue, calling for the creation of a ‘European Sovereignty Fund’ and an increase of EU participation in the financing of IPCEIs. She, however, did not specify where the necessary funding would come from. Following up on von der Leyen’s speech, Commissioner Thierry Breton suggested that the proposed Sovereignty Fund should be financed through common debt and partly serve “to top up specific industrial projects supported through IPCEIs” ([Breton 2022](#)). Mirroring the concerns of various stakeholders over differences in financial, technical and administrative capacities between Member States (see [Eisl 2022](#)), Breton sees the Sovereignty Fund as a means to allow those EU countries to participate “who do not have the same fiscal space to help de-risking investments”. Some Member States, such as [Germany](#), are, however, strongly opposed to any new form of common debt.

While this raises serious questions about how the proposed Sovereignty Fund could be financed, **the EU, nevertheless, needs to get serious about developing more permanent financial instruments to achieve the increasing ambitions of a common industrial policy in the framework of the Single Market.** This policy paper recommends a large debt-financed European investment fund to support – amongst other things – IPCEIs, but also elaborates alternative and complementary policy options at the European but also national level.

## I A LARGE DEBT-FINANCED EUROPEAN INVESTMENT FUND

The EU and its Member States face significant public investment needs in this decade. This includes investments in the green transition<sup>3</sup>, in increased economic and military independence, and in the reconstruction of Ukraine. **A debt-financed European investment fund would be the most sensible solution to address all these issues in a joint fashion.** As many of these public investments are very costly and should be frontloaded to maximise positive returns, a debt-financed model to finance them is justified. Future generations will be able to strongly profit from these investments (a more habitable planet, more economic and political security, a more prosperous Ukraine, etc.) and should thus take on a share of the costs incurred today. Inside such a large investment fund, **IPCEIs would constitute a relatively small spending item and could serve as a means to simultaneously address green transition and geopolitical/geoeconomic objectives of the EU.** As common debt instruments are politically sensitive and difficult to adopt, developing a single instrument with a broader set of key EU investment priorities might be easier to agree on and lead to more coherent implementation than a panoply of different instruments.

## I A LIMITED SOVEREIGNTY FUND

In line with recent calls from the Commission, a comparatively smaller Sovereignty Fund with more narrow spending objectives could also be imaginable for the common financing of IPCEIs. As a debt-financed model for such a fund carries high political costs in relation to the economic gains due to its comparatively small size, it might make sense to **consider whether the Sovereignty Fund could not be rather (co-)financed through existing or planned EU Own resources.** As many of the existing but also planned IPCEIs are in climate-relevant sectors (batteries, hydrogen, solar energy, low-carbon industry), funding of the Sovereignty Fund could potentially be provided – at least partly – by sources such as the new Carbon Border Adjustment Mechanism (CBAM), the EU Emissions Trading System (ETS), or other climate-related financial mechanisms. A mid-term revision of the multi-annual financial framework (MFF) could allow for the creation of a dedicated IPCEI budgetary line inside the EU budget.

## I FACILITATE NATIONAL IPCEI SPENDING

IPCEI participation could also be fostered by modification in EU economic governance and by measures at the national level. In the end, IPCEI financing is – so far – assured by national budgets, even if the RRF supported them through common funds. The following policy recommendations are, however, unfit to address the existing differences in the financial capacities of Member States and will do little to reduce the tensions between EU industrial policy and competition policy. They would nevertheless be an improvement over the status quo and could play an important complementary role for EU funding for IPCEIs.

First, in the absence of additional EU funding, **Member States might find it easier to take part in IPCEIs if the incurred investment costs are not included in the calculation of public deficits and debt in the European fiscal framework.** With its recent [orientations](#) for the reform of the Stability and Growth Pact, the Commission attempts to facilitate common investment and reform priorities by softening fiscal adjustment trajectories based on adequate Member State proposals. The Commission defined a number of criteria for such investments, but they are still too vague to

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<sup>3</sup> [Baccianti](#) (2022), for example, estimates that additional annual EU public investment needs amount to €250bn for the 2021-2030 period to achieve EU climate objectives. The RRF only covers about 13 per cent of this investment and only for the 2021-2026 period.

know whether IPCEIs could fall under them. Additional clarifications are needed in this regard and should make it clear that **IPCEIs would be among the investments that are taken into account in the lengthening of fiscal adjustment paths.**

Second, exclusively at the national level, certain modifications to budgeting could also help to foster national IPCEI participation, particularly by reducing the constant difficulties and trade-offs in securing IPCEI funding. Whenever a new IPCEI is proposed, Member State governments need to figure out whether to participate in them or not, discussing with organisations representing the interests of specific economic sectors about their funding needs. Currently, a country's IPCEI participation strongly depends on a government's willingness to prioritise IPCEI spending over other policy issues. Due to the *ad hoc* nature of IPCEI, they can come in at various points during the budgeting process. Typically, IPCEIs are not anchored in existing dedicated budgetary lines and thus are competing with more permanent spending programmes over funding. In addition, fiscal rules and the rules guiding budget processes make it difficult in many EU countries to amend budgets in a fashion that increases public deficits without identifying additional financing. Without significant industry pressure and strong political support, planned IPCEI participations can thus easily fail due to a lack of available national funding.

**The creation of a dedicated national fund or specific budgetary lines that are reserved for IPCEI participation and related measures could help giving the funding of IPCEIs a more permanent foundation.** As IPCEIs are a quite specific investment instrument and depend on cross-country cooperation, it might be useful to give such a national fund a broader scope, e.g. to finance measures and projects towards the achievement of the green and digital transitions. Depending on the development of relevant IPCEIs, this fund could then be used to provide them with financial support. This approach would reduce the need to struggle over adequate national financing means for each and every individual IPCEI participation.

### **III • Develop a more harmonised and effective IPCEI governance**

Beyond the question of financing, also the governance design of IPCEIs could be significantly improved to make them a successful instrument of EU industrial policy in the long run. The main objective of the measures recommended here is to allow for more coordination and harmonisation of IPCEI processes across Member States, allowing for more equal access for enterprises. The policy recommendations for IPCEI governance include (1) the harmonisation of national IPCEI application, implementation, and evaluation procedures to reduce bureaucratic burdens, supported by the creation of a European exchange forum for Member States, (2) the establishment of a European support structure for enterprise applicants and participants, and (3) the acceleration of IPCEI notification processes at the EU level.

First, while constituting a key tool of EU industrial policy, **IPCEIs are still overwhelmingly national exercises.** Especially for the first wave of IPCEIs, Member States had to first develop procedures from scratch. The lack of European guidance and variations in the functioning of national industrial policy ecosystems have led to significant differences in national IPCEI procedures, e.g. regarding applications and reporting. **This lack of alignment can create unnecessary bureaucratic burdens for enterprises, which should be tackled by a harmonisation and simplification of IPCEI processes across countries.** As a third wave of IPCEIs is currently in the planning phase, such measures should be discussed and implemented as soon as possible. **To identify concrete areas for improvement, also based on national best practice examples, a European exchange forum for participating and interested Member States should be created.**

Second, during the IPCEI development process, enterprises receive support from national ministries, agencies, and other organisations. This typically includes feedback on the individual projects proposed by enterprises, whether they are in line with the requirements of the IPCEI communication and how to best formulate their application towards the Commission. There are, however, significant differences in Member State capacities not only regarding IPCEI financing, but also regarding their technical and administrative capacities. Especially larger Member States with better-endowed bureaucratic bodies and more experience in working with the Commission are better able to successfully accompany the enterprises they want to support. To maximise the chances for potential IPCEI participants, it is important that they are able to ‘speak the right language’ vis-à-vis the Commission. This might not be the case for enterprises that are more used to exchange with national authorities, requiring external support.

**The creation of a European support structure for enterprise applicants could help to reduce the differences in the technical and administrative capacities of Member States.** The success of individual enterprises in IPCEI applications should not depend on the Member State in which they are active. A European support structure could **provide information and trainings for how to write and organise IPCEI applications. Enterprises from all Member States should be able to exchange with European experts on the project ideas for which they would like to have financial support and how to best align them with the IPCEI requirements.** This should include independent technical as well as administrative experts who can play an important intermediary role. Beyond European funding, such a centralised support structure would be a key element to render IPCEIs a more European industrial policy instrument and considerably help to minimise the tensions between industrial policy and the common competition policy.

Third, the Commission needs to speed up IPCEI notification processes to **ensure that a more active EU industrial policy does not remain a laggard behind the investment policies of other global powers such as China and the USA.** While the EU seeks, at least discursively, to accelerate measures towards “strategic autonomy” and the green and digital transitions, many stakeholders have pointed out that **the adoption of IPCEIs takes considerably too long.** The notification of the microelectronics 2 IPCEI, for example, has – according to various interviewees – not advanced for more than half a year, likely due to a lack of case handlers. This significantly delays the implementation of IPCEIs and can create considerable financial risks for enterprises if they go ahead with a proposed project without being certain that it is eligible to receive public support for it in the end. **The Commission needs to rapidly expand its administrative capacities for the handling of IPCEI applications to allow for their swift implementation.**

## • Concluding remarks

In the context of the climate crisis, the energy crisis, and growing global competition (e.g. through the US Inflation Reduction Act), the EU is in need of a more active common industrial policy. In this line, Commission President von der Leyen [announced](#) further changes to the European state aid framework in mid-December 2022, allowing – most notably – for additional exemptions for green investment. It is important to complement this approach, which is mainly based on giving more flexibility to national subsidies, with a European approach to the funding and governance of EU industrial policy. The adoption of the recommendations for the strengthening of IPCEIs presented in this policy paper could help the EU significantly in this endeavour.

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