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Europe first? The rise of EU industrial policy promoting and protecting the single market

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ABSTRACT


Within Europe's regulatory state, industrial policy has largely remained within national governments' remit. Yet, a plethora of new supra- and cross-national industrial policy initiatives have recently emerged whereby the Commission proactively engages in pan-European activities to foster innovation and economic development. This article brings the 'Developmental Network States' (DNS) literature into dialogue with EU integration scholarship to explain both the timing of EU industrial policy's rise since the mid-2010s and the variation in forms of EU integration of different industrial policy functions. Our analysis suggests that the Commission increasingly operates four major developmental functions akin to DNSs and aimed at promoting and protecting the single market. Neofunctionalist theories of EU integration explain these momentous shifts. The timing behind the rise of EU industrial policy is best explained as an interplay of functional, cultivated, and political spillovers, driven especially by the Franco-German realignment on pro-EU industrial policy positions since 2016. Variation in the governance forms of integrated EU industrial policy functions is instead explained in terms of the degree of pre-existing integration of extant policies, the low vs high politics nature of the policy domain and the types of externalities attached to the specific policy area.

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1 Introduction

Within Europe's 'regulatory state' (Majone, 1997), industrial policy¹ has largely remained within the remit of national governments (Fioretos, 2001). On the one hand, the European Union's (EU) industrial policy has revolved around

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horizontal measures regulating markets' framework conditions (e.g., the Single Market Programme) or promoting research and development (R&D) (Landesmann & Stöllinger, 2020). On the other, since the 1980s, the greater reach and bite of EU competition law and state aid regulations have severely curtailed member states' capacity to pursue selective industrial policy interventions (Bulfone, 2022). The EU's executive body, the European Commission, is in fact known in the literature as the agent of *market-enhancing* integration (Höpner & Schäfer, 2012), fostering regulatory harmonisation and preventing anticompetitive behaviour in the single market by curbing national state aid and public ownership in national strategic sectors (Billows *et al.*, 2021; Jabko, 2006; Scharpf, 1998). Yet, recently, Brussels increasingly makes the news for a 'retooling' of EU industrial policy (Financial Times, 2019). A plethora of new supra- and cross-national industrial policy initiatives have in fact emerged or are underway in Europe. The Commission has become, in various ways, proactively involved in sector-specific and mission-oriented initiatives to foster innovation and economic development across Europe (Defraigne *et al.*, 2022; Haroche, 2020; Haroche, 2022; Prontera & Quitzow, 2022). Considering the hitherto neoliberal nature of Europe's regulatory state (Majone, 1997), how can we now account for the rise of new interventionist forms of EU industrial policy in the single market?

Extant scholarship has so far provided descriptive accounts of the emerging EU industrial policy (Ambroziak, 2017; Landesmann & Stöllinger, 2020; Pianta *et al.*, 2020) and of sector- or mission-specific initiatives, e.g., in the automotive sector (Pichler *et al.*, 2021), EU climate and energy policy (Prontera & Quitzow, 2022; Tagliapietra & Veugelers, 2020) or developmental banking (Mertens *et al.*, 2021). To date, however, two key aspects behind the rise of EU industrial policy remain unexplored, namely the proximate causes behind the *timing* of EU industrial policy's rise in the mid-2010s and the *variation in forms of integration* of different industrial policy functions in the single market. For example, while budgeting for innovation in the Multiannual Financial Framework (MFF) remains intergovernmental, the Commission brokers innovation through transnational production networks (i.e., industrial alliances) and increasingly facilitates national state aid for Important Projects of Common European Interest (IPCEIs) through its regulatory competences. Thus, based on the triangulation of primary sources and original elite interviews with Commission and member states' officials, this article speaks to burgeoning debates on EU industrial policy with a fourfold contribution.

First, we systematize the EU's industrial policies by drawing from the literature on Developmental Network States (DNS) (Block, 2008; O'Riain, 2000). We suggest that a fruitful way to make sense of the 'retooling' of EU industrial policy is to treat the Commission as increasingly performing functions akin to those of a DNS promoting and protecting the European single market, i.e., (1) by providing targeted resourcing to actors with high innovation

potential; by (2) brokering pan-European innovation and production networks; by (3) ensuring the facilitation of Member States' industrial policies within the extant EU regulatory state's strictures, e.g., by facilitating the provision of national state aid for strategic and innovative cross-national IPCEIs; by (4) ensuring the protection and the integrity of the EU single market from unfair state-backed foreign competition.

Second, we bring EU integration scholarship into dialogue with the DNS literature to account for variation in the forms of integration of these different industrial policy functions. While these functions are increasingly performed or coordinated at the European level, they are integrated and governed through different governance modes. Targeted resourcing and protection remain largely intergovernmental. Facilitation is the result of the Commission's supranational agency and governance, while brokering is based on novel forms of network governance, e.g. the industrial alliances. By leveraging a neofunctionalist perspective (Nicoli, 2020), we thus explain the variation in these governance modes based on: (1) the degree of pre-existing policy integration; (2) the type of policy (low vs high politics domain); and (3) the types of externalities stemming from the governance interdependence of the various policies.

Third, based on the neofunctionalist theory of EU integration, we interpret the timing behind the rise of the EU industrial policy as an interplay of functional, cultivated, and political spillovers (Haas, 1964; Niemann & Ioannou, 2015). In short, changes in the international political economy – i.e., climate, technological and geopolitical changes – have created the need for more integrated and coordinated EU industrial policy in the single market (functional spillover). In the quest to solve collective action problems and expand its competences, the Commission has gradually shown greater interest in EU industrial policy initiatives (cultivated spillover). Yet, the gradual rise of EU industrial policy has only been possible once a new consensus on the need for greater EU economic activism was found among member states when, after a major wave of Chinese acquisitions of German companies, Germany realigned with France on pro-EU industrial policy positions (political spillover). The Franco-German alliance has, since 2016/2017, driven the rise of EU industrial policy in the single market, a trajectory reinforced further by the economic and energy shocks linked to the COVID-19 pandemic and the Ukraine war.

Lastly, we theorise a new mechanism of policy integration in the single, i.e., network spillover, as a governance mode hitherto largely neglected by EU integration theory.

Our argument unfolds as follows. Section two reviews the evolution of industrial policy in the EU until the recent rise of EU industrial policy. Section three introduces our theoretical framework while section four describes our empirical strategy and evidence. Section five reconstructs the rise of EU industrial policy, while the last section concludes by discussing and contextualising our findings.

2 From industrial policy in the EU to EU industrial policy

Industrial policy features prominently in European political economy debates since the post-WWII period. Europe's so-called golden age (Eichengreen, 2008) was predicated on the active role of the nation-state in economic governance (Bianchi & Labory, 2020; Bulfone, 2022). National industrial policies were enabled and facilitated by two key factors. First, European economic integration had not progressed beyond a customs union and the Treaty of Rome's provisions against competition-distorting state aid remained dormant until the 1980s (Scharpf, 1999, p. 52). Second, the state's control over its national economy was enhanced by the limited scope of international economic integration characterising the post-war "embedded liberalism" regime (Ruggie, 1982). Since the mid-1980s, however, mounting globalisation and the deepening of the European regulatory state have increasingly challenged the capacity of European nation-states to govern the national economy through activist economic governance (Scharpf, 1998, Ch.3). In reaction to these trends, academic debates on EU industrial policy have largely developed into three scholarly streams.

One set of scholars argues that pro-competition regulatory governance in Europe has replaced demand management and industrial policies by the hitherto *active Keynesian state* (Majone, 1997). This is due to three main factors: the deepening of the European Single Market, which has ushered in the liberalisation of previously protected economic sectors and the privatisation of state-owned undertakings (Bulfone, 2022; Jabko, 2006; Thatcher, 2007); the 'constitutionalisation' of European competition law (Scharpf, 1998, p. 55) aimed at ensuring a level playing field in the common market; and the constraints on national governments' fiscal policies enshrined in the Maastricht Treaty's Stability and Growth Pact. Moreover, beyond Europe, an increasingly globalised economy has come to challenge nation-states' capacity to govern the domestic economy (Strange, 1996).²

A second set of scholars argue that states have found new modes to continue intervening selectively in the economy. Thus, in the age of regulation and neoliberalism, states engage in new forms of market-shaping interventions and discretionary policymaking (Levy, 2006), e.g., via the strategic use of regulation (Bulfone, 2019; Levi-Faur, 2009; Thatcher, 2014), regulatory forbearance (Dewey & Di Carlo, 2021), off-balance sheet interventions via national promotional banks (Bulfone & Di Carlo, 2021; Mertens *et al.*, 2021) or via state-sponsored entities such as sovereign wealth funds (Alami *et al.*, 2021; Thatcher & Vlandas, 2016).

Lastly, a more recent strand of the literature analyses the deepening and broadening of industrial policy initiatives at the EU level, by and large through a threefold approach. First, descriptive accounts have attempted to operationalise, quantify and assess the adequacy and effectiveness of older

and newer EU industrial policy initiatives (Ambroziak, 2017; Defraigne *et al.*, 2022; Landesmann & Stöllinger, 2020; Mosconi, 2022; Pianta *et al.*, 2020; Redeker, 2021) Second, the literature on political economy has described the expansion and/or conversion of EU institutions for new industrial policy purposes to circumvent the EU's fiscal and regulatory constraints on state activism (Mertens & Thiemann, 2019). A third group of scholars have concentrated on specific missions of EU industrial policy – e.g., the smart specialisation strategy (Wigger, 2022) or the green industrial policy agenda (Tagliapietra & Veugelers, 2020) – or specific sectors of intervention where the EU has acted as a "catalytic state," for example in the energy and climate sectors (Prontera & Quitzow, 2022) or the automotive sector (Pichler *et al.*, 2021).

Despite its richness and importance, there remain some gaps in the existing literature on EU industrial policy. In reverse order: by focusing on specific policy domains, mission-oriented and sector-specific analyses of EU industrial policy have not yet provided an overarching account of the broader ongoing shift in EU economic governance and its drivers. The political economy literature has typically focused on the European Investment Bank (EIB) as the agent of the EU's rising 'hidden investment state' (Mertens & Thiemann, 2019) but has neglected the Commission's role as a developmental agent. Lastly, descriptive accounts have not yet leveraged EU integration theories to explain the transnational integration of industrial policy – a domain hitherto firmly within the remit of national governments (Fioretos, 2001). Factors such as technological and climate change, as well as geopolitical shifts, do feature within these accounts and have certainly contributed to the integration of industrial policy. However, these factors appear unable to fully account for the timing and different outcomes of the integration process. For example, the innovation challenge had been recognised in Europe since the Lisbon Agenda in 2000. Climate change concerns have been on the political agenda since the Kyoto Protocol in 1997, and China's geopolitical ambitions had been acknowledged at least since the Belt and Road Initiative in 2013. Yet, the integration of industrial policy in the single market has accelerated prominently only from 2016/17 onwards. Moreover, the outcomes of this integration process vary across different industrial policy functions, which have been integrated to different degrees and through various governance forms. For instance, while budgeting for innovation remains largely intergovernmental, the Commission brokers innovation through transnational networks and increasingly facilitates national state aid to foster cross-national IPCEIs through its regulatory competencies.

As a result, extant literature has yet to explain the proximate causes behind the rise of EU industrial policy, its timing and the ensuing variation across forms of integration which the different industrial policy functions have been subjected to over the last decade. We contribute to the literature by addressing these gaps.

3 Theory and hypotheses: EU integration scholarship meets developmental network states

This article aims to explain the growing integration of industrial policy functions at the EU level. We understand integration as the ‘increased coordination of national policies, the transfer of authority to the EU level in new policy areas, or the strengthening of the EU authority in existing areas of competence’ (Jones *et al.*, 2021, p. 1523). We focus on the European Commission as the EU’s executive power with a legal basis (art. 173 TFEU) to pursue industrial policy in the single market to ‘ensure the conditions for the competitiveness of the Union’s industry’ by: (1) speeding up adjustment of industry to structural change; (2) ensuring a business environment favourable to economic activity; (3) encouraging cooperation between undertakings; (3) fostering better exploitation of the industrial potential of policies of innovation, research and technological development.

Given the fragmented nature of EU industrial policy initiatives and the multi-dimensionality of its developmental mandate, our endeavour requires both an analytical framework to systematise and trace developmental functions and a theory of regional integration to account for the drivers, the timing, and variation in integration outcomes of industrial policy functions. To this end, we leverage the analytical framework of DNSs and combine it with EU integration theories.

3.1 The developmental functions of developmental network states

The concept of the DNS has been developed in a series of works by Seán O’Riain (2000, 2004) and Fred Block (2008) to theorise a new role of the state in economic development within post-Fordist societies and the knowledge economy. The DNS contrasts with the workings of previous ‘bureaucratic developmental states’ of the Fordist era which operated dirigiste forms of industrial policy through a centralised bureaucratic apparatus and hierarchical steering of the economy. By contrast, DNSs bolster technological innovation and economic development by virtue of their embeddedness in society (Evans, 1995).

Given the complexity and multidimensional nature of the knowledge bases required to innovate in today’s globalised knowledge economy (Fagerberg, 2006; Iversen & Soskice, 2019), technological breakthroughs increasingly occur via network collaborations among private and public actors (e.g., technologists, firms, universities, public agencies) (Block & Keller, 2009; Breznitz & Ornston, 2013; Maggor, 2021) and increasingly depend on firms’ capacity to develop ‘collaborative advantages’ through cross-country production networks, where each firm specialises in given steps of the innovation and production process (Nahm, 2021). Public officials in DNSs thus

operate closely with organised groups and civil society to identify and support the most promising avenues for innovation (Block, 2008, p. 172). DNSs aim to ‘shap[e] the capabilities of societal and market actors’ and are defined by their ability to ‘create and animate post-Fordist networks of production and innovation and link them together in ways that promote local and national development’ (O’Riain, 2000, p. 165). Activism by DNSs is desirable within today’s transnational production systems to overcome *network failures*, i.e., situations where production or innovation networks may be needed but fail to emerge due to information asymmetries or lack of trust among prospective partners (Negoita, 2014; Schrank & Whitford, 2011). To these ends, DNSs’ public officials operate through various developmental functions (see Table 1): targeted resourcing, brokering, facilitation. To these functions originally highlighted by Block (2008)³, we add protection, a classic industrial policy function used by governments to nurture domestic industries while shielding them from foreign competition (Gourevitch, 1986).

Targeted resourcing requires public officials to consult with civil society and the business community to identify new challenges with an eye to then

Table 1. The four developmental functions of DNSs and the EU Commission’s functions.

Developmental Functions of DNSs	The Commission’s ends	Examples of some of the Commission’s instruments	Examples of EU industrial policies/ programs
Targeted Resourcing	Promote innovation by funding projects likely to achieve technological innovation and breakthroughs in strategic sectors	Own budgetary resources allocated through innovation-specific programs; Special purpose funds; National Promotional Banks	Horizon 2020; Cohesion Funds; COSME; EIF; RRF; ERDF
Brokering	Act as honest broker to promote the emergence/sustenance of cross-national and cross-sectoral production and innovation networks in the single market	Industrial Alliances; Innovation institutes and platforms	Industrial alliances; EIT; EU industry days
Facilitation	Bend/adjust the strictures of the EU regulatory state to permit state aid aimed at promoting cross-national and cross-sectoral production and innovation networks in the single market	Administrative simplifications; Economic (re-)regulation; Regulated exemptions from EU treaties	IPCEIs; Standard Setting Initiative; Global Gateway Strategy, etc.
Protection	Protect EU market actors from extra-EU unfair competition, especially in sectors key to strategic autonomy and national security	Instruments for FDI screening; Instruments for public procurement screening; etc.	FDI & Procurement Screening tools; Foreign Subsidies Screening tool; Anti-coercion tool

Source: Authors’ elaboration.

providing funding to those actors with projects most likely to achieve technological innovation and breakthroughs. This function is particularly key when, due to the fundamentally uncertain nature of innovation, the market fails to provide start-up capital to prospective innovators (Mazzucato, 2013). For our interests here, for example, the Commission provides targeted funding for innovation through funds directly or indirectly managed and via shared funding with member states (see Table 1 and section 5.2).

Brokering envisages states connecting scientists working in universities, government laboratories or business settings to stimulate innovation. Brokering involves setting up networks that enable technologists to connect with private or public investors to acquire the funding necessary to develop and commercialise products. Since 2017, the Commission has increasingly carried out brokering functions especially – although not only – via the formation of industrial alliances (see section 5.3).

Facilitation requires regulatory actions such as strategic re-regulation, standard setting or administrative simplifications which smoothen market actors' operations and incentivise investments in new strategic sectors. *Inter alia*, the Commission increasingly facilitates national state aid provision through a revised framework for cross-national Important Projects of Common European Interest (IPCEIs) (see section 5.4).

Finally, *protection* implies measures like tariff or non-tariff regulatory barriers imposed by public authorities to protect domestic market actors from foreign competitors, e.g., for reasons of national security, unfair competition or simply to shield domestic economic actors from the competition of more technologically advanced nations or firms. In liaison with member states, the Commission progressively attempts to protect the EU single market through instruments such as the new public procurement and FDI-screening tools (see section 5.5).

We now turn to EU integration theories to elaborate testable hypotheses on the drivers and outcomes of integration for these four policy functions within Europe's single market.

3.2 EU integration theory: theorising drivers and outcomes of policy integration

EU integration scholarship offers a well-established theoretical arsenal to explain the drivers and outcomes of regional integration. Given its focus on nation-states and grand bargains, classic intergovernmentalism (Moravcsik, 1998) appears inadequate to account for incremental processes of industrial policy integration. Similarly, new intergovernmentalism (Bickerton *et al.*, 2015) cannot adequately explain integration in those industrial policy functions established outside of the Council's consensus-building deliberations, e.g., brokering innovation through industrial alliances or facilitating state aid through the purposive re-regulation of the IPCEI framework.

Conversely, neofunctionalism understands EU integration as an incremental process driven by self-serving actors forging transnational coalitions pushing for new integrative solutions in the face of emerging policy problems (Haas, 1964; Niemann & Ioannou, 2015). Integrative processes may be triggered by exogenous shocks which reveal inadequacies and weaknesses in the existing EU construct – e.g., the refugee crisis (Genschel & Jachtenfuchs, 2018) or the COVID-19 pandemic (Brooks *et al.*, 2022). Alternatively, problems may emerge from the very process of EU integration due to unforeseen consequences of previous integrative decisions. In such cases, governments are generally expected to relinquish and integrate as few policy functions as possible to maintain national sovereignty yet as many as necessary to address outstanding problems (Schmitter, 1970).

The process of integration is *driven* by functional, political, and cultivated spillover mechanisms. *Functional* spillovers occur when international economic interdependence makes national policymaking ineffective, calling for further supranational integration of policy domains. *Political* spillovers ensue when national stakeholders – governmental agents and/or organised interests – come to understand that new problems can no longer be dealt with at the domestic level. Thus, through a learning process, national elites gradually realise the need to "make use of Europe" (Woll & Jacquot, 2010) to effectively solve new problems. *Cultivated* spillovers are pro-integration initiatives pushed by supranational institutions. Motivated by a double interest in expanding competences and enhancing collective problem-solving capacity, supranational institutions – like the Commission – can devise new policy solutions and work to assemble transnational political coalitions in support of more integration.

Considering high economic integration in the Single Market and the EU constraints on national industrial and fiscal policy, one would readily expect a functional spillover to drive the integration of industrial policy at the EU level. After all, the inadequacies of EU institutions and policies have become apparent after the 2008 global financial crisis, and the need for industrial policy is today openly discussed at all levels in light of the rising innovation, climate and geopolitical challenges (Zeitlin *et al.*, 2019). However, a functional spillover alone cannot explain the timing of this integration process. Rather, a more explicit relationship between the three spillover mechanisms must be formulated. Our insight is that, once a functional spillover creates a new need for more Europe (necessary condition), a political alignment between the Commission and national stakeholders is needed to move integration forward (sufficiency condition). This is especially the case in domains where the Commission requires cooperation from national actors to effect policymaking. New networked forms of industrial policy in the knowledge economy fall squarely within this realm given the dependency of DNSs on societal and economic actors for the pursuit of developmental aims. Thus, while we expect a competence-seeking

Commission to exercise integration pressures through a cultivated spillover, the Commission remains largely dependent on the *voluntary* participation of national stakeholders in the execution of many decentralised and network-based industrial policies. We thus formulate our first hypothesis.

H1: Functional and cultivated spillovers are necessary, but not sufficient conditions for EU industrial policy to emerge. Integration of industrial policy is likely to accelerate when a political alignment occurs between the Commission and key national actors who realize the need for integrated EU-wide industrial policy (political spillover).

But which integration *outcomes* are likely to emerge from this integration drive? Neofunctionalist scholars have developed conceptualisations of different integration outcomes based on *types of governance* assigned to integrated policies (Schmitter, 1970). Specifically, neofunctionalism distinguishes between intergovernmental and supranational governance of integrated policy domains. Following Nicoli (2020), a *spillover* outcome implies the integration of a new policy domain or the expansion of pre-existing authority under the sole decision-making authority of a supranational actor. On the contrary, a *spillaround* outcome reflects greater integration/coordination of policy functions but under inter-governmental decision-making where member states retain oversight.

While the neofunctionalist literature has long theorised and analysed cases of EU integration based on supranational and intergovernmental governance, it has paid little attention to a third mode of transnational policymaking in the EU: network governance (Jones *et al.*, 1997). Governance through networks consists of the 'articulation of interdependent, but operationally autonomous actors from the public and/or private sector' (Torfing & Sørensen, 2014, p. 334). In the EU and the single market, this can occur when policy functions are governed neither via fully supranational nor strictly intergovernmental governance but via voluntary participation in trans-national networks of European stakeholders and when these networks are established and steered by an EU supranational authority. We thus extend the neofunctionalist literature by introducing a third type of integration outcome: *network spillover*. Network spillovers can occur in the EU when a policy domain is integrated beyond the nation-state but is governed via network governance. In such cases, supranational actors like the European Commission will act as *honest brokers* to foster the creation and sustenance of transnational networks of pan-European private and public actors aimed at achieving collectively desirable public policy outcomes. The proactive agency of the supranational authority is key to addressing information asymmetries widespread among cross-national economic actors, for stabilising expectations among network participants and generating trust among prospective participants, thus minimising the likelihood of network failures.

Nicoli (2020) identifies three factors contributing to explaining variation across integration outcomes: (1) the degree of pre-existing policy integration; (2) the type of policy (low vs high politics domain); and (3) the likely effects of governance interdependence, distinguishing between problems of interdependence based on mismatches between national-supranational level policies (e.g., member states' policies which distort the single market) versus problems of interdependence associated with collective action problems (e.g., free-riding or moral hazard) which generate externalities to the community.

Translated to the three types of integration outcomes, a spillover integration outcome is likely to occur when the supranational institution has already competence over a policy domain and enjoys powers to autonomously expand or reinterpret its mandate. A spillover type of integration outcome is instead likely to occur under two scenarios. In high politics domains already integrated and governed through intergovernmentalism, spillover occurs because governments will be inclined to strengthen/reinterpret EU authority to address new problems but will want to continue exercising oversight through joint decision-making in the highly sensitive policy domain. Alternatively, in high politics domains hitherto not integrated, spillover is also likely as greater integration aims to minimise problems of interdependence while leaving room for member states' oversight in decision-making. Lastly, network spillovers can be expected to occur in low-politics domains where, nonetheless, economic interdependence is high, and the high risk of collective action problems calls for the establishment of effective cooperative governance mechanisms that minimise and sanction free-riding behaviour. In this case, network-based forms of transnational governance, established and governed by a supranational broker, help to address information asymmetries, enhance trust and sanction malpractices, incentivising the voluntary participation of national stakeholders within transnational networks of governance.

Harnessing these theoretical insights, we develop a battery of expectations about the integration outcomes to be expected for the four industrial policy functions introduced above: targeted resourcing, brokering, facilitation and protection.

H2: Since the Commission shares budgeting authority (a high politics domain) with Member States that vote unanimously in the Council, we should expect a spillover type of integration for the targeted resourcing function;

H3: Since innovation and production networks rest on the voluntary and mutual cooperation of cross-national public and private actors in the EU single market, we should expect a network spillover outcome of integration for the brokering function;

H4: Since the Commission has competence and autonomy in economic regulation and competition law, we should expect a spillover type of integration for the facilitation function;

H5: Since member states' discretionary protection of domestic markets on security grounds (a high politics domain) is potentially highly distortive at the Union level, we should expect a spillaround type of integration for the protection function.

The remainder of the article is geared toward testing the five hypotheses.

4 Data and methodology

Our empirical strategy rests on a variant of the process tracing methodology defined as *systematic process analysis* (Hall, 2006). This method is particularly suitable within small-N research designs where the investigator aims to provide context-specific historical explanations unfolding over a given time horizon. It requires the investigator to first formulate theories identifying variables/conditions and processes conducive to the outcome of interest and then derive consistent hypotheses about outcomes and patterns to be validated empirically. Observations are then made through case studies leveraging multiple sources of relevant evidence.

Accordingly, we test the above hypotheses by reconstructing the process of integration of EU industrial policy functions by triangulating primary and secondary sources. We combine 11 elite interviews with EU Commission's officials in various Directorates-General (DGs) and officials in the top echelons of the German Economy Ministry (see Table A2 in the Appendix for details) with an in-depth analysis of the Commission's industrial policy communications and other publicly available official documents (e.g., by the Council of the EU, the Friends of Industry meetings or by national ministries). We combine these primary sources with information from specialised news outlets and available academic literature. In the analysis, we do not assume nor treat the Commission as a single monolithic actor.⁴ Instead, when available, we provide specific information about the main actors and the various DGs involved in the process.

5 The rise of EU industrial policy

In the empirical section below, we first reconstruct the process of political alignment between the Commission and national stakeholders on a new consensus in favour of EU industrial policy in the mid-2010s. Then, we analyse the integration process of each industrial policy function.

5.1 Political spillover: France and Germany's alignment behind a new industrial policy consensus

EU industrial policy did not emerge abruptly in the last decade. Still, between the 1980s and the late 2000s, EU industrial policy was neoliberal in nature and centred on horizontal measures to improve economic framework conditions. In brief, three main pillars characterised EU industrial policy during this time

(Landesmann & Stöllinger, 2020). First, the creation and deepening of the Single Market Programme in 1987 constituted the quintessential framework policy, fostering regulatory harmonisation and deeper economic integration across the EU. Second, the bite of EU competition law (i.e., state aid rules, merger control and public procurement) was broadened and strengthened to discipline member states' industrial policy and ensure competition and a level playing field in the single market. Third, some horizontally designed policies and programmes supporting R&D collaborations existed as the cornerstone of the EU's innovation and technology policy but remained largely peripheral (Landesmann & Stöllinger, 2020, p. 629).

National governments and the EU's approach to industrial policy started to change in the aftermath of the great financial crisis, driven especially by France under the new Socialist government of François Hollande. Years of fiscal austerity, economic recession and high unemployment had engendered a reappraisal of industry's centrality for economic prosperity, calling for a renewed emphasis on industrial policy for economic development (Cherif & Hasanov, 2019; Mosconi, 2015). In the summer of 2013, the French government presented its vision for 'France in 10 years' time' (Financial Times, 2013). Faithful to its longstanding interventionist tradition, France's vision revolved around a 'pragmatic' 10-year industrial policy agenda elaborated by industry minister, Arnaud Montebourg – fiercely committed to support France's industry in its key innovative sectors (e.g., renewables, robotics, medical biotech), thereby boosting industrial output and employment (Government of France, 2013). Concomitantly, minister Montebourg vocally attacked the EU regulatory state, denouncing the strict application of EU state aid rules as the factor preventing Europe from meeting mounting global competition in times of rapid technological change (Financial Times, 2014). Quite evocatively, Montebourg characterised the Commission's approach to state aid limitations as 'obsoletism, autism, imprisonment, fundamentalism' and, in highlighting the generous state aid given by foreign governments to domestic industry, likened the situation in the EU single market to 'Rome surrounded by the barbarians' and awaiting to fall (Financial Times, 2014).

To build a transnational coalition of likeminded countries, in Autumn 2013, Montebourg set up the Friend of Industry (Fol) conference, a cross-national forum of EU economy ministers aimed at advocating for new forms of interventionist industrial policy and reforms of the EU's regulatory straitjacket (see also Ambroziak, 2017, pp. 102–103). The first Fol's joint declaration was signed in Paris by an initial group of nine member states: Belgium, Bulgaria, Czech Republic, France, Greece, Italy, Luxembourg, Spain, and the United Kingdom. In stressing the centrality of industry for EU prosperity, the Group advocated for the reform of 'outdated' state aid rules, the strengthening of European industrial value chains and greater screening and protection

from unfair subsidies practiced outside the EU (Friends of industry, 2013). Put differently, countries in the Fol conference took stock of the ‘structural changes’ – climate and technological change and unfair international competition – to which EU countries and industry were exposed and started advocating vocally for an overhaul of extant EU policies and institutions that would put industry ‘at the heart of European decision-making’ (Friends of industry, 2014, p. 2) and promote and protect the EU single market.

Yet, while the number of countries joining the Fol’s yearly meetings grew in the subsequent years, Germany abstained repeatedly from signing the Fol’s joint declarations and its opposition to EU-level industrial policy *de facto* foreclosed any major reform steps. By increasing their public Communications on the subject, during the same years both the Council⁵ and the Commission showed a new penchant for a more ambitious European industrial policy. Until 2017, however, the Commission’s industrial policy Communications continue to envisage limited and horizontal regulatory initiatives (see Table A1 in the Appendix for an analytical overview), reflecting the conclusions reached by Competitiveness Council⁶ (COMPET), the ministerial body of the Council of the European Union.⁷

It is only after 2016/17 that the expansion and integration of industrial policy gained currency as a result of Germany’s momentous shift in favour of greater EU integration and coordination of industrial policy functions after the so-called ‘Kuka moment’ (Germann, 2022, p. 13). In truth, various factors concurred to trigger a reappraisal of industrial policy among German policymakers, business groups and public opinion alike. First, the election of President Donald Trump marked the beginning of protectionist trade policies in the U.S., hitherto the bastion of free trade in the international political economy (Ikenberry, 2018). Second, the UK vote for Brexit was going to deprive the EU of a heavyweight country historically leaning toward pro-market and anti-interventionist positions in EU economic governance (Meunier & Mickus, 2020; interview 8). But, most importantly for Germany’s domestic politics, the 2016 acquisition of the German word-leading robotics firm Kuka by state-backed Chinese investor Midea Group marked the tipping point of a five-year-long wave of Chinese acquisitions of highly innovative German companies (Financial Times, 2016a). The acquisition came as a shock, triggering a public debate on the future of German industry both in Berlin and Brussels (Financial Times, 2016b), revealing in full force the need for greater EU industrial policy.

The magnitude of the Kuka shock in triggering this change cannot be overstated (interview 9). Crucially, German policymakers realised they did not dispose of adequate legal means to screen and prevent foreign investments for geopolitical and national sovereignty concerns (interview 9). Similarly, government officials also started to worry about the long-term competitiveness of European industry in crucial sectors such as the automobile industry

(interview 5; 7) and about unfair competition by foreign companies backed by generous state aid. These concerns were mirrored also in Brussels. As one EU Commission official put it: 'you have countries out there like China [...] – but the US as well – that do support very generously their industry, and they have very ambitious industrial policies in place ... So, we should also be less naive ourselves' (interview 8). A pro-European industrial policy sentiment started to emerge in Germany's public opinion too, due to the new need to stand up against Chinese aggressive takeovers. Indeed, Eurobarometer polls conducted prior to Kuka's acquisition and two years after show a 15-point increase in public support for EU industrial policy in Germany (European Parliament Research Service, 2019, p. 3).

Germany's U-turn on state activism is evident in its advocacy for a more ambitious EU industrial policy within COMPET (14343/16). Moreover, not only Germany starts signing the Fol's joint declarations, the 2017 meeting is, in fact, summoned in Berlin. Speaking at the 2017 Berlin Fol's meeting, German state Secretary Matthias Machnig openly urged the 'need a strong industrial sector in Europe and a clear EU industry strategy with specific measures to boost the competitiveness of our industry' and called 'on the European Commission to quickly present such strategy' indicating that a 'strong European industrial sector and a clear stance on industrial policy also form part of our response in Europe to isolationist tendencies in other parts of the world' (BMWK, 2017).

But the Franco-German alignment behind EU industrial policy has most explicitly materialised during the Franco-German Council of Ministers in July 2017. At the meeting, the two governments tasked their major business associations, MEDEF and BDI respectively, to cooperate in setting up working groups on, *inter alia*, industrial policy, climate change, trade and investment to bring forward recommendations for closer economic cooperation between the two countries. Early in 2018, BDI and MEDEF issued their joint recommendations for new initiatives on industrial economic cooperation between Germany and France. Business interests issued calls for a 'new approach in the industrial policy of the European Union' through the promotion of a modern manufacturing sector via EU targeted funding for 'industrial investment, innovation and entrepreneurship' and new initiatives to promote technological transfers, regulatory facilitation and standard setting (BDI and MEDEF, 2018).

The European Commission's early 2019 decision to prohibit Siemens' proposed acquisition of Alstom further contributed a sense of urgency in the overhaul of EU industrial policy (European Commission, 2019). Explicitly incorporating recommendations from the Fol and from the business groups, in 2019 France and Germany eventually issued a Franco-German Manifesto for a European industrial policy fit for the twenty-first Century. The manifesto paved the way for the integration of industrial policy functions

at the EU level based on three pillars: (1) investing in and enabling innovation (through targeted funding and brokering); (2) Adapting the EU regulatory framework to the new global challenges (through regulatory facilitation favouring state aid and innovation); (3) Effecting measures to protect the EU single market (i.e. by protecting EU firms from foreign unfair competition).

In all, it is in the late 2010s that, reflecting a newly-found Franco-German consensus on EU industrial policy, the Commissions' communications start to discuss more explicitly vertical and mission-oriented forms of industrial policy (interview 11).⁸ These developments corroborate our H1 above: in a neofunctionalist fashion, functional and cultivated spillovers pushed in the direction of further integration of industrial policy at the EU level. Yet, major changes have only been possible once Germany's opposition to EU industrial policy was lifted (political spillover). Germany's change of preferences was due to the realisation that major structural changes in the international political economy called for an overhaul of EU institutions and policies to promote and protect the EU's industry, in Germany's interest too. The following sections will now detail empirically the developments in each of the four developmental functions.

5.2 Targeted resourcing: a case of spillover

Due to its focus on regulation and economic integration in the single market, the EU has historically wielded – and continues to wield – limited budgetary resources to promote industrial policy. Still, important changes can recently be observed both in the growing amount of resources targeted to industrial policy and in the conversion of existing programs toward industrial policy aims/functions. Targeted resourcing by the Commission can occur⁹ in the form of directly managed funds (e.g., Horizon Europe) and shared management funds (i.e., when the Commission co-manages funding programs together with the member states).

The most important direct form of targeted resourcing has generally consisted of funding for innovation, executed through resources earmarked in the multiannual financial framework (MFF) adopted unanimously by the Council after a conciliation phase between the Commission and the Parliament. Resources for research and innovation had already been increased gradually in the 2000s to comply with the Lisbon Agenda's goal to make Europe 'the world's most competitive and innovative region' (Aho, 2006, p. 13; Mosconi, 2022, p. 187). Yet, the budget for research and innovation has doubled from €55bn in the 2007–13 MFF to more than €95bn today, in the 2021–27 MFF. A qualitative shift from the Lisbon Agenda is also visible in the negotiation phase for the 2021–27 budget after the Commission issued a proposal based on the political agreement reached by member states in Bratislava (September 2016) and enshrined in the Rome Declaration (March

2017). Thus, the first long-term budget for the Union of 27 explicitly called for 'a modern budget for a Union that *protects, empowers, and defends*' (European Commission, 2018, emphasis added). The 2021–2027 MFF revolves around the guiding principle, agreed by member states, of fostering 'European added value' as a response to technological and climate change and geopolitical instability. In the event, also the very logic behind targeted resourcing has changed. Horizon Europe now revolves around mission-oriented funding (Mazzucato, 2018), i.e., five missions increasing investment in areas such as research and innovation, digitalisation, security, and defence and specifically aimed at stimulating ecosystems and cross-national innovation networks. New programmes have also been launched under the Horizon umbrella, such as the European Innovation Council (established through a pilot phase in 2018), which supports game-changing innovations throughout the lifecycle from early-stage research, to proof of concept, technology transfer, and the financing and scale up of start-ups and SMEs.

But it is in shared funding where we have observed the greatest increase of resources targeted to industrial policy functions. The post-COVID European response has led to the creation of the NextGen EU funds, unlocking over €700bn in loans and grants. The magnitude of NextGen EU is unprecedented and the Commission has subsumed much of the resources disbursed through the Recovery and Resilience Funds (RRF) under an industrial policy logic. Thus, 37 per cent of funds must be spent on the green transition, and 21 per cent on digitalisation. Moreover, the RRFs are disbursed in tranches tied to a member state's performance in the European Semester. As such, the RRF could be thought *de facto* as a new indirect instrument of EU industrial policy.

In sum, increased integration of targeted resources for industrial policy has occurred both via the strengthening of existing funding for innovation through the MFF and the creation of new programmes – such as the RRF – which, via shared funding, now provide greater resources for the funding of industrial policy aims. Although gradual improvements were already underway in the 2000s and early 2010s to shore up the Lisbon Agenda, transformative changes have precipitated later in the decade once a new industrial policy consensus could be found among member states. In line with our H2, integration in matters related to budgeting, a core state power (Genschel & Jachtenfuchs, 2018), has occurred via a spillover mechanism where member states retain oversight over funds via unanimity voting in the MFF and via the national implementation of shared funds.

5.3 Brokering innovation: a case of network spillover

In today's knowledge economy innovation has become increasingly complex, requiring network collaborations among a plethora of various cross-national

institutional actors and cooperation among several firms along the value chain (Block & Keller, 2009). Over the years, network failures due to coordination problems and a lack of trust have widened the gap between research and innovation in the EU (Granieri & Renda, 2012). In the past, the European Commission had tried to address these network failures through minor initiatives – e.g., in 2008 with the creation of the European Institute for Technology (EIT) aimed at supporting cross-national, voluntary innovation partnerships between companies, research labs, and higher education institutions (Leceta & Könnölä, 2021).

It is only since 2017, however, that the Commission has thrown its full weight behind the need to broker innovation in the EU single market. It first launched the annual industry days, a forum to link up members of the business community, governments, and academia to discuss the state of European industry. But, most importantly, the Commission has started to broker cross-sectoral and cross-national industrial alliances that draw from and expand on the EIT's network alliances. The goal of these alliances is to spur innovation in existing sectors and build new capacities by forging pan-European production networks. The first of such examples has been the European Battery Alliance, which was formed in 2017 with the aim of uniting actors along the battery value chain. Since then, as summarised by Table 2, seven new industrial alliances have been launched in the areas of hydrogen, ICT, semiconductors, cloud technology and raw materials, involving a plethora of various institutional and economic actors across the single market.

Commission officials are explicit about the network failures that motivate their brokering activity (Pichler *et al.*, 2021) and adamantly stress that it was 'quite an important role for us [the Commission] to be able to play as a neutral broker on this' (Interview 7). As with the first Alliance on batteries launched in 2017, officials from the Commission's DG GROW realised that, by itself, 'the market was not delivering' and the Commission wanted to make sure 'Europe is at least a player' in the battery market (interview 7). In the words of the former Energy Commissioner Maros Sefcovic, Commission officials had to step in 'to use the convening power of the European Commission to get the right people in the room' with an eye to establishing pan-European networks of battery production (cited in Financial Times, 2019).

Overall, since 2017 the brokering function has undergone a steady integration via the establishment of several production and innovation networks under the convening agency of the EU Commission which now operates and perceives itself as a full-fledged 'honest broker' to address network failures in the EU single market. These developments seemingly corroborate our H3.

Table 2. Industrial alliances brokered by the EU Commission.

EU Industrial Alliances	Start date	Commission's type of involvement	Main actors	Aims
European Battery Alliance (EBA)	Sep 2017	Launching and overseeing the Alliance	Commission (Maroš Šefčovič), EIB, EIT InnoEnergy, Northvolt	Developing a European battery value chain
Circular Plastics Alliance (CPA)	Dec 2018	Launching and overseeing the Alliance	DG Internal Market, Industry, Entrepreneurship and SMEs	Increasing the use of recycled plastics
European Clean Hydrogen Alliance (ECH2A)	July 2020	Launching the Alliance and organising the annual hydrogen forum	EC & Hydrogen Europe	Building a European hydrogen value chain
European Raw Materials Alliance (ERMA)	Sep 2020	Launching and overseeing the Alliance	Commission (Thierry Breton & Maroš Šefčovič), EIT RawMaterials	Reducing extra-EU dependence by diversifying the supply of critical raw materials
European Alliance for Industrial Data, Edge and Cloud	July 2021	Launching the Alliance and collecting regulatory expertise from the Alliance's partners	DG Connect	Developing home-grown European cloud technologies
Industrial Alliance on Processors and Semiconductor Technologies	July 2021	Launching the alliance and spurring public-private investment through the Chips Act	Commission (Thierry Breton), EIB, EIC	Identifying gaps in European semiconductor development
Renewable and Low-Carbon Fuels Value Chain Industrial Alliance	April 2022	Launching and chairing the High-level Steering Group	DG MOVE	Boosting production and supply of low carbon fuels in aviation and waterborne sectors
Alliance for Zero-Emission Aviation (AZEA)	June 2022	Launching and acting as key organiser (General Assembly)	DG DEFIS	Setting standards for sustainable aviation and accessibility for low-emission fuels

Source: Authors' elaboration.

5.4 Facilitating industrial policy: a case of spillover

In facilitating innovation and development is where we find the most creative and far-reaching spillover that expands the Commission's developmental role. In the past, strict supranational enforcement of competition and state aid regulations *constrained* national industrial policy that selectively aided domestic producers. In its role as DNS, the Commission now works to *enable* Member States' industrial policy by trying to channel national interventions into collaborative pan-European production and innovation networks. To overcome the strictures of the EU regulatory state, the Commission has activated a 'sleeping' legal resource hidden in the Treaties, namely the provisions allowing for forms of state aid compatible with the

internal market (art. 107(3) of the TFEU), ‘to promote the execution of an important project of common European interest.’ Although present since the Treaty of Rome, the IPCEI provision had not been activated fully until the late 2000s, not least for lack of clearly regulated governance criteria about what constitutes an IPCEI and how member states could conduct such market-distorting interventions (interviews 5; 8).

In the early 2010s, the push for IPCEIs was led by DG Connect and DG GROW, where policy officials were concerned about the laggard status of European industry in key growth areas such as batteries and microchips (interview 7). The absence of investment and network coordination were deemed market failures that particularly needed state involvement to be resolved (interview 8). As part of a broader initiative to modernise the EU’s state-aid and competition policy in the 2010s, DG Comp worked to formalise the eligibility criteria that classify the instances in which member states can deviate ‘orderly’ from state aid prohibitions for developmental aims. The Commission chief aim was to enable member states to intervene selective in the national economy while trying to preserve the overall integrity of the single market (interview 6). As put by a Commission official involved in the process: regarding article 107(3), ‘member states at the time, generally speaking, were not really aware of this legal basis, because it was not broadly used in the past’ (interview 8). This changed in 2014 when the Commission adopted a communication instructing member states on how to initiate the development of cross-national collaborative projects promoting common European interests.¹⁰ With the introduction of the IPCEI framework, the era of unfettered pursuit of a level playing-field is increasingly making way for a more sector-driven, mission-oriented, and less horizontal European industrial policy. IPCEIs satisfied member state demands for ‘other instruments, not only regulation, but also financial instruments [...] where you can get money without state aid problems’ (interview 11).

IPCEIs differ from post-WWII dirigiste industrial policy because of their networked and cross-national nature. To qualify as a project of common European interest, in fact, an IPCEI must minimally involve four Member States. Moreover, the governance of the IPCEI must include a wide range of European stakeholders, including SMEs, who must be invited to participate. Lastly, the project must promise to generate measurable benefits to EU markets and societies, unleashing positive spillovers beyond the Member States and the undertakings involved. In other words, through its facilitating function, the Commission is *de facto* operating as a DNS in the single market, actively trying to foster the emergence of pan-European innovation networks thanks to the strategic re-regulation of the EU state aid framework towards what Commission officials understand as ‘positive flexibility’ (interview 8).

Similar to the other industrial policy functions, these developments have accelerated in the late mid-2010s once a new industrial policy consensus has emerged. The first project in microelectronics was launched in 2018, with France and Germany playing a major convening role in mobilising other member states and industry stakeholders (interview 9). Since then, five more IPCEIs have been launched in key sectors such as battery production and hydrogen, involving a plethora of member states and various European stakeholders (see Table 3), while partnerships on cloud computing

Table 3. Initiatives undertaken through the IPCEI framework.

IPCEI	Duration	Funding (state aid + expected private capital)	Member states	Industry actors	Key actors
Microelectronics I	2018–2024	€1.75 + 6 bn	Austria, Germany, Italy, France + UK	32	European Commission, European Semiconductor Industry Association
Batteries I	2019–2031	€3.2 + 5 bn	Belgium, Finland, France, Germany, Italy, Poland, Sweden	17	European Commission (DG GROW), EBA
Batteries II	2021–2028	€2.9 + 9 bn	Austria, Belgium, Croatia, Finland, France, Germany, Greece, Italy, Poland, Slovakia, Spain, Sweden	42	European Commission (DG GROW), EBA
Hydrogen 1 (Hy2Tech)	2021–open ended	€5.4 + 8.8 bn	Austria, Belgium, Czech Republic, Germany, Denmark, Estonia, Greece, Spain, Finland, France, Italy, Netherlands, Poland, Portugal, Slovakia	35	European Commission, EIT InnoEnergy, Clean Hydrogen Alliance
Hydrogen 2 (Hy2Use)	2022–2036	€5.2 + 7 bn	Austria, Belgium, Denmark, Finland, France, Greece, Italy, Netherlands, Poland, Portugal, Slovakia, Spain, Sweden + Norway	29	European Commission, Clean Hydrogen Alliance
Microelectronics II ^a	2022/23–tbd	€10 bn	20 member states	90	European Commission, Germany

^aProject pre-notified and pending Commission approval.

Source: Authors’ elaboration.

and solar energy, health, and low-carbon industries are in the pipeline (Eisl, 2022, p. 5).

In all, facilitating national industrial policy increasingly takes place at the EU level where, in line with our H4, the Commission has expanded and reinterpreted its functions (spillover) thanks to its competence and autonomy in economic regulation and competition law.

5.5 Protecting the single market: a case of spillover

The European DNS has come to operate in a geopoliticized world where other nations generously support their industries and supply chains are increasingly vulnerable to political and economic shocks (Aggarwal & Reddie, 2020; Meunier & Mickus, 2020). With alliances shifting and China and the United States seeking to decouple themselves technologically, the EU is drastically stepping up its efforts to protect the single market from the ensuing geo-economic shifts (Weyand, 2022). Proposals to enhance the resilience and home-grown industrial capacity of the single market are discussed under the rubrics of digital sovereignty and open strategic autonomy (Schmitz & Seidl, 2022). In its October 2020 conclusions, the Council stated that 'Achieving strategic autonomy while preserving an open economy is a key objective of the Union' (European Council, 2020, p. 1). Beyond home-grown industrial capacity, this entails more forceful ways to obtain reciprocity in international trade rules and practices as well as prevent distortions in the single market from foreign anti-competitive behaviour.

In response to the 'big wake-up call for the EU' provided by geopolitical turmoil (Interview 3) and following the explicit requests of France and Germany, the Commission has recently introduced a set of protective instruments. Most importantly, in 2019 the Commission adopted the EU's framework for the coordination of foreign direct investment (FDI) screening, resulting from a February 2017 request by the governments of France, Germany, and Italy (BMWE, 2017). The regulation gives the Commission powers to lay out minimal requirements for the establishment of member states' screening mechanisms and a tool for the coordination of national FDI reviews, but leaves the final decision-making power on FDIs to member states. Twenty-four Member states have since implemented *national* investment screening mechanisms (Modrall, 2022). Additionally, in 2021 the Commission proposed regulation to investigate potentially distorting foreign subsidies to protect the level playing-field between EU and non-EU market actors, for instance within the European market for public procurement. Additionally, as of spring 2023, the EU Commission, the European Parliament and the Council are deliberating on the creation of an Anti-Coercion Instrument (ACI) with the aim of counteracting third countries' attempts to muscle EU member states into altering their sovereign choices under the

threat of measures affecting trade or investment (European Commission, 2022, pp. 10–11). Not surprisingly given the high stakes linked to security concerns, the Council's position in late 2022 proposes to scale down the Commission's authority and envisages an intergovernmental decision-making procedure to govern the ACI based on qualified majority voting (Euractiv, 2022).

In all, while the Commission and the member states have stepped up their efforts to coordinate new protective initiatives and tools in the single market, their implementation and oversight continues to remain at the national level. As such, developments confirm our H5 whereby attempts at greater pan-European coordination of protective measures conform to a spillover logic of integration: member states have increasingly tried to coordinate their responses to extra-EU unfair competition while keeping oversight over the discretionary protection of domestic markets on security and sovereignty grounds.

6 Conclusions

This article's aim was to account for the proximate causes behind the rise of EU industrial policy since the mid-2010s, both in terms of its timing and the governance modes of various industrial policy functions. Through the lens of the Developmental Network State (DNS) (Block, 2008; O'Riain, 2000), we have systematized and tracked the numerous fragmented industrial policy initiatives pursued by the Commission, the EU's executive power with a treaty-based mandate to pursue European industrial policy. This analytical framework allows us to highlight how the Commission increasingly operates to promote and protect the single market through four developmental functions: by providing targeted resourcing in support of technological innovation; by brokering pan-European innovation and production networks; by enacting strategic economic re-regulation to relax the EU's regulatory constraints and facilitate national and cross-national industrial policy and state aid; and by protecting the single market from unfair foreign competition and undue foreign influence on European states and firms.

The rise of EU industrial policy, as embodied by the ensemble of these four industrial policy functions, can be best explained through the neofunctionalist theory of EU integration. Since the mid-2010s, the steady expansion of new EU industrial policy initiatives has been driven, politically, by a newly found consensus between Germany and France on the need for more integrated and coordinated forms of industrial policy, necessary for EU member states to address significant challenges in the international political economy, namely: the environmental and technological challenges, rising economic protectionism and geopolitical turmoil. The four developmental functions of EU industrial policy have been integrated and are governed

through different governance modes. The targeted resourcing and protection functions remain largely intergovernmental, while facilitation is the result of the Commission's supranational agency and governance. The brokering function is based on network governance, with the Commission's supranational agency key to overcome network failures across the EU single market. Various factors, drawn from recent advancements in neofunctionalist theory (Nicoli, 2020), help to explain the variation in these governance modes: i.e., the degree of pre-existing policy integration, the type of policy (low versus high-politics), and the types of externalities stemming from the governance interdependence of various policies.

The Commission's increasing economic activism is a recent but important phenomenon, to be studied alongside concomitant efforts to govern markets in Europe – ranging from the ECB's unconventional monetary policy (van 't Klooster, 2021) and its quest for market-enhancing structural reforms (Braun *et al.*, 2021) to Europe's capital market union (Braun & Hübner, 2018) and European and national promotional banking (Mertens *et al.*, 2021; Mertens & Thiemann, 2019). The rise of EU industrial policy marks an important – yet still incomplete and ongoing – shift in EU economic governance. If, in the past, the Commission could be depicted as the agent of *market-enhancing* integration (Höpner & Schäfer, 2012) within the EU's regulatory state, our analysis suggests that the Commission today operates increasingly as an agent of *market-shaping* integration, proactively trying to correct, shape and protect the EU single market for the fulfilment of politically-decided public policy goals. The EU regulatory state is certainly *not* dead. But an ongoing process of gradual and possibly transformative change can be observed in Europe whereby new institutions, policies and programs are being set up to pursue developmental and industrial policy functions that are forward-looking, mission-oriented and sectoral, rather than backward-looking and horizontal.

Yet, if external challenges such as China's economic imperialism and the US's increasing protectionism call for greater economic activism and further integration of industrial policy in the EU, a full-fledged EU industrial policy is yet to emerge. Scholars continue to question the adequacy and the effectiveness of the panoply of EU industrial policy initiatives and programmes, highlighting criticalities linked to insufficient EU funding for industrial policy and an excessive fragmentation, and at times incoherence, of extant policy programs (Pianta *et al.*, 2020; Redeker, 2021; Wigger, 2022). Moreover, current measures such as the IPCEI-framework seem to systematically favour the richer and larger states with greater organisational and financial capacity to launch IPCEIs (Eisl, 2022). Along similar lines, the Commission's 'Temporary Frameworks' adopted after the COVID-19 outbreak and Russia's invasion of Ukraine to allow member states to aid ailing domestic producers jeopardise the single market's integrity. In fact, with greater

fiscal capacity, Germany and France alone have been responsible for almost 80% of all state aid green-lighted by the Commission (Financial Times, 2023b).

As a result, the Commission faces an unprecedented dilemma. On the one hand, given mounting extra-EU competition from China and the US, it is under pressure to enable ever greater intra-EU national state aid. This is indicated, for example, by the Commission's new guidelines to allow anti-relocation public funding for green projects when similar incentives are offered outside Europe (Financial Times, 2023a). On the other, however, forbearing from state aid enforcement leads to an unprecedented fragmentation of the single market in favour of richer and larger states. As advocated by EU Commission President Ursula von der Leyen (2023), a way out of this conundrum could be the establishment of a European sovereignty fund, pooling fiscal resources at the supranational level to conduct a full-fledged EU industrial policy. Yet, if this article's neofunctionalist account is correct, overcoming member states' resistance to greater fiscal integration to pursue EU industrial policy will be hard. But perhaps not impossible given the plethora of challenges Europe faces today.

Notes

1. We use the term industrial and developmental policy interchangeably to mean, following Warwick (2013, p. 16), 'any type of intervention or government policy that attempts to improve the business environment or to alter the structure of economic activity toward sectors, technologies or tasks that are expected to offer better prospects for economic growth or societal welfare than would occur in the absence of such intervention.'
2. Debates on the effects of globalization on states' economic sovereignty are reviewed by Hay (2020).
3. We omit Block's (2008) 'opening windows' category and subsume it within brokering.
4. A detailed analysis of political dynamics and intra-organizational conflicts of interest within the Commission is beyond the scope of this paper.
5. EUCO 104/2/13, paragraph 10, and EUCO 7/1/14, paragraphs 5-14.
6. COMPET was founded in 2002 and convenes four times a year and is usually comprised of member state ministers and executives of economic affairs.
7. See COMPET conclusions 14887/12, 17566/12, 13593/13, 17202/13, 13338/14.
8. Calls for a more ambitious EU industrial policy are particularly strong in 2017–2018 (see COMPET 9760/17, 15223/17, 7037/18, 14406/18, and EUCO 8/17, paragraph 15).
9. It is important to highlight that the Commission also contributes to funding innovation through indirectly managed funds such as via the European Investment Fund – which runs important programs providing risk finance to innovative SMEs (e.g. COSME or VentureEU) – or via the European Investment Bank, see Mertens *et al.*, 2021.
10. For a review of the whole regulatory process on the IPCEI framework, see European Parliament (2022).

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Appendix

EU commission industrial policy communications

The main source of reference on EU industrial policy are the EU Commission's industrial policy communications. Here, the Commission spells out its long-term vision for the direction and shape of EU industrial policy. We have qualitatively analysed all communications since 1990 (see Table A1), the period relevant for our study. Notably, the frequency of industrial policy communications has substantially increased since the mid-2010s, in line with the article's argument that the rise of EU industrial policy has been precipitated by a newly found alignment between France and Germany in favour of new forms of EU industrial policy. If the Commission launched its first industrial policy communications in 1990, until the 2010s such communications remained sporadic. Since 2010, the Commission has issued six consecutive industrial policy communications in a decade, indicating an unprecedented interest in the subject. Qualitatively, early communications advocated mostly for minimal and horizontal forms of industrial policy, largely geared toward ensuring a level playing-field to prevent sectoral industrial policy at the national level. Crucially, since the 2010s the Commission has adopted a much more interventionist and sectoral logic with mission-oriented forms of intervention. Since the 2020s, this has been complemented with a focus on open strategic autonomy, value chain resilience, and a protection of Europe's single market from unfair foreign distortions.

Table A1. EU Commission Industrial policy communications.

Year	Title	Rationale for industrial policy	Means of industrial policy
1990	Industrial policy in an open and competitive environment. Guidelines for a community approach	Horizontal; role of the state is to ensure predictable & competitive business environment to equip for structural adjustments	Regulation; integrating markets; standard setting; facilitation of infrastructure & education
2002	Industrial Policy in an Enlarged Europe	Horizontal; creating framework conditions to foster competitiveness	Regulation; cutting red tape where possible
2010	An integrated industrial policy for the Globalisation era	Horizontal, but value chain perspective highlighted for the first time; importance of networks & clusters for innovation	Regulation: framework conditions, access to finance for business, facilitation of infrastructure (energy, transport, communication); strengthening (cross-national) innovation
2012	A Stronger European Industry for Growth and Economic Recovery	Building on 2010, but with focus on sector-specific innovation and R&D; state needed to bridge 'valley of death' between innovation and marketisation	Same as 2010; for innovation: creation of task forces and agenda-setting on member state level
2014	For a European Industrial Renaissance	Building on 2012 with an even stronger emphasis on innovation; industrial policy to build cross-European value chains	New: investment in innovation (Horizon2020, ESIF, Smart Specialisation); reforms to state aid framework for R&I (IPCEI)
2017	Investing in a smart, innovative and sustainable Industry A	Clearer mission-oriented industrial policy focus; industrial policy to foster	New: EU Commission as a brokering agent through alliances and industry days

(Continued)

Table A1. Continued.

Year	Title	Rationale for industrial policy	Means of industrial policy
2020	renewed EU Industrial Policy Strategy A New Industrial Strategy for Europe	innovation & cross-national production networks Industrial policy to foster strategic autonomy & twin transitions; sectoral interventions for economic ecosystems	Reform of IPCEI instrument, introduction of screening measures for FDI and foreign takeovers
2021	Updating the 2020 New Industrial Strategy; Building a stronger Single Market for Europe's recovery	New: industrial policy to mitigate critical dependencies (e.g., raw materials)	Analysing dependencies for strategic value chains; proposing a mix of stockpiling, diversification & reshoring in case of need

Source: Our elaboration based on a qualitative analysis of the EU Commission's industrial policy communications

Interviews

We have conducted 11 online interviews. All interviews have been recorded and transcribed with prior verbal permission obtained on condition of guaranteeing the anonymity of the interviewee. We have selected our interview partners based on their knowledge, expertise, and direct involvement with EU industrial policy making. Thus, we have spoken to (former) high-level policy makers with intimate knowledge on member state positions, and with EU Commission officials directly involved with initiatives such as IPCEIs and foreign investment screening regulations. For instance, interview 7 was conducted with an official directly involved in the IPCEIs on batteries, interviewee 8 has overseen the state aid review process in DG Comp from its beginning, while our interviews 9 and 11 were conducted with high-ranking officials in the German economy ministry, allowing us to reconstruct the German U-turn on EU industrial policy. Each interview was semi-structured and guided by a questionnaire. The interviews lasted between 40 and 120 min. Table A2 gives an overview of the interviews conducted.

Table A2. List of interviewees.

Interview	Description	Date of Interview
Interview 1	Policy official DG Trade	April 2021
Interview 2	Senior policy official DG Trade	May 2021
Interview 3	Two Policy Officials European External Action Service	May 2021
Interview 4	Member of the European Parliament	May 2021
Interview 5	Policy official DG Comp	February 2022
Interview 6	Senior policy official DG Connect	March 2022
Interview 7	Senior policy official DG Grow	March 2022
Interview 8	Senior policy official DG Comp	March 2022
Interview 9	Former senior executive, BMW	November 2022
Interview 10	Policy analyst, European Parliament	December 2022
Interview 11	Former senior executive, BMW	December 2022