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Designing industrial policy:

Key questions and a policy menu for policymakers

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Designing industrial policy: key questions and a policy menu for policymakers

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In collaboration with **Assonime**, the Association of Businesses.

Abstract

The process of rethinking Italian industrial policy requires policymakers to identify new intellectual and practical tools to design interventions that can effectively address Italy's industrial weaknesses. This paper offers a practical framework to aid policymakers in this endeavour. This framework does not suggest which sectors governments should promote, but it helps identify the key questions policymakers must answer to design industrial policies that align with the chosen sector's industrial needs and the government's objectives. It also helps to select the most suitable tools to implement industrial policies.

[1] The views expressed in this paper are the authors' alone and do not represent that of any of the institutions for which they work.
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Summary

- This paper offers a practical framework for policymakers aiming to design industrial policies and provides a menu of policy instruments to facilitate their effective use.

- Industrial policies must start from clear definitions of their objectives, whether purely economic or with a societal/strategic angle.

- They must also be informed by an in-depth analysis of the sector they intend to target. The paper introduces four stages of production that broadly apply across sectors, explaining the key capabilities/institutions required, and showing global and Italian examples of areas that excel at each stage.

- The paper also explains the pros and cons of relying on private sector intermediaries for industrial policy implementation and provides a basic practical questionnaire to assess compliance with EU State Aid rules.

- The key takeaway for Italian policymakers is that the "national", "horizontal", and even "sectoral" approaches are not granular enough to enable the implementation of an effective industrial policy in the country.

- Instead, matching stages of production with each geography's capability can yield a variety of avenues for wealth creation and long-lasting comparative advantage. This can create opportunities for various areas of the country, not just for those that can compete at the technological frontier.

- Industrial policy will thus need to be targeted, multifaceted, and adjusted to meet different regions' capabilities. For each sector governments deem strategic, policymakers need to be clear about the nature of the strategic objectives and design a strategy that exploits the specific strengths of different regions/areas to create comparative advantages in specific parts of a sector's stages of production.

- Policy tools should then be chosen according to the capabilities that must be built, the existing level of government capacity, and the scope of conditionalities for private partners required to achieve the policy objective.

- The paper concludes by emphasizing the need for rigorous monitoring and evaluation of industrial policies—whether to discontinue, adjust, or expand them—in order to address the fragmentation and inconsistencies that have marked industrial strategies in Italy over the last two decades.

Introduction

This paper offers a practical framework for policymakers aiming to design industrial policies.[2] Governments that decide to support a specific sector face complex design choices. This framework does not suggest which sectors governments should promote, but it helps identify the key questions policymakers must answer to design industrial policies that align with the chosen sector's industrial needs, the government's objectives, and to deploy the most suitable tools.

The framework revolves around six questions.

1) **What is the goal** of the industrial policy (IP) being proposed?

2) **Which stage of production** within the chosen sector should the IP target?

3) What are the best suited **sources of funding** and **implementation channels**?

4) Which **policy instruments** are best fit to achieve the objectives?

5) **Does the intervention represent "state aid"** under European regulations?

6) How will we know that the policy is having its **desired effects**?

1. Strategy Design. What is the goal of the proposed IP?

Governments may choose to intervene in markets and support specific industries for a variety of reasons (Criscuolo et al., 2022; Juhász, Lane, and Rodrik, 2023). In any case, they should clearly articulate the rationale for such interventions which are typically driven by their posture (proactive or protective) and their ambition (economic goals or societal goals).

[2] This work provides a forward-looking perspective that complements a recent LUNHIP publication (Gronchi and Ughi, 2025) that assessed Italy's industrial policies over the past eighteen years.

Figure 1.1 IP priorities matrix

		POSTURE	
		Proactive	**Protective**
AMBITION	**Economic goal**	Increase productivity, growth, innovation, and (quality) employment, closing territorial inequalities	Preserve (quality) employment or competitive advantages
	Societal goal	Drive societal transformations (e.g., space race, green transition, pandemic response, armed conflicts)	Limit industrial dependency, achieve autonomy / resilience

Based on this simplified matrix, we identify at least four reasons to pursue a sectoral IP. Note that these are not necessarily mutually exclusive and may reflect parallel competing priorities.[3]

1) Inequality and economic decline → IP to increase productivity, innovation, equitable growth, and (quality) employment
2) Strategic challenges or missions → IP to address major societal goals (e.g., climate transition, health, digitalisation)
3) Geopolitical risks → IP to achieve autonomy / resilience
4) Anaemic growth and international competition → IP to protect / preserve (quality) employment and standards of living

Some of these objectives may at times be compatible but they often involve trade-offs along both axes. Avoiding industrial dependency on a certain sector can, at least in the short term, slow down the achievements of social goals. Importing solar panels from China, the cheapest and largest producer, is a faster way to reduce CO2 emissions in Europe than aiming to produce solar panels locally (McWilliams, Tagliapietra, Tasi 2024). Similarly, allocating resources to achieving a non-economic goal such as the space race or healthcare provision can crowd out investments from other productive sectors, thus reducing GDP growth, at least in the short term.

Policymakers must be clear about their objectives—and realistic about the trade-offs they entail.

[3] Partially based on McNamara 2022, "The Politics of European IP", and Di Carlo and Schmitz 2023, "Europe first? The rise of EU IP promoting and protecting the single market."

2. Strategic positioning. Which stage of production within the sector should IP target?

The second question looks at strategic positioning. Industrial sectors are not monolithic. Their value chains are complex and often fragmented, with different companies and countries specialising in different stages of production (Breznitz 2020). In choosing a priority sector, policymakers must dig into the next level of detail and understand:

- **The constraints that the sector is facing** (e.g. cost or access to financial capital, lack of expertise and human capital, lack of scale, limited access to inputs or markets, lacking supporting infrastructure or regulatory environment, or other public goods).

- **Where public resources can best be used** to build or increase a comparative advantage in different parts of the sector or develop a new industry.

Different stages of production require different enabling factors and face specific constraints. Policymakers may wonder why such focus is necessary and whether instead it will limit their IP ambitions. The reason lies in the micro-economics and network economics of industrial specialisation. Building a comparative advantage requires concentrating resources to reach scale and building the necessary ecosystems of skills to become better than others at certain processes. Distributing resources and efforts builds little scale and does not support the agglomeration of competences necessary to compete globally. Aiming for autarky is always a theoretical possibility, but the more a country leans towards autarky the more it trades off the benefits from other countries' specialisations (Ricardo 2015, 1817).

We leverage literature (Breznitz 2020) that suggests identifying four main stages of production, with concepts that are flexible enough to be applied coherently across a variety of industries and can thus help policymakers choose an IP focus.[4]

Stage 1: New product invention. This is the stage most commonly associated with "innovation." It comprises the processes of fundamental discoveries that are turned into innovations and enter the market for the first time. This stage is fundamentally centred around new technologies or radically new ideas of how to use existing technologies to create new markets. This is the stage where knowledge at the technology frontier is generated. Silicon Valley is the most prominent example, but other models exist which are not necessarily based on nimble start-ups but, for instance, on highly innovative corporates—often multilateral corporations (MNCs) —with significant R&D capacity. Either way, this stage demands and generates specific skills and employment. Given the focus on R&D, the skills required are those of highly educated and specialised talent. These people, often competing on a global scale, can demand high salaries. Stage 1 therefore generates high-quality and well-paid employment. On the flip side, however, the high specialisation of the tasks means the relative quantity of jobs created is low and so are the trickle-down employment effects on the rest of the surrounding economy. In other words, the few highly qualified people involved in these activities benefit greatly but the rest of the community is left out (if not worse off due to rising costs of living). The cases of San Francisco and Israel are telling of the inequalities that emerge in economies focused mostly on this stage of production and innovation.

[4] This section is explicitly based on the categories provided in Breznitz 2020. Although the original book focuses on innovation models, the concept of stages of production is generally insightful when discussing industrial policy targeting.

Stage 2: Product design and creation. This is the stage where companies focus on turning a product idea into a proper product, which can be produced at scale and profitably. To be clear, this stage takes place across most advanced industries and independently of which type of company has come up with the idea in the first place—it can be a start-up or a corporate. Either way, companies often rely on other firms which specialise in "design, product development and production engineering" (Breznitz 2020) to turn the project into a reality. Taiwanese firms focused on this stage are perhaps the most prominent example, notably in the semiconductor industry. This second type of companies therefore do not necessarily "invent" anything but create their comparative advantage by innovating the way things can be made. As such, the skills they require and employment they generate is less niche, and broader, compared to stage 1, spanning from engineering talent to graduates from other disciplines, to manufacturing labour (Breznitz 2005).

Stage 3: Product improvement. This is the stage usually associated with the concept of "incremental innovation" (Hall and Soskice 2001). Here companies focus on improving and redefining the critical components of a product, thus delivering incremental gains in productivity, efficacy, and utility. A prominent example is the continuous innovation that has powered the evolution of the car from its early forms (Fordism) through the latest generation of vehicles. Germany's auto industry and, more broadly, its highly productive SMEs (*mittelstand*) are a perfect example of this comparative advantage built on this stage. Similarly, the ecosystem of Italy's SMEs historically focused on supplying moving components to the German automotive industry also fits in this category. In this model, companies do not focus on R&D, which is instead often shared and co-financed via public institutions or private consortia (see Fraunhofer institute). Another key example of this stage is the pure-foundry chips manufacturers that developed in Taiwan in the late 1980s. These companies did not participate in the design of chips but became the world's leading manufacturers of the technology, so much so that today the world depends on Taiwan (and some other Asian countries that followed the same model) for the production of advanced chips. The human capital needed and employment generated, thus, is more technical in nature and, again, spans a broader spectrum of education levels, as is true for most manufacturing activities.

Stage 4: Production and assembly. The final stage refers to the ultimate creation or assembly of products conceived and designed elsewhere. Comparative advantage here is built on constantly improving the price-quality ratio. Innovations in the systems of production and organisation allow for the incremental improvement or maintenance of high quality and low costs even as final products become increasingly complex and require assembling parts from an increasing number of component suppliers. The best contemporary example of this stage is China and, particularly, the area around Shenzhen (Breznitz 2020). Here, since the 1980s several companies have sprung up and co-located to create a dense network of materials and component suppliers. They focus on manufacturing a wide range of products for the world's largest brands (MNCs), following their specific and challenging requirements. Their advantage is built not on advanced R&D but on tight local supply chains and production efficiency, incrementally and constantly improved over time. Although originally low labour costs certainly contributed to the region's success, its resilience as the world's production capital speaks to the importance of the other institutional elements (Breznitz 2020). Predictably, this stage has much lower human capital sophistication requirements. In turn, it is labour intensive, thus generating significant employment opportunities, especially for those with less advanced skill sets.

Note of course that these stages should be thought of as "archetypal models". In reality, many industrial and innovation clusters may be at the intersection of some of them. However, typically the features of one of the stages are *prevalent* and it is important for policymakers to recognize them. This allows them to identify the institutions needed and the policy measures that are most appropriate to support such specialisation. The table below summarises the four stages and their characteristics.

Table 1.2: Four archetypal stages of production

	1 **New product invention**	2 **Product design and creation**	3 **Product Improvement**	4 **Production and Assembly**
Description	R&D for discovering new technologies or creating new markets	Design, prototype development and production engineering	Improve, expand, and redefine a product or its components through incremental innovation	Final creation / delivery of goods and services
Type of skills and institutions needed	Highly qualified technical talent; VC or R&D funding; advanced higher education	Across skills spectrum; bank credit; university + technical and design schools	Across skills spectrum; banks + PE; university + technical schools; central/shared R&D capabilities	Non-advanced education; large capital investments; technical and basic education
Employment intensity and type	Low intensity, very high competence	Medium-high intensity, medium-high competence	Medium-high intensity, medium-high competence	High intensity; middle-low competence
Global example	Silicon Valley	Taiwan's electronics and semiconductors	Germany's auto industry + *mittelstand*; Taiwan's pure-play chips foundries	China's Shenzhen and India's IT Service Industry
Italian Example	Turin's diesel innovation community Emilia Romagna's Motor Valley	Riviera del Brenta shoe design Livenza Furniture	Brescia, Cuneo, Asti ICE automotive components	Prato textile district

Source: authors' elaborations based on Breznitz 2020

Acknowledging this general structure has three fundamental implications for policymakers. First, it shows that there are different opportunities for building comparative advantage and that, even for developed economies, not all require advanced R&D and new product invention (Stage 1). Second, it stresses the importance of targeting industrial policies to the specific stage(s), not simply to a sector. And finally, it suggests that within one country and one sector, different regions might be better positioned to specialise at different stages.

Policymakers must therefore assess the capabilities of each country or region at every stage of production and determine where it is feasible (and needed) to develop a comparative advantage, as well as which enabling factors industrial policy should prioritize. We identify six elements that can help understand whether a region can excel at one (or more) stages:

1. Human capital availability: Each stage requires different types and quantity of human capital. Policymakers must evaluate whether the right workforce is present and what changes to the education system must be promoted to supply it. Broadly speaking, as we move from stage 1 to 4, the role of the highly educated and specialised workforce (post-graduate trained) decreases, while technical skills become more important. Education systems, comprising both purely academic education and "on-the-job" learning, should be developed on this basis. In the Italian context, policies should prioritise research universities, ITS, or technical schools depending on the stage of focus.

2. Financial capital availability: Public intervention is warranted when commercial capital is provided in insufficient quantity or at unsuitable terms / too high a cost. Different stages of development require distinct types of capital and financing models. For instance, in industries requiring significant R&D and early-stage product development (Stage 1), firms typically need non-traditional finance. Venture capital (VC) or highly subsidised government funding, such as grants or low-interest loans, can be necessary, especially during the initial stage where research and invention are crucial.

This is because Stage-1 activities often do not generate immediate profits to cover traditional credit repayments. Thus, they must be supported through financing tools that allow for equity participation and / or for the state to take on the early-stage risk. Stages 2 and 3 are more aligned with standard financing tools, such as corporate debt or equity. Small-mid cap private equity can also be relevant at these stages. Stage 4 is similar but is also more likely to require more complex project financing to enable investments in production facilities with the economies of scale that contribute to cost competitiveness.

3. Infrastructure and other necessary public goods: The competitiveness of a region in each sector and stage may be greatly advanced by the availability of specific public goods. The main example is physical infrastructure. Semiconductor foundries, for example, need access to large and reliable water supplies. For data centres, reliable electricity and connectivity connections are essential. Intangible public goods can be as important. Germany's and Taiwan's Stage-3 comparative advantage is also enabled by shared/public R&D institutes, which take on the research risk. These institutions act as an "intellectual infrastructure". The Fraunhofer Institute in Germany and ITRI in Taiwan pursue industry-relevant R&D and then license the discoveries to local companies, enabling an allocation of risk which allows more traditional companies to still innovate and maintain their Stage-3 comparative advantage.

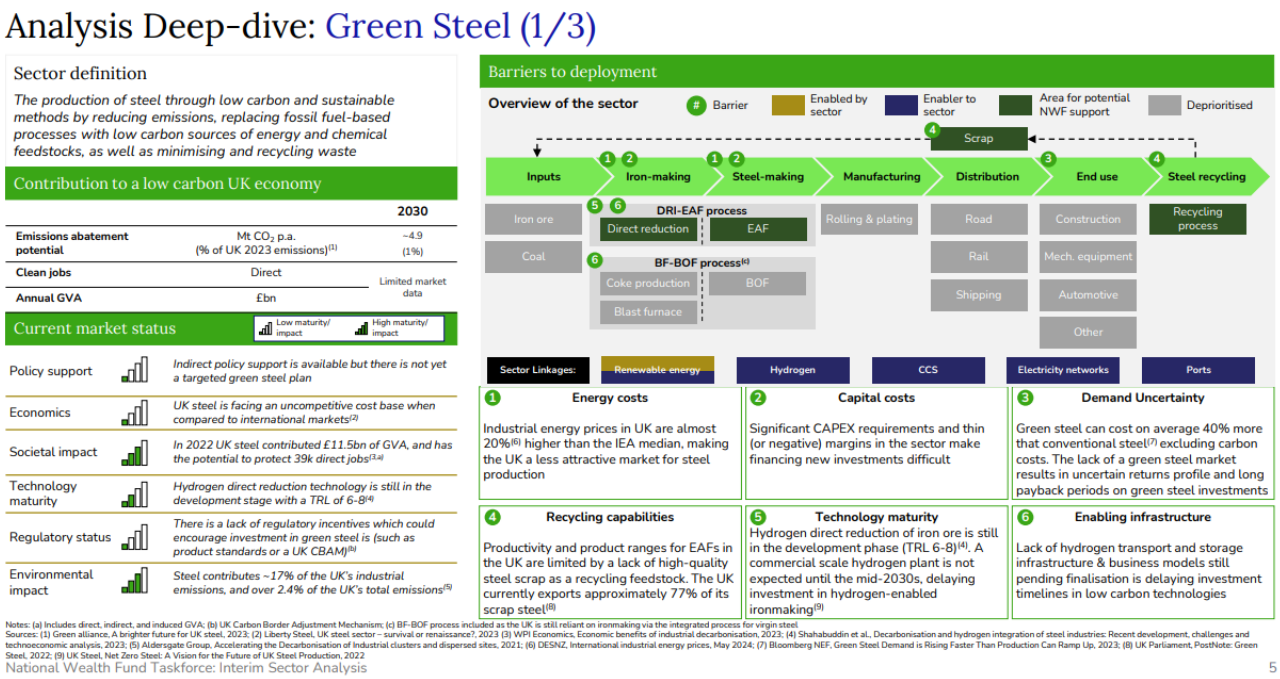
4. Access to inputs: Regions must also be endowed with (or have comparatively cheap/easy access to) the key production inputs required at a certain stage. These differ vastly by stage and sector but governments should clearly identify them before embarking on targeted industrial policies. Importantly, while some input access is the result of natural endowments, it would be wrong to believe they are all always a given. Public policy can facilitate access through infrastructure projects, trade deals, and more. For example, Germany's export-driven growth in the two decades before 2020 was facilitated also by cheap natural gas imports from Russia—the result of both infrastructure investments (Nord Stream) and bilateral trade agreements (Di Carlo, Hassel, Höpner 2022).

5. Access to markets: Equally important for creating comparative advantage is to ensure regions are well-positioned to sell the products they produce. As in point 3, this is a combination of natural endowments and policy outcome. To provide one example, one of the enabling factors of Israel's spectacular ICT-driven growth in the 1990s is explained by the country's strong linkages with US technology markets, which provided a large demand for the technologies produced in the country (Breznitz 2007). These links were both historical and policy driven.

6. Current distance from technological frontier: Finally, policymakers should look at the competitive landscape. They should understand whether in that stage within the target sector there are clear market-leading companies or countries and how advanced the technology or know-how they have in comparison with the best companies in the domestic region is. In other words, is it realistic for the region to achieve capabilities that are comparable to the best-in-class or is the gap too wide to fill? In some ways this evaluation might cover some of the aspects in points 1-5. However, a micro comparison of the best firm in the domestic economy versus the best global firm would be an insightful place to start.

To be sure, the stages of production and elements to analyse we introduced above should be considered a guiding framework, to be then adjusted for the specific case and information available. In practice, data or other constraints may mean that the analysis cannot cover thoroughly all the six elements above. Similarly, the archetypal stages of production we described can be turned into industry-specific steps in value chain. As an example, figure 2.2. shows how this type of approach was employed by the task force of the British National Wealth Fund.

Figure 2.2. An example of sectoral analysis by the Task Force of the UK National Wealth Fund



Source: Green Finance Institute, 2025

In summary, thus, once policymakers have decided to focus on a certain sector, designing the right industrial policies requires diagnosing the target industry, figuring out where the bottlenecks and opportunities lie along the stages of production, and intervening to build a comparative advantage. Growth and welfare creation opportunities lie in all the stages, but they might be very different across regions. Policymakers should fine-tune policies by region and by stage, subject to the strategic objectives of question 1.

3. Method of Implementation. What are the right sources of funding and implementation channels?

When designing an IP, decision-makers need to determine the sources of funding and the implementation channels (Buti and Papakonstantinou 2022).

Source of funding: The funding can be mainly (or fully) public funding, mainly private funding, or a blend of private and public resources. In the case of instruments that leverage mainly private funding, these are typically catalysed by tax or other regulatory incentives (for example, tax credits on R&D or capital expenditure by firms). Finally, when the IP instrument is based on a mix of direct public and private funding the role of public capital is typically to anchor/mobilise private investments, for example by providing equity, debt, or sovereign guarantees to a project. There are also instruments that do not require funding or that generate government revenues. These are typically more passive instruments such as tariffs or specific levies aimed at changing market behaviours (e.g., carbon tax schemes).

Implementation channel: Much of the debate on IP focuses on the strategic objectives of these interventions. The choice of the implementation channel is, however, equally critical and often overlooked. Policymakers can look at three questions to choose which channel is most appropriate:

- *First: capabilities*. Should the public administration have in house, or could it realistically build in house, the full capabilities needed to manage directly the instrument, or could this be most effectively managed by a third party, such as companies or financial intermediaries?
- *Second: discretionality and flexibility*. Would the IP instrument benefit from some degree of discretionality in how it is applied (e.g., technology neutral tax credits or flexible loan structures) or should the policy be entirely prescriptive (e.g. technology prescriptive tax credits or pre-set financing solutions)? When flexibility is needed, can decisions be delegated to third parties (e.g., beneficiary companies, financial intermediaries)?
- *Third: timing*. What is the implementation channel that allows for the deployment of the tool within a timeframe that is consistent with the goals of the policy?

In light of these considerations, there are several channels that can be chosen:

1. *Directly managed by public administration*

Governments own the implementation of industrial policies but their level of direct responsibility in managing policies can differ. Public administrations are always responsible for monitoring performance, defining and adjusting budget allocations, as well as ensuring the correct application of the law through their departments and agencies. However, they may choose to adopt a more active or a more passive role in deploying specific policy tools. In some cases, there is no alternative to public administrations directly managing the instrument. Policy instruments based on taxes, levies (e.g., trade tariffs, fiscal incentives) or direct subsidies (e.g., consumer subsidies, regional development grants) should normally be managed directly by public authorities. Similarly, public procurement is by definition managed by public institutions. These tools are typically fast to deliver and can drive changes in behaviour among consumers and corporates (e.g., there is evidence that reducing the costs of electric vehicles increases demand). On the other hand, the risk of this approach is that governments could be overly rigid and prescriptive. Public administrations are best suited to implement policies with well-set, predetermined criteria (e.g., regions, sectors, or technologies that can receive a subsidy) rather than flexibly adapt their offer to market evolution (e.g., a state-supported VC fund can flexibility deploy capital using its own discretion in assessing potential investees).

For other instruments, however, policymakers can choose whether and how the implementation could be delegated to third parties. Policy instruments that require specialist financial skills (e.g., investment and financing) or industrial technological skills (e.g., human capital formation) are normally best delivered by intermediaries which already have these capabilities. For example, when providing credit guarantees to SMEs, public administrations set high-level criteria for the type of beneficiaries and the intended outcomes but delegate the deployment of the instrument to financial intermediaries (normally private or public banks), which will assess the creditworthiness and manage relationships with the borrowers.

2. *Via public financial intermediaries*

Policy instruments that involve investment or financing decisions (grants, loans, equity, guarantees), require specialist commercial and legal skills, independent judgement, and long-term horizons. In these cases, typically the most effective option is for governments to set high-level objectives and then delegate implementation to arms-length bodies that insulate investment decisions from political pressure and short-term priorities. Using intermediaries also facilitates the attraction and retention of people with specialist knowledge and a proven industrial or financial track record. The case of public venture capital policies in Europe, for instance, is one where governments have heavily relied on public intermediaries (Moretti 2024).

Policy instruments can be deployed via public financial institutions that can be national (such as Cassa Depositi e Prestiti, SACE, or Invitalia in Italy) or European (e.g., the European Investment Bank). The value of supranational institutions is the ability to support transnational projects that lack a national sponsor or funding body, such as cross-border high-speed train connections or cross-border energy grid interconnections.

3. *Via private intermediaries*

Policymakers can also decide to delegate the implementation of IP tools to private intermediaries. These can be financial intermediaries or industrial intermediaries. In the case of private financial intermediaries, these can be specialised or generalist intermediaries. An example of IP tools managed by generalist intermediaries are SMEs support loans provided by commercial banks with capital provided by or guaranteed by a public institution. These interventions tend to be most effective as counter cyclical tools, such as in times of commercial credit contraction, but they are typically less tailored to drive innovation (new business model or technology). Specialised intermediaries (such as private equity or credit funds), instead, are most effective where the objective is to support more niche markets (innovative industries and technologies) through more sophisticated financial instruments. When properly designed, with full alignment of objectives and incentives (and appropriate conditionality, see box below), these intermediaries can be a powerful tool to create new markets and flexibly deploy capital.

Box 1. Conditionality in Industrial Policy

The concept of IP inherently includes some form of conditionality (Bulfone et al. 2024). Public support is granted with the expectation that recipients will take specific actions in return. There are however two ways to look at conditionality (Mazzucato 2022, Mazzucato and Rodrik 2023).

In a traditional sense, conditionality means that public institutions set criteria for accessing public resources and ensure that with these resources firms do something they would not have done otherwise. For example, an export subsidy should lead to an export increase and R&D tax credit should result in more R&D intensity. Similarly, the definition of eligibility criteria for accessing public support is one of the most critical policy design elements as it requires balancing selectiveness, flexibility, and incentives to change firms' behaviour. For example, the KfW energy efficient refurbishment and construction programme in Germany provides loans to businesses to build or restore buildings. The higher the energy-efficiency of the building after the intervention, the better conditions are to repay the loan.

However, in recent years, policymakers have been encouraged to set higher standards for firms seeking access to public resources, requiring them to demonstrate that their use of these resources provides "public value". While this concept is still evolving, three key questions guide its application:

- Does the policy push firms to pursue socially beneficial goals, such as net zero emissions or affordable access to essential products and services?
- Are risks and rewards fairly shared between public and private sectors? For example, "when companies benefit from public investments in the form of subsidies, guarantees, loans, bailouts, or procurement contracts, conditions can be attached to help shape innovation and direct growth so that it achieves the greatest public benefit" and that the risk assumed by the government is rewarded (Mazzucato 2022, p.3).
- Are conditions designed with an understanding of private intermediaries' business models ("informed conditionality")? For example, European governments investing in private VC funds negotiate specific terms for the governance of the funds and their use of capital (e.g., requirements to invest locally). These are typically balanced in light of the portfolio diversification and operational needs of a standard VC funds. Failing to set conditions informed by the intermediaries' business models risks can lead to poor outcomes, like adverse selection, that undermine policy goals (Moretti 2024)

4. IP instruments menu. Which policy instruments are best fit to achieve the objectives? This section presents a critical overview of the industrial policy tools available to public institutions. We offer a menu of nineteen instruments, grouped into ten categories, commonly used in Italy and across the EU. This classification aligns with existing literature (Evenett et al., 2024) and builds on the framework developed by Criscuolo et al. (2022).

For each instrument, we outline:

a) the conditions under which it is appropriate—or less appropriate—to use;
b) whether it is best suited to horizontal or vertical policy contexts; and
c) whether it primarily targets supply, demand, or governance.

Table 4.1 below summarises this menu of tools, while Table A.1 in the annex provides concrete examples from Italy and other EU member states.

Effective industrial policies typically rely on a combination of instruments to influence market behaviours. Policymakers should not view this menu as a list from which to select a single tool, but rather as a guide to understanding the full set of options and identifying appropriate combinations. Because these instruments can potentially distort markets, their use must be guided by a clear strategic rationale—as discussed in previous sections—and must comply with EU State aid rules, which are addressed in the next section.

4.1 Trade finance

Trade policy is an exclusive competence of the European Union but governments can deploy financial instruments that make it easier for importers and exporters to transact.[5] These instruments provide firms with insurances and/or working capital loans to mitigate against specific trade-related risks (e.g., delayed payments, political risk, breach of contract, confirming bank risk, currency volatility, transfer and convertibility risks).

Trade finance instruments are horizontal tools best suited to promote firm growth in challenging markets. They are not designed to support specific sectors or technologies, nor to close competitiveness gaps. However, they are increasingly being used to help firms secure access to critical inputs, such as raw materials needed for the green transition.[6]

These instruments are usually administered by dedicated public trade agencies or banks with the technical expertise to assess, price, and manage trade risks. Although they rely on public funding, they have historically incurred very low losses and require limited public administrative capacity, as they are delivered through specialised intermediaries. In Italy, SACE and SIMEST (part of Cassa Depositi e Prestiti) provide trade finance solutions.

[5] Trade tariffs and quotas are critical industrial policy tools; however, they are not considered in this paper as they are an exclusive EU competence.
[6] See for example the UK's Critical Minerals Supply Finance by UKEF.

4.2 Fiscal incentives

Governments can reduce the tax liability of firms by providing tax credits against certain costs (investments, expenditures, depreciations) or, more rarely, by exempting certain portions of profits from taxation (i.e., Italy's old patent box regime from 2014).

Fiscal incentives are typically designed as horizontal instruments, available to a wide range of firms whose investments or spending meet defined criteria. For example, in Italy, investments in eligible 4.0 or 5.0 assets can qualify for tax credits.[7] However, they can also take more vertical forms, targeting specific locations (e.g., Special Economic Zones in Southern Italy), sectors (e.g., creative industries), or technologies.

Tax credits are typically applied on R&D costs or Capital expenditure (CapEx).

- **R&D tax credits** aim to boost innovation-led productivity growth. Over the past two decades, OECD countries have increasingly relied on tax-based incentives to stimulate private investment in R&D. These instruments are most effective when firms across sectors and regions are systematically underinvesting in experimental development—for example, during early-stage product development—or when structural barriers, such as firm size, limit innovation capacity. However, R&D tax credits tend to be less effective than direct funding tools—such as grants or concessional loans—when targeting specific innovation priorities or supporting early-stage, pre-commercial research (OECD, 2023).
- **Capex tax credits** are typically best used in three cases: (i) when firms' size or location constrain their ability to invest and grow (i.e. SMEs), (ii) when firms across sectors are facing a technology-driven competitiveness gap or a technological transformation; and (iii) when firms face a mismatch between short-term investment costs and societal goals (e.g. energy efficiency). Increasingly, Capex tax credits are subject to *outcome conditions* which require companies to achieve certain performance results to be eligible to benefit or continue benefiting from a tax incentive (Italy's Transition 5.0 sets thresholds of energy consumption reduction to access the credit) (OECD, 2022).

Fiscal incentives allow governments to deploy resources swiftly and at scale and are among the most widely used instruments in IP, alongside grants and subsidies. They require some administrative and industrial capabilities to be designed and managed (e.g. disbursements, verifications) effectively. Tax credits can be designed with a broad or narrow focus, but beneficiary firms must always have substantial skin in the game and credits must be fully budgeted in advance.

[7] Tax credits based on firm size (e.g. SMEs) are considered horizontal under OECD classifications as they aim at improving the entire business environment.

Table 4.1. Industrial Policy instrument summary table

IP instrument	Description	Use This When	Do not Use This When	Best managed by	Instrument choice	Operating model
TRADE FINANCE						
Trade Finance	Insurance and/or working capital loans to firms to mitigate against trade-related risks	* Firms' growth or access to critical inputs is constrained by clearly identified trade risks (political, currency, credit)	* The domestic industry has a structural competitive gap vs peers	Public trade finance agencies	Horizontal	Supply (within)
FISCAL INCENTIVES						
R&D Tax Credits	Reduce the tax liability of firms for eligible investments or expenditures	* Firms are underinvesting in R&D for experimental development or face structural lack of innovation	* Direct funding is more effective for targeting narrowly defined R&D priorities * Pre-commercial fundamental research is needed	Tax administrations	Horizontal (predominantly) or Vertical	Supply (within)
Capex Tax Credits		* Firms' structure and size (i.e. SMEs) constrain their ability to invest and grow * Firms need to bridge a technology-driven competitiveness gap * Firms face a mismatch between short term investment costs and societal goals (e.g. energy efficiency)	* Specific sectors or technologies need targeted support	Tax administrations	Horizontal (predominantly) or Vertical	Supply (within)
GRANTS AND SUBSIDIES						
Grants for R&D	Provision of cash or in-kind equivalent to eligible firms	*Supporting pre-commercial product development projects with the potential to lead to subsequent investments and revenue generation	* Supporting basic research (which can take place outside firms)	Public implementing agency	Horizontal or Vertical	Supply (within)
Subsidies for Regional Development		* Promoting economic activity in underdeveloped regions	* Unclear path to commercial sustainability * One off interventions with limited resources as they are unlikely to drive change at scale	Public implementing agency	Vertical	Supply (within)
Sectoral Subsidies		* Supporting industries deemed strategically important for national economic development facing unfair external competition	* Unclear path to commercial sustainability	Public implementing agency	Vertical	Supply (within)
Consumer Subsidies	Financial aid to reduce the price of goods and services to consumers	* Consumers need incentives for behavioural and societal changes, complementing supply side instruments	* The supply of targeted products is underdeveloped	Public implementing agency	Vertical	Demand
ACCESS TO CREDIT						

Debt	Offer credit to firms	* Providing counter cyclical capital across firms in times of crisis, * Anchoring strategic projects in capital intensive sectors * Supporting investment in underdeveloped regions * Drive societal goals by changing citizens and firms' behaviour	* Firms or projects are not commercial sustainable * The aim is to support innovation, R&D or early stages product development	Financial intermediaries	Horizontal and vertical	Supply (within)
Credit Guarantees	Mitigate risk for financial intermediaries providing credit to firms			Financial intermediaries		Supply (within)
ACCESS TO EQUITY						
Direct Equity Investments	Capitalise firms, directly or via intermediaries	* Equity in high externality projects is not provided by private sources notwithstanding valid commercial case (e.g. lack of strategic alignment) * Anchor strategic assets with public participation	* Difficult to articulate how a public participation would add value to the firm or the broader ecosystem * Assets are distressed	Public Financial intermediaries	Vertical	Supply (within)
Indirect Equity Investments		* Supporting Frontier investments that are higher risk for private finance * Facilitating firms' access to a broader range of non-banking funding options by deepening and broadening local private equity markets	* Firms can transition away from public support	Public Financial intermediaries	Vertical	Supply (within)
COORDINATION TOOLS						
FDI Attraction Offices	Investment facilitation advisory	* Promoting investment opportunities to foreign firms. * Need to improve access to inputs in key sectors. * Tech transfer from foreign firms is highly beneficial for local firms.	* Incompatible with strategy to support local industry.	Public administration	Horizontal	Governance
Technology Transfer Policies and Research-Industry Links	Connect firms and research	* Strong research and industrial capabilities but lack of alignment between Research Supply and Industry Demand	* Goals and stage of research is misaligned with industry needs.	Public administration/ Higher Education institutions	Horizontal	Governance
FDI Screening	Public authority to authorise, set conditions for, or prohibit investments	* Strong security or national competitiveness case against investments	* Lack of clear evidence supporting "national security" arguments.	Public administration	Horizontal	Governance
PUBLIC PROCUREMENT						
Innovative Public Procurement	Procurement of pre-production or pre-scaling innovative solutions	* Promotes and direct innovation at an early production stage	* Private finance already supports innovative solutions.	Public administration	Vertical	Demand
PRICE ASSURANCE						
Price Assurance Mechanisms	Commitments to purchasing a product at a certain price on a fixed date.	* Stabilise nascent markets and facilitate long term market maturity and investments	* Products in structurally not competitive sectors	Public administration	Vertical	Supply (within)
LOCAL CONTENT						

Local Content Incentives	Incentivise local input production	* Promoting the development of domestic supply chains.	* Protect products where the country does not have a realistic path to commercial competitiveness * Excessively increase costs for businesses. * Highly distort trade and likely WTO litigation.	Public administration	Vertical	Supply (within)
HUMAN CAPITAL						
Upskill and Reskill Policies	Training to workers	* Addressing skills gaps and preparing the workforce for future job demands.	* Stand-alone measures without broader strategy	Public administration or private contractors	Horizontal	Supply (within)
Talent Attraction Policies	Attract the highest-skilled workers	* Evidence of brain drain * Lack of human capital		Public administration	Horizontal	Supply (within)

4.3 Grants and subsidies

Through Grants and Subsidies, governments provide cash or in-kind support to firms that meet certain eligibility criteria within the constraints of EU State aid rules (see next section). These instruments include:

- **R&D grants** for pre-commercial product development projects with the potential to lead to subsequent investments and revenue generation.
- **Subsidies for regional or sectoral development** partially cover CapEx or OpEx for firms operating in undeveloped regions or specific sectors (microprocessors, automotive, tourism). These are often combined with subsidised capital tools or fiscal incentives.[8]
- **Consumer subsidies** (demand side), which cover a part of the price of a product.

Supply-side subsidies can be used to enhance innovation-driven competitiveness (R&D Grants), or to address regional underdevelopment by supporting, for example, new industrial clusters. Sectoral subsidies may also have different objectives. They can support traditional sectors undergoing significant transformation (e.g. automotive), to build in-country industrial capacity (e.g. microprocessors), or drive societal transformation (e.g. renewable energy generation). While subsidies may appear as a simple and quick tool to deploy, effectively designing and implementing these instruments (i.e. eligibility criteria, maximum subsidy thresholds) requires significant administrative capacity and industrial expertise.

Policymakers should design these instruments based on an in-depth understanding of the sectors and regions they aim to support. This should include understanding in what stage of production the targeted firms are, whether the beneficiaries have sufficient skin in the game, and what the path is to commercial sustainability of the target firms (i.e. once the subsidy expires).

Demand-side subsidies have become more common in recent years and can be used to quickly boost the demand of a product (e.g. electric vehicles). However, to be effective as an industrial policy tool they need to support products that are locally produced rather than imported, they need to affect goods where demand is sensitive to pricing, and they need to lead to further investments and cost reduction. The effects of such 'induced innovation' are only felt in the long run.[9]

4.4 Access to Credit

Governments can facilitate access to credit for firms either directly, by providing loans, or indirectly, by offering guarantees or capital to financial intermediaries such as banks, which then extend credit to firms.

- **Debt,** which is typically offered on slightly more favourable terms (or significantly more favourable concessional terms in case of State aid eligible tools) than those available from commercial banks (lower

[8] There is growing literature suggesting that sectoral subsidies can support the development of key industries when combined with policies that encourage cross-border technology transfer and learning-by-doing (Goldberg, Juhász, Lane et al, 2024).
[9] The case of solar panels is a good example of how consumer subsidies can induce innovation in the longer term (Gerarden 2018).

or adjustable interest rates, longer tenor grace periods, or repayment schedules, larger volumes) while meeting EU State aid rules.

- **Credit Guarantees** or **on-lending to financial institutions** incentivise the provision of credit to firms by reducing financial intermediaries' own risk exposure.

Policymakers can activate access to credit tools with different objectives:

- To provide counter-cyclical capital to the private sector during crises, as seen during the COVID-19 pandemic or the Eurozone crisis of the 2010s – this is a horizontal instrument. To anchor large strategic projects and lower the cost of capital in innovative capital-intensive sectors (e.g. microprocessors, green hydrogen) or in established sectors undergoing transformation (e.g. automotive) - this is a vertical instrument.
- To support productivity and investments across firms in underdeveloped regions - this is a horizontal instrument provided at typically concessional terms and qualifies as State aid.[10]
- To advance societal goals by changing citizens and firms' behaviour with preferential access to credit (e.g. energy efficiency in construction)[11] - this is a horizontal instrument and likely requires concessional terms.

Debt instruments, including concessional ones, are however unlikely to be best suited to drive innovation, R&D, or early-stage product development.

Providing credit always necessitates deep market and credit risk experience. These instruments are most effectively administered by independent public financial institutions, which can evaluate each transaction individually and operate independently of government influence.

4.5 Access to Equity capital

Public institutions can promote industrial development with equity participations. They can serve three objectives:

- Supporting startups or innovative projects in the early stages of production with Venture Capital.
- Facilitating firms' access to a broader range of non-banking funding options by deepening and broadening local private equity markets. This in turn can help firms mobilise more private capital thanks to the signalling and anchoring effect of the public support.
- Give governments participation rights in assets considered strategic for national competitiveness or security.

Public investors should carefully articulate how a state-supported participation would add value to the firm and the broader ecosystem, and what the project's long-term financial sustainability outlook is. Public investors have

[10] For example, in the case of Italy's Contratti di Sviluppo managed by Invitalia (link).
[11] Le Plan Climat, largely executed through BPIfrance, and Germany's KfW Energy Efficient Refurbishment and Construction Programs, have been notable in advancing the green transition swiftly (see Mazzucato and Rodrik 2023).

historically not proven to be best suited to manage distressed assets (with limited exceptions in highly regulated cases like bank restructuring). Like the provision of credit, deploying equity capital requires significant market and financial capabilities and expertise. These instruments are most effectively administered by financial institutions operating at arm's length from the government and provided under market conditions. States should build robust monitoring capacity and design it based on a thorough understanding of market needs, but they do not need to build the capabilities in house to deploy these instruments.

When the investment is aimed at creating innovative markets and supporting new technologies, policymakers should deploy capital with a view of catalysing private capital and demonstrating the commercial case for investing in a new sector or products. In this case, the best way to deploy equity capital is indirectly via intermediaries such as Private Equity or Venture Capital funds (Moretti 2024).

4.6 Coordination tools

According to the traditional literature on industrial economics, governments intervene to fix coordination failures (Juhász, Lane, and Rodrik, 2023, p.5, Criscuolo et al. 2022). The latter occur when the "viability of a new business depends on simultaneous investments in related fields, with the effect that no firm risks an investment unless someone guarantees the necessary complementary investments" (Altenburg and Rodrik 2017, p.9). Coordination policies seek to maximise the benefits of agglomeration and complementary activities. Hence, coordination policies mainly operate through a governance channel: rather than nudging firms or consumers to make some investment decisions, these instruments coordinate stakeholders.

In a broad sense, many of the policy tools in this menu can be used to address coordination failures. Subsidies for both sectoral and regional development indeed fix a coordination failure when they aim not only to provide financial support to companies, but rather make the most of their interactions, and position the region along global value chains. However, in this subsection we highlight three tools that are exclusively used for coordination. These instruments are typically deployed directly by public administrations and, while they require in-house capabilities, they typically fall within their core competencies.

- **Foreign Direct Investment (FDI) attraction offices** facilitate investment opportunities for foreign firms, providing the necessary technical and legal counselling to operate in the domestic market. The objective is not so much to encourage foreign firms to 'invent' new things, but to insert them in the local industrial ecosystem. As such, a good design of FDI attraction policies must first think of the complementarities and capabilities offered by foreign firms which will make the most positive impact on domestic markets.
- **Technology transfer policies** foster links between research institutions and the industry, aiming to bolster innovation and productivity growth. They are used in production Stages 2 and 3 to promote both product design and incremental innovation. Tech-transfer can be managed by a wide variety of actors. Many government venture capital agencies provide tech-transfer services, like CDP Venture Capital in Italy or Vinnova in Sweden. In other countries such as Germany, applied research institutes like the Fraunhofer-Gesellschaft play the biggest role in transferring technology across industries.

- **FDI screening** is considered the quintessential protective policy tool. Governments directly prevent FDI when it threatens non-economic goals like security, industrial dependency, or public health. There is normally a very high bar required to impose FDI restrictions. However, they are highly political instruments and discretionary in nature.

4.7 Public Procurement

Through public procurement, public administrations purchase goods and services. In macroeconomic policy, it has traditionally been used to promote counter-cyclical measures and stimulate demand, insofar as it accounts for around 10 to 15% of GDP in most OECD countries. As such, it is mostly a demand-side instrument. Yet, public procurement in some sectors can also generate positive spillovers and fuel innovation. For instance, public procurement in the US military has leveraged the development of key technologies for civilian purposes, from the internet to GPS (Mazzucato 2013).

Innovative public procurement allows public administrations to purchase promising innovative products and services from startups in earlier stages of production, helping them to enter the market. There are two types of innovative public procurement.

- With **Pre-Commercial Procurement** (**PCP**), the public administration signs a purchase contract of a new product that has not yet been commercialised. The public administration, as the first and only consumer, can steer the development of new solutions directly towards its needs by asking the developer to include certain features in its product before it enters the market (European Commission 2022). For startups, PCP can be an interesting option since they count on a stable consumer that gives them notable publicity, pulling in more investors.
- Through **Public Procurement of Innovative Solutions** (**PPI**), the public sector uses its purchasing power to act as an early adopter of innovative solutions which are not yet available on a large-scale commercial basis (European Commission, 2022). The logic behind PPIs is very similar to that of PCPs.

In many countries innovative public procurement has been introduced by intermediary public agencies, as is the case with CDTI in Spain or the Federal Procurement Agency in Austria. Most prominently, the case of the American innovation agency DARPA is a paradigmatic example of the role that innovative public procurement, in this case through the Department of Defense, can have in "pulling" ground-breaking innovation and developing new industries and technologies.

4.8 Price assurance mechanisms

Through price assurance mechanisms, governments commit to purchasing a product at a certain price on a fixed date. There are two main purposes of price assurance mechanism:

- In highly volatile sectors (energy, agriculture, mining), they stabilise both prices and revenues. Using **feed-in-tariffs** or **contracts for difference**, producers are protected against losses, which allows them to

have a more certain business environment to make investments or increase their production. This version of price assurance mechanisms corresponds to a more protective posture.

- In less established industries, **off-take contracts** can ensure revenue stability for entrepreneurs before their product is launched or well established in the market. In this sense, the price assurance mechanism can be viewed as a proactive measure to encourage innovation and bolster economic growth.

Price assurance mechanisms have an immediate effect on producers, encouraging them to make investment decisions. As such, they operate through the 'within-supply' channel, targeting both SMEs and large companies, as well as startups and more established companies. They are most effective when supporting innovative industries or products (e.g., green hydrogen). However, when used in sectors that are structurally not competitive (or loss making), they distort markets, protecting less efficient firms and stifling productivity growth.

4.9 Local content incentives

Local content incentives either mandate or nudge firms to purchase inputs from domestic suppliers. They usually come in the form of requisites to benefit from a subsidy or a tax break scheme.

This instrument is highly protectionist in nature, as it seeks to reduce dependency on third countries in the upstream value chain. It can thus allow for the development of domestic industries along the full value chain, spurring job creation at the expense of severely distorting trade. When poorly designed, such measures push the most productive foreign firms out of the market, while making inputs more expensive for domestic firms.

For those reasons they are forbidden, albeit with few exceptions, by the rules of the World Trade Organization (WTO), which also makes them the object of long-lasting litigation with third countries.

These instruments are not overly complex to design and manage, and they are typically managed by public administrations. Often, tax credits are preferred, given the relatively small administrative capacity and resource use needed to implement them.

4.10 Human Capital Formation (HCF)

HCF policies are used to fill a shortage in the skills capabilities of a country, a region, or a sector of the economy. Most often, they target labour-intensive firms in the latest stages of production: training programmes are set up for workers to learn how to use new types of machinery or software, or develop their organisational skills. In the field of innovation, policies for "brain regain" (e.g., *Rientro Cervelli* in Italy) attract high-skilled workers who may prove to be particularly valuable to meet non-economic goals or accelerate knowledge transfer from foreign firms at the technology frontier. Such policies were, for instance, critical to the development of Taiwan's semiconductor industry (Breznitz 2007). In general, HCF policies increase wages and labour-productivity. Yet, when poorly designed they can provide little remedy to societal challenges such as the polarisation of the labour market (Rodrik 2021).

Implementing HCF policies is normally delegated to specialised public entities. Quite often, publicly funded agencies deliver the policy, such as Aikuiskoulutustuki in Finland, which is responsible for delivering a large

subsidy programme for workers to participate in up-skilling training. The private sector may sometimes be more effective and cost-efficient. In Denmark, in 2007 the Confederation of industrial companies together with trade unions and employee associations set up IKUF, a fund that provides grants to employees to participate in training programmes. Depending on the design and the resources of the policy, effects can be felt in the short and medium term.

5. State aid. Does the intervention represent "State aid" under European regulations?[12]

This section offers a visual framework to guide policymakers in understanding whether the policy intervention they are planning falls under State aid regulations. It then summarises the modalities and characteristics of aid that is exempt from being notified to the European Commission and the legal basis of different types of aid. Finally, it provides an overview of the Important Projects of Common European Interest (IPCEI) instrument, which has been gaining prominence as a way for member states to fund large projects in strategic industries.

5.1 What counts as State aid?

State aid refers to any transfer of public resources to certain undertakings or activities which, by granting a selective economic advantage, distorts (or threatens to distort) competition by affecting trade between Member States.

Article 107 of the Treaty on the Functioning of the European Union (TFEU) establishes the general prohibition of State aid (paragraph 1). It declares certain types of aid compatible with the internal market (paragraph 2) and indicates the aid which may be considered compatible with the internal market on the basis of a discretionary assessment performed by the European Commission (paragraph 3).

To understand whether an IP falls under State aid regulations, policymakers ought to ask themselves six questions. If the answer to all six of them is affirmative, then the policy can be considered State aid. If at least one of them is answered with a "no," then the IP is not considered State aid. The decision tree of Figure 5.1 below provides a visual representation of these questions.

1. **Is the beneficiary of the policy an undertaking?** An undertaking is any entity engaged in an economic activity, regardless of its legal status and the way in which it is financed.

2. **Is the measure granted by State resources?** Public/state resources include all resources of the public sector, not only coming from the State, but also coming from intra-State entities (e.g. decentralized, regional or local) or from public authorities, as well as resources coming from the European Union (e.g. structural funds, NRRP resources), if the national authorities have discretionary power in the use of such resources. Other than the transfer of State funds, the State's forgoing of revenues (e.g. reductions in taxes or contributions) can also constitute aid.

[12] The following section was written in collaboration with Assonime, the Association of Businesses. We thank Miriam Cassella, Paola Parascandolo, Andrea Stringhetti. Special acknowledgement goes to Director General Stefano Firpo, who supported this collaboration.

3. **Does the undertaking receive an economic advantage?** An economic advantage is any reduction in the charges that normally weigh on the company or any compensation for the costs inherent to the economic activity.

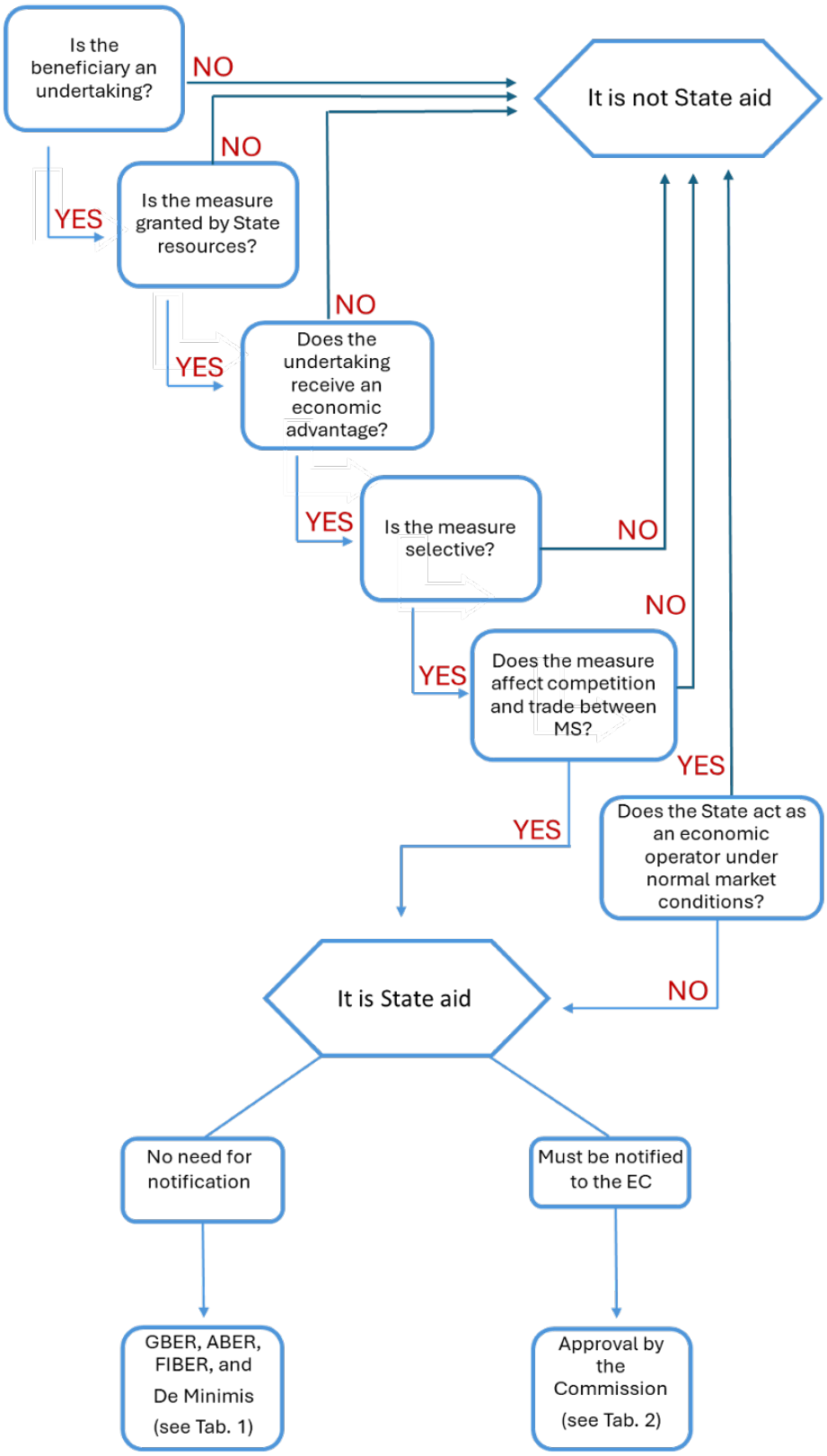
4. **Is the measure selective?** Only measures that grant an advantage selectively to certain undertakings, or categories of undertakings, or to certain economic sectors constitute aid. General measures which are effectively open to all undertakings operating within an EU country on an equal basis are not State aid (e.g. R&D tax credits, Transition 5.0 tax credits).

5. **Does the measure affect competition and trade between Member States?** To constitute aid, the measure must distort (or threaten to distort) competition and trade. A measure granted by the State is considered to distort or threaten to distort competition when it is liable to improve the competitive position of the recipient compared to other undertakings with which it competes. However, the likelihood of distortion of competition must not be merely hypothetical.

   Public support may be considered capable of affecting trade between Member States even if the recipient does not directly participate in cross-border trade (e.g. by increasing local supply, the aid may make it more difficult for operators from other Member States to access the market).

6. **Does the State act as an economic operator under normal market conditions?** States may act as economic operators. If the State (or public bodies or public undertakings) carries out economic transactions under normal market conditions, the advantage conferred on the counterparties does not constitute State aid. If, on the other hand, public authorities (or undertakings) provide goods or services at a price below market rates or invest in an undertaking in a manner that is inconsistent with the market economy operator test, State aid is involved. In the case of public investments, to determine whether a public body's investment constitutes State aid, it is necessary to assess whether, in similar circumstances, a private investor of a comparable size operating in normal conditions of a market economy would have been prompted to make the investment in question.

Figure 5.1: The State aid decision tree



5.2 Is notification to the European Commission needed?

As a general rule, any policy that is considered State aid must be notified to the European Commission. However, there are some important exceptions.

First, there are three regulations that establish a list of economic sectors, conditions, limits, and maximum aid intensities under which State aid is exempt from notification:

- **General Block Exemption Regulation** No. 651/2014 (**GBER**), last amended by Regulation 2023/1315
- **Agricultural Block Exemption Regulation** No. 2022/2472 (**ABER**), last amended by Regulation 2023/2607
- **Fishery Block Exemption Regulation** No. 2022/2473 (**FIBER**), last amended by Regulation 2023/2603

Second, **de minimis** aid is not subject to notification because, being less than a certain amount, it is considered not capable of distorting competition and trade between Member States and therefore lacks one of the requirements necessary to be classified as aid. The total amount of de minimis aid, on the basis of the general regulation, is currently 300,000 euros per single undertaking over a period of three years. There are four de minimis regulations:

- General de minimis regulation No. 2023/2831.
- De minimis regulation for the agricultural sector No. 1408/2013, as amended by regulation 2019/316.
- De minimis regulation for the fisheries and aquaculture sector No. 717/2014, last amended by regulation 2023/2391.
- De minimis regulation for services of general economic interest 2382/2023.

Given the different features of the GBER and the de minimis regulation, the type of policies that can invoke one or another regulation are also very different. For instance, the GBER is only applicable in cases where the maximum aid limit is a percentage of the eligible costs, whereas, according to the de minimis regulation, the total amount of the aid granted to a single undertaking is 300,000 euros over any period of three years. Also, for any State aid to avoid notification under the GBER, it must have an "incentive effect" - that is, it must produce a positive effect that would be missing if the same activity for which the aid is granted could be carried out without it. By contrast, the "incentive effect" condition is not required by the de minimis regulation.

To understand when to invoke which regulation, Table 5.1 below provides a more complete comparison between the main features of the GBER and the de minimis regulations.

Table 5.1: Comparison of features of the General Block Exemption Regulation (GBER) and the de minimis Regulation

GBER	DE MINIMIS
The maximum aid limit is a percentage of the eligible costs	The total amount of the minimis aid granted to a single undertaking is 300,000 euros over any period of 3 years[13]
The aid must have an incentive effect[14] (in some specific cases this is "presumed")	No incentive effect required
The beneficiary of the aid is the legal entity	The beneficiary of the aid is the single undertaking[15]
Specific rules for each exempted activity (exemption thresholds, maximum aid intensities, eligibility conditions)	Same rules for undertakings in all sectors (excluding primary production of agricultural products and of fisheries and aquaculture products)
The size of the beneficiary is relevant for eligibility and aid intensity	The size of the beneficiary is not relevant
Operating aid typically excluded[16]	Operating aid permitted
Undertakings in difficulty are excluded (except for very specific cases)	Undertakings in difficulty are eligible (except for loans and guarantees)

5.3 What happens when the European Commission is notified?

The European Commission assesses the compatibility of the notified aid measures under the general State aid rules and principles (Article 107(3)(c)) and under the specific criteria set out in the Guidelines relating to the sectors concerned:

- Guidelines on State aid for climate, environmental protection and energy (2022/C 80/01).
- Framework for State aid for research and development and innovation (2022/C 414/01).
- Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty (2014/C 249/01).
- Guidelines on regional State aid (2021/C 153/01).
- Guidelines on State aid to promote risk finance investments (2021/C 508/01).
- Guidelines on State aid in the agriculture, forestry sectors and in rural areas (2022/C 485/01).

[13] Regulation 2023/2831. The maximum amount is set at EUR 750,000 in the SGEI de minimis regulation no. 2023/2832; EUR 20,000 (or EUR 25,000 in compliance with specific conditions) in the Agricultural de minimis regulation no. 1408/2013; EUR 30,000 (or EUR 40,000 in compliance with specific conditions) in the Fisheries and aquaculture de minimis regulation no. 717/2014.

[14] The incentive effect (necessary for aid under the GBER and aid approved following notification) consists in producing a positive effect that would be missing if the same activity for which the aid is granted could be carried out without the aid. Aid is considered to have an incentive effect if the beneficiary has submitted a written application for the aid to the Member State concerned before work on the project or activity starts.

[15] Under de minimis rules, all entities operating in the same Member State and controlled directly or indirectly by the same entity according to the criteria identified in Art. 2, par. 2 of Regulation 2023/2831/EU, are considered a single undertaking.

[16] Operating aid is aid for expenses that the company must in any case bear in order to carry out its ordinary activity. In this case, the incentive effect would be missing.

- Criteria for the analysis of the compatibility with the internal market of State aid to promote the execution of Important Projects of Common European Interest (IPCEI) (2021/C 528/02).
- Guidelines on State aid for broadband networks (2023/C 36/01).
- Guidelines on State aid to airports and airlines (2014/C 99/03).

The following table shows, for each category of aid (column A), the relevant articles of the GBER which exempt the aid from notification (column B), and the Commission guidelines under which notified aid can be assessed to be compatible (column C). In column C, where no specific Guidelines are indicated, there are no specific evaluation rules and the Commission's assessment is based on the general principles.

Table 5.2: Exemption under the GBER vs notification of aid measures

A. Categories of aid exempted from notification under the GBER	**B. General eligibility conditions Chapter I and specific conditions Chapter III of the GBER**	**C. If the general eligibility conditions (Chapter I) and the specific conditions (Chapter III) are not met => Notification to the Commission + Commission assessment of the compatibility of the aid based on the general principles and, where they exist, on the following specific guidelines**
Regional aid	Sec. 1 (Articles 13-16)	Guidelines on regional State aid (2021/C 153/01)
Aid for SMEs	Sec. 2 (Articles 17-19d)	
Aid for European territorial cooperation	Sec. 2a (Articles 20-20a)	
Aid for access to finance for SMEs	Sec. 3 (Articles 21-24)	Guidelines on State aid to promote risk finance investments (2021/C 508/01)
Aid for research, development and innovation	Sec. 4 (Articles 25-30)	Framework for State aid for research and development and innovation (2022/C 414/01)
Training aid	Sec. 5 (art. 31)	
Aid for disadvantaged workers and for workers with disabilities	Sec. 6 (Articles 32-35)	
Aid for environmental protection	Sec. 7 (Articles 36-49)	Guidelines on State aid for climate, environment, and energy 2022 (2022/C 80/01)
Aid to make good the damage caused by certain natural disasters	Sec. 8 (Article 50)	
Social aid for transport for residents of remote regions	Sec. 9 (Article 51)	
Aid for broadband infrastructure	Sec. 10 (Articles 52-52d)	Guidelines on State aid for broadband networks (2023/C 36/01)
Aid for culture and heritage conservation	Sec. 11 (Articles 53-54)	
Aid for sports and multifunctional recreational infrastructures	Sec. 12 (Article 55)	

Aid for local infrastructures	Sec. 13 (Article 56)	
Aid for regional airports	Sec. 14 (Article 56a)	Guidelines on State aid to airports and airlines (2014/C 99/03)
Aid for ports	Sec. 15 (Articles 56b-56c)	
Aid involved in financial products supported by the Invest EU Fund	Sec. 16 (Articles 56d-56f)	

5.4 Important Projects of Common European Interest

IPCEIs (Important Projects of Common European Interest) are innovative cross-border projects in strategic sectors of European industry, involving at least four Member States. Under Article 107 (3)(b) of the TFEU, IPCEIs constitute one of the forms of State aid that may be compatible with the internal market, with their own distinct legal treatment.

In IPCEIs, the project must represent a major, concrete, and identifiable contribution to the achievement of the objectives and strategies of the Union and must have a significant impact on sustainable growth. For example, the project must have particular relevance for: the European Green Deal, the Digital Strategy, the European Data Strategy, the new Industrial Strategy for Europe, NextGenerationEU, the European Health Union, the new European Research and Innovation Area, the new European plan for the Circular Economy, the achievement of climate neutrality by 2050.

The project must be designed to address serious systemic or market failures, which would prevent the project from being implemented on the same scale and in the same manner without the aid, or the societal challenges that could not otherwise be addressed and solved. The project must be of particularly significant size or scope or must involve a very significant level of technological and/or financial risks.

The benefits of IPCEIs must not be limited to the funding Member States. Instead, they must have broader relevance and application in the Union economy and society through clearly defined and concrete positive spill-over effects (e.g. systemic effects on multiple levels of the value chain, or on upstream or downstream markets, alternative uses in other sectors). All Member States must have a real possibility to participate in the project.

Member States identify the project of interest, select the participating companies (preferably following open calls), and agree on the governance of the project and the financial support. The project must involve, except in specific cases, significant co-financing by the beneficiaries of State aid.

Research, development and innovation projects must be highly innovative or constitute an important added value in terms of R&D&I in light of the state of the art in the sector concerned. Projects comprising first industrial deployment must allow for the development of a new product or service with high research and innovation content or the deployment of a radically innovative production process. Since they are not covered by the previous projects, infrastructure projects in the fields of environment, energy, transport, health, and digital technology must be of major importance for the Union strategies in these sectors or contribute significantly to the internal market.

The proposal must concern an individual project. Integrated projects are eligible. They refer to groups of individual projects integrated into a common structure or programme (the individual components of the

integrated project may relate to separate levels of the supply chain but must be complementary and provide significant added value towards the achievement of the objective of European interest).

Since IPCEIs are financed by national budgets, the public support by Member States to IPCEIs and the companies participating in them constitutes State aid and must be notified to the Commission for assessment and approval. The assessment is carried out on the basis of the criteria identified in the European Commission Communication 2021/C 528/02.

With the latest amendment to the General Block Exemption Regulation (GBER), adopted by Regulation (EU) 2023/1315, the implementation of certain projects involving beneficiaries in several Member States has been simplified by increasing the aid intensities and notification thresholds for IPCEI-related research and development projects.

6. Policy evaluation. How do we know the IP is obtaining the desired effects?

Finally, policymakers must establish clear mechanisms and governance structures to assess whether the instruments they deploy are delivering results. Industrial policy is inherently interventionist and often produces asymmetric effects across economic actors. This makes robust monitoring and evaluation essential, as the legitimacy of industrial policy ultimately depends on demonstrating that its trade-offs were justified in terms of broader economic benefit.

Evaluating IP is notoriously difficult (Juhász, Lane, Rodrik 2023). Nonetheless, policymakers should at least consider four key aspects for structuring such evaluations: methodology, type of evidence, governance, and timing.

6.1 Methodology

The public policy literature and practice have identified three main types of policy evaluation, which reflect different *foci*:

- Process evaluation analyses the activities involved in the policy and, broadly, *how* the policy was delivered. Although it is not designed to estimate its impact, it can be very useful to maintain a record of how things were done, why, and what the perceived obstacles to implementation were.
- Impact evaluation: estimates the changes triggered by the policy made. It looks at whether the policy effects have created a scenario that is different from a world in which the policy had not taken place. A fundamental aspect of conducting impact valuation is to identify clearly ex-ante what are the policy's objectives, expected beneficiaries / targets, and the indicators that would reflect the expected change. Context also matters and the methodology must reflect changes in circumstances to ensure the analysis captures the true effect of the intervention and not the underlying trends independent of it.
- Value for money evaluation: analyses whether the effect of the policy was large enough to justify the efforts (monetary or of another sort) involved. This is a key consideration because many interventions might achieve change but at a disproportionately high cost. While these evaluations have gained

prominence in the form of narrow cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA), policymakers must think carefully about both their full objectives and the total investment that went into the intervention. Otherwise, such evaluations run the risks of reflecting only what can be easily calculated and thus providing estimates that are overly optimistic (if they ignore the full input costs and negative externalities) or overly pessimistic (if they do not capture positive externalities, public value, and long-term effects).

Besides these standard approaches, additional and alternative ones exist that can be utilised to overcome some of the possible shortcomings of these methods. These include social fabric matrices, living labs, and public value mapping (IIPP 2020). Note that all these methodologies can be relevant and can be combined with each other to provide a full and more informative account.

6.2 Evidence types

Within each methodology, policymakers should be aware of the robustness of the evidence they are gathering. This will tell them how sure they can be of the effects of the policy. Building on Nesta's Standards of Evidence (Puttick & Ludlow, 2013) and the Maryland Scientific Methods Scale, we propose the following 4 levels of evidence quality:

1) Sound rationale: there is a precise description of the policy and its objectives as well as an explanation of the mechanisms through which it should work, based on best practices or other secondary sources;
2) Positive correlation: there is evidence that after the policy was implemented the intended targets experienced the effects the policy aimed to generate;
3) Causal evidence: the correlation evidence (2) is complemented by an indication that it is truly the intervention that caused the observable change. This ideally would be based on identifying a reasonable "counterfactual" scenario (e.g., a control group) that shows what the outcomes at the time of observation would have been, had the policy not been in place.
4) Repeated and systematised causal evidence: the type-3 evidence is available in various contexts and across time, thus ensuring that the effects were not a context-specific coincidence.

It should be noted that within each type both qualitative and quantitative evidence can, and ideally should, be used. Qualitative evidence, such as interviews, is particularly useful for understanding "how" something works, while quantitative evidence helps estimate the size of the effect. Both are important as policymakers try to understand whether an intervention should be aborted, continued, or scaled up—and if it would work in a different context.

6.3 Governance of evaluation

Who performs the evaluation is often key to ensuring its quality and reliability. There are multiple actors who might be well placed to conduct these analyses, but the main decision policymakers are faced with is whether

to conduct the evaluation in house or rely on an external provider. Although a third-party analysis is typically an advisable choice, policymakers should consider:

- Complexity: how sophisticated can the analysis be at the stage when it is to be conducted?
- Skills: what expertise is present in house vs. externally?
- Knowledge and data access: who can have access to the relevant data and how informed are third parties on the functioning of the programme?
- Accountability and conflicts of interest: how can the governance of the evaluation process ensure that key stakeholders are involved but do not influence the output, as well as limit the conflict of interests (even by the external evaluator) that would compromise the reliability of the exercise?

Broadly speaking, as complexity increases it is advisable to involve external partners to conduct the analysis. But involving externals is not enough if they are not given access to all the necessary data and processes are not in place to avoid conflicts of interests.

6.4 Timing

Finally, evaluations can be conducted at various points during a policy's life. The literature (OECD 2023b) identifies three main moments:

Ex ante: before the intervention kicks off. To shape its design and how it will be implemented. This can involve reviewing the evidence from other similar interventions, conducting simulations, piloting, and early testing of policy ideas. These exercises can be useful in setting expectations right in terms of the impact of the policy, as well as the likely obstacles.

***In itinere*:** during implementation. To influence decisions, fine-tune, and help ensure that the policy can realise its intended benefits. These evaluations will typically collect evidence about the efficacy of the policy's design, its implementation, and emerging outcomes. They can cover both early estimations of the impact but also identify unintended consequences.

Ex post: after an appropriate time lag to allow for the policy effects. Policymakers should consider both the *frequency* of the evaluation and the *appropriate temporal lag* before the effects of a policy can realistically emerge and thus an *ex-post* evaluation be useful. Recent literature has highlighted how studies of IP effects too often ignore the intergenerational or long-term effects of IP and thus policymakers should be aware upfront of the likely timeline for effects to appear (Juhász, Lane, Rodrik 2023). On the other hand, the right timing for the evaluation is also key to ensuring that policies are discontinued when they either have proven ineffective or have proven so effective that they are no longer needed. The latter is a particularly relevant consideration for industrial policies, which are often interventions that aim to change an existing economic equilibrium to create a new one that should eventually become self-sustainable. In this context, effective policies should envision a "sunset provision" that pre-empts that the programme will be shut down once the original objective is achieved (see for instance Israel's successful Yozma programme for supporting the venture capital industry). In these

cases, the timing of the evaluation is fundamental to properly inform the decision to continue or discontinue the policy.

Conclusions

This paper offers policymakers a practical framework for designing effective industrial policy instruments. It walks through six questions that help turn broad ambitions to promote a sector into clear, actionable policies.

The first question clarifies the goal of IP. It highlights that IP can be utilised to: 1) increase productivity, equitable growth and (quality) employment, 2) resolve societal challenges, 3) achieve autonomy / resilience, or 4) protect / preserve (quality) employment and standards of living. Policymakers must identify their priorities and accept trade-offs before deciding on interventions.

The second question highlights the complexity of global value chains, urging policymakers to assess where their country or region can best compete—be it product invention, design, improvement, or production—and tailor policies to build the specific capabilities needed at that stage. We invite policymakers to analyse whether the country or regions are better positioned to excel at product invention (stage 1), product design and creation (2), product improvement (3), or production and assembly (4).

Questions three and four focus on implementation. They address who funds and manages IP. We explained that policymakers should consider aspects of capacity, flexibility, and timing to choose whether to manage the IP directly via public institutions or via intermediaries. We then provided a comprehensive menu of the policy instruments available for IP, explaining for which objectives they are most effective and appropriate and what implementation approach is typically the most effective.

The fifth question covers the critical legal dimension of State aid within the European Union. It provides basic guidelines to understand what interventions constitute State aid and how to ensure compliance with EU rules. Finally, the paper underscores the need for monitoring and evaluation. Given IP's redistributive effects, continued support must rest on solid evidence. We provide guidance on how to structure these evaluations to inform policy adjustments and accountability.

While these insights are relevant worldwide, they are especially important for Italy. Italy has a highly heterogeneous economic structure, evident in its regional economic disparities and sectoral specialisations (see Gentile et al. in this series). This underpins its global leadership in select industries despite its longstanding productivity stagnation. Yet Italian industrial policy has rarely reflected these deep differences. As Gronchi and Ughi demonstrated in this LUHNIP series (Gronchi and Ughi, 2025), over the past eighteen years Italy has primarily relied on horizontal, national-level industrial policies—an approach that does not suit the country's pronounced regional diversity and sectoral variation. Reorienting these policies based on a deeper understanding of the industrial system and of Italy's competitive advantage across the different stages of production would help deploy resources in a more tailored way.

Finally, Italy's industrial policy has been characterised by significant fragmentation and a proliferation of interventions, often implemented directly by various public administrations with little coherence or coordination. The menu of policy tools and implementation methods presented in this paper offers a practical way to rationalise and strengthen existing measures, while also guiding the design of new, more coherent and effective policies.

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Annex: Table A.1 Examples of IP policy instruments

IP instrument	Examples	Italian example
TRADE FINANCE		
Trade Finance	-Bpifrance Export Credit Insurance: covers risks of contract interruption or non-payment for French firms abroad. See here. -KUKE (Poland's Export Credit Agency) covers bank loans from credit risk and political risk for Polish firms abroad. See here.	-SACE Contract-tied facility: eases access to international financing in hard currencies at competitive rates to purchase capital goods from Italy. See here. -Cassa Depositi e Prestiti - finanziamenti agevolati SIMEST: offers favourable conditions for domestic firms to finance their international expansion. See here.
FISCAL INCENTIVES		
R&D Tax Credits	-The OECD portal INNOTAX has a whole database of R&D tax credits and tax deductions. See here. -Ireland's R&D Tax Credit for SMEs: up to 25 % of SMEs' R&D expenditure. See here and here. -Denmark R&D tax deduction: up to 110% deduction of any firms' R&D capital expenditure. See here and OECD database. -France's Credit d'Impôt de Recherche: to up 30% of R&D expenses. The credit can be used in any of the three following years following the firm's R&D investment. See here.	-Credito d'imposta ricerca e sviluppo, innovazione tecnologica, design e ideazione estetica under Transizione 4.0: up to a 10% tax credit on R&D investments. See here.
Capex Tax Credits	-French art.35 of Law 1322/2022: 20% tax credit of investment in capital goods for firms in the following sectors: batteries, wind power, solar panels and heat pumps. See here.	-Nuova Sabatini: covers up to 80% of the total investment in capital goods. See here.
GRANTS AND SUBSIDIES		
Grants for R&D	-VINNOVA (Sweden): covers half of the cost of a 'purpose-driven innovation' projects. See here. -Germany's Zentrales Innovationsprogramm Mittelstand: comprehensive financial support for SMEs innovative projects. See here. -Germany's Cyberganetur (based within the Federal Ministry of Defence): it internalises the innovation of new technologies within the military. See here. -Germany's Agentur für Sprunginnovationen (SPRIND): promotes early stage disruptive innovation. See here. -Austria Wirtschaftsservice Gesellschaf (Austria's federal promotion bank): offers R&D grants. See here. -Spain's CDTI Agency NEOTEC grant: up to €325.000 grant per company to finance R&D activities. See here.	-Accordi per l'innovazione: covers up to half of the cost an industrial research project. See here.
Subsidies for Regional Development	-CPER Grand-Est in France 2021-2027: a 5 billion, subsidies-based programme for regional development in France's Grand Est region. See here. -Germany's Gemeinschaftsaufgabe „Verbesserung der regionalen Wirtschaftsstruktur“ (GRW) : provides grants and subsidies covering up to 45% of an investment in a structurally weak region. See here.	-Resto al Sud managed by Invitalia: up to €200.000 (50% of which is provided as a grant, 50% as a loan) to support individuals set up new companies in Italy's Southern regions. See here. -Law 488/92: regional investment subsidies to develop industrial activity in the Mezzogiorno. See here. (Here and here for evaluations that find limited impact)
Sectoral Subsidies	-Germany's CfD Funding Program ("Förderprogramm Klimaschutzverträge") finances the decabornization of heavy industries in Germany. See here. -Health-Holland is a PPP entity that provides financing in the pharmaceutical sector. See here.	-PNRR Missione 1, Componente 2 - Economia spaziale: The second component of the Italian PNRR offers subsidies targeted at the space economy. See here.
Consumer Subsidies	-Germany's Umweltbonus subsidizes the purchase of electric vehicles. See here. -Estonia offers €5000 vouchers for consumers that buy electric vehicles that cost under €60.000. See here. -Spain's bono cultural gives a 400€ voucher to citizens that turn 18 years old to be spent on cultural products. See here.	-Ecobonus finances the purchase of non-polluting vehicles. See here.
ACCESS TO CREDIT		
Debt	Germany's KfW Energy Efficient Refurbishment and Construction Programs: -gives preferential interest rate loans for companies in the buildings sector that meet green requirements. -part of the debt is condoned if further requirements are met. See here. -France's Le Plan Climat issues loans (from €50k to €5 million) with advantageous conditions for 'green' investments. See here and here.	-Fondo Rotativo Imprese (FRI) (Cassa di Depositi e Prestiti) - loans at low interest rates to support R&D investments. See here.
Credit Guarantees	-Spanish ICO €40 billion debt guarantee programme protected SMEs struggling during COVID-19. See here. -BPI France's France-Active: covers up to 80% of a bank loan for SMEs and self-employed. See here. -Polish Development Fund Group offers several guarantee products, including the Biznesmax Plus warranty which covers 80% of commercial bank loans See here and here.	-Fondo di Garanzia: debt guarantees for SMEs and self-employed. See here. -Controgaranzia CDP-FEI-EGF: covers up to 80% of loans to SMEs (the max loan being circa €3 million), helping them cover working capital expenses. See here.

ACCESS TO EQUITY		
Direct Equity Investments	-INVEST NL: buys equity directly from companies in strategic sectors, providing up to 50% of financing of a firm, between €5-50 million. See here. -The Polish Development Fund Group: equity financing for firms for up to 7 years and €1.2 million, as well as networking and business support. See here.	-Fondo Italiano d'Investimento: invests equity in Italian industrial companies with high growth potential and strategic importance. See here.
Indirect Equity Investments	-INVEST NL: invest in third funds. Participating interests between € 5-25 million per fund. See here. -Croatian Venture Capital Initiative 2 (CVCi 2): €80 million fund-of-funds to fuel the growth of innovative SMEs. See here and here. -Portugal Venture Capital Initiative (PVCi): fund-of-funds managed by the European Investment Bank. See here. -Germany's KfW Capital: indirectly invests in VC funds of green and tech startups. See here.	-Fondo Italiano d'Investimento: participates in Private Equity and Venture Capital funds various fund of funds vehicles. See here and here.
COORDINATION TOOLS		
FDI Attraction Offices	-Spain's ICEX -Germany's GTAI -Business France -The Netherlands Foreign Investment Agency (NFIA)	ICE/ITA: Foreign Direct Investment Desk
Technology Transfer Policies and Research-Industry Links	-VTT Technical Research Centre of Finland: state-owned research and tech company conducting applied research. It provides R&D services and information for private companies. -Estonian Research Council (ETAG) and Estonian Research Information System (ETIS): promote cooperaiton between government, research institutions and companies. See here and here. -VINNOVA ENVIRONMAN project: transfers research knowledge to firms in the green transition. See here. -Fraunhofer-Gesellschaft : Germany's largest applied-research organization. See here.	-CDP Venture Capital - Fondo Technology Transfer invests in poles of technology transfer in collaboration with universities and research centers. See here.
FDI Screening	-Spanish FDI screening mechanism RD 571/2023: foresees mandatory filings for foreign investors in strategic sectors. See here. -Ireland's Screening of Third Country Transactions Act 2023: enables the Minister for Enterprise, Trade and Employment to respond to threats to security and public order posed by particular types of foreign investment. See here.	- The Golden power law (Law-Decree No. 21/2012) allows the President of the Council of Minister to stop FDI in 'strategic' Italian assets and companies. See here. -Law-Decree No. 21/2022 incorporates some extraordinary FDI screening measures adopted during the COVID-19 crisis into the ordinary Italian regulation. See here.
PUBLIC PROCUREMENT		
Innovative Public Procurement	-Spain CDTI offers both PCP and PPI solutions through its program Compra Pública de Innovación. See here. -In Austria, the PPI Service Centre of the Federal Procurement Agency is in charge of PCP and PPI procurement since 2013. See here.	- Consip announced in 2021 that it would launch its own Innovative Public Procurement tools soon. See here.
PRICE ASSURANCE		
Price Assurance Mechanisms	-Germany's Renewable Energy Sources Act: provides guaranteed prices for electricity generated from renewable sources. See here.	- Agenzia per le erogazioni in agricoltura: provides price guarantees for certain agricultural products to stabilize farmers' incomes and ensure a stable supply of essential goods. See here,
LOCAL CONTENT		
Local Content Incentives	-Greece Feed-In Tariff bonus for solar electricity: 10% bonus on top of the Feed-In Tariff if at least 70% of the equipment cost of solar panels come from EU countries. See here and here. -France eco-bonus (consumer subsidy for electric vehicles) does not apply to cars manufactured in China. See here. Both policies are currently the object of dispute at the WTO.	- Conto Energia IV and V: 10% bonus on top of the Feed-In Tariff if at least 60% of the equipment cost of solar panels come from EU countries.
HUMAN CAPITAL		
Upskill and Reskill Policies	-Denmark's Industriens Kompetenceudviklingsfond – IKUF : grants to employees in the manufacturing sector to participate in self-selected training activities. See here. -Finland's Aikuiskoulutustuki: subsidies for adults to participate in upskilling and reskilling trainings. See here.	-Fondi paritetici interprofessionali nazionali per la formazione continua, managed by Agenzia Nazionale Politche Attive del Lavoro: gives money to firms to finance workers' training. See here. -Fondo Repubblica Digitale: public-private partnership offering upskilling and reskilling training, focusing on digital skills. See here.
Talent Attraction Policies	Spain's Plan to attract and retain innovation and research talent: grants for recognized academic researchers to be integrated into the Spanish system covering both capex and opex research expenses. See here. France's Passeport Talent (see here) and the UKis High Potential Individual Visa (see here).	-Rientro cervelli 2024 (art. 44 DL n. 78/2010): tax break for researchers and scholars who come settle in Italy after having lived abroad for at least three years. See here.