Collaborative Advantage in a Geopolitical World

How the European Commission fosters Innovation in the Single Market

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Abstract

With the rise of the regulatory state, political economy and EU integration scholarship have characterized the European Commission as the agent of market-enhancing integration and guardian of free market principles. Over the last decade, however, the Commission has advocated for greater state interventionism and engaged in active economic governance through multiple pan-European industrial policy initiatives. How can we account for this shift toward statist economic governance when the regulatory state was purposefully built to prevent market-distorting interventions? We argue that, confronted with geopolitics and structural economic change, the Commission has expanded its autonomy for two objectives: (1) ensure the single market's integrity by protecting against unwanted foreign distortions; (2) promote the upgrading of European industry for technological change. However, limited state capacity forces the Commission to nurture its embedded autonomy. Building on this concept, we argue through case studies, elite interviews, and primary document-analysis that the Commission is slowly morphing into a developmental network state capable of mobilizing decentralized policy networks to foster and coordinate public-private industrial policy partnerships in a multi-level governance space. Our findings highlight the need to move beyond the traditional focus on national vs supranational policy arenas to investigate hybrid forms of EU economic governance.

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1 Introduction

The European Union is usually depicted as a a set of institutions bent on promoting market-enhancing integration (European Commission, 1990; Majone, 2011; Scharpf, 1998). Through its single market program, the European Commission is said to boost the competitiveness of European firms by eliminating barriers to market entry and by curtailing the power of states to distort the smooth functioning of markets. This has also meant the dismantling of industrial policy aimed at picking winners and committing large fiscal resources to steer the direction of domestic industries. Over the last decade, however, the Commission has advocated for greater state interventionism (European Commission, 2020, 2014) and engaged in active economic governance through multiple pan-European industrial policy initiatives[1]. How can we account for this shift toward statist economic governance when the regulatory state was purposefully built to prevent market-distorting interventions?

We argue that structural changes in the nature of innovation (Hendrikse et al., 2022) combined with the move away from a rule-based to a power-based international order (Aggarwal and Reddie, 2020; Farrell and Newman, 2019) pose significant challenges to the European Union's single market program. The new global disorder (Lavery and Schmid, 2021) is replete with supply chain uncertainties and geopolitical stifles that put into question the collaborative advantage globalized production networks offer (Green, 2019; Nahm, 2021). At the same time, the basis of innovation and sources for growth have changed. As the center of gravity in global capitalism shifts to intellectual property heavy firms (Schwartz, 2021), so does the need for a regulatory environment different from the regulatory state. Contemporary innovation is predicated on collaborative efforts and investment that go beyond any single firm (Iversen and Soskice, 2019; Thelen, 2020). Without a clear mission and coordination efforts conducted by a competent bureaucracy, network failures stifle innovative potential (Mazzucato, 2013; Negoita, 2014). Taken together, geopolitics and structural changes render ineffective the regulatory state institutions upon which the single market is built.

While geopolitics and structural change are powerful forces to reorient the *social purpose* (Ruggie, 1982) of the EU's regulatory institutions, they cannot explain how an anti-statist bureaucracy is supposed to pursue statist policy. Especially in the day and age of stimulus and massive fiscal commitments to rejuvenate economic growth, how can a fiscally limited and politically constrained institution solve these problems? We argue that the Commission has stopped to embody the European regulatory state through its role of custodian of the market and market enhancing

[1] Examples include Important Projects of Common European Interest on car batteries, hydrogen, and microelectronics; the Chips Act to increase European semiconductor production; and measures to protect the single market from distortion of state-backed foreign multinationals through procurement and FDI-screening.

integration. Instead, the Commission has been gradually morphing into what can be understood as a Developmental Network State (Block, 2008; Maggor, 2021), with a supranational bureaucracy now taking over key responsibilities for the development of indigenous innovation in the EU. It aims to spur growth and innovation by facilitating an internal market insulated from geopolitical pressures, solve network failures by brokering transnational public-private alliances, and provide the necessary targeted resources to make good on its mission to "become the accelerator and enabler of change and innovation" (European Commission, 2020, p. 1)

The argument unfolds in four steps. We first review the relation between industrial policy and the European regulatory state, focusing on the European Commission. Then, we present our theoretical framework that marries EU integration scholarship with international political economy. Next, we briefly outline our empirical strategy and data, before turning to our analysis. On the one hand, we present evidence for why the Commission has made the turn to active industrial policy drawing from descriptive statistics and elite interviews. On the other hand, the analysis maps the myriad of initiatives, funding instruments and alliances that make up the new EU industrial policy. The last section concludes.

2 From industrial policy in the EU to the European regulatory state: review of academic debates

Political economy has, since its inception, thrived as a discipline studying the evolving dialectical relationship between states and markets (Polanyi, 1944) or, put differently, the political/hierarchical allocation of societal resources vis-à-vis the economy's price mechanism (Caporaso & Levine, 1992). As such, scholarly debates on industrial policy and economic governance have generally occupied a central place in the discipline.

While early political economy scholars did focus on the role of developmental states in fostering industrialization (Gerschenkron, 1962; Rostow, 1975), industrial policy analyses and debates gained prominence especially in the post-WWII period. Europe's so-called golden age (Eichengreen, 2008) was in fact characterized by a prominent role of the state in economic governance. On the one hand, governments sought to manage aggregate demand via active fiscal policies and the institutionalization of European welfare states (Glyn, Hughes, Lipietz, & Singh, 1992). On the other, they shaped the supply side of the economy through interventionist and selective forms of industrial policy (Shonfield, 1965). Thus, despite cross-country variation in the specific forms of economic

intervention[2], the state generally played an overarching role in the structuring and operation of domestic markets. Relatively centralized state bureaucracies enjoyed considerable discretion and formal hierarchical powers which they employed to support "national champion" firms in strategic economic sectors (Hayward, 1995). States acted as direct producers through state-owned enterprises for the provision of essential public services in infrastructural sectors such as energy, transport and telecommunications (Vernon & Aharoni, 2014). They could favour domestic producers via public procurement (Pianta, 2014) and subsidise domestic firms or entire industries via state-led credit policies like in France or Spain (Pérez, 2019; Zysman, 1984) or via a largely state-owned banking sector like in Italy (Deeg, 2009; Lutz, 1962). They embarked in economic planning and retained regulatory powers over mergers policy which, like in France, governments could use strategically to foster industrial consolidation and upscaling (Hall, 1986). In all, the industrial policy of the European golden age was enabled and facilitated by two key factors. On the one hand, European economic integration had not progressed beyond a customs unions and the Treaty of Rome's provisions against non-tariff barriers and competition-distorting state policy had remained dormant until the 1980s (Scharpf, 1999, p. 52). On the other, the state's control over the boundaries of the national economy was facilitated by the limited scope of economic and financial globalization which characterised the post-war "embedded liberalism" regime (Ruggie, 1982).

Since the mid-1980s, however, mounting globalization[3] and the deepening of the European regulatory state through steps of negative integration have increasingly challenged the authority and capacity of European nation states to govern the national economy and protect domestic producers (Sandholtz and Zysman, 1989; Scharpf, 1998, p. Ch.3). Intellectual and political interest in industrial policy shifted away from Europe to the United States (Block, 2008; Weiss, 2014) and East Asia [Evans (1995); Chang.1993; Nahm (2021); see also Warlouzet (2017)].

More recently, examples of increased state activism have invited a flourishing literature to reflect on the ostensible return of the state, which lead some to talk about a (re)emerging state capitalism (Alami and Dixon, 2019). These include sovereign wealth funds (Thatcher and Vlandas, 2021), transnationally operating state owned enteprises (Babic et al., 2020), and a more active role for the state in attracting foreign direct investment (Medve-Bálint and Šćepanović, 2020; Reurink and Garcia-Bernardo, 2020). As (Alami and Dixon, 2019) note, the more active role of the state in such developments equally seems to indicate a return of industrial policy, something Aiginger and Rodrik (2020), Chang and Andreoni (2020) concur with. At the same time, Bulfone et al. (2022) criticize the alleged return of the state by the loose or absent conditions placed on fiscal transfers to businesses. Thus, a

[2]For two comprehensive reviews of industrial policy goals, instruments and practices across Europe, see *inter alia* Bulfone (2022) and Bianchi and Labory (2020).

[3]For an excellent review on the various debates on globalization's impact on states, see Hay (2020).

large part of industrial policy should rather be conceived of as corporate welfare as an active role of the state in administering the processes unlocked by said transfers is absent. In reaction to these trends, academic debates on EU industrial policy can be said – without pretention to be omni-comprehensive – to have largely developed into three scholarly streams.

One set of scholars argues that pro-competition regulatory governance in Europe has replaced discretionary fiscal spending and industrial policies by the hitherto *active Keynesian state* (Majone, 1997). This is especially due to the "constitutionalization" of European competition law (Gill, 1998; Scharpf, 1998, p. 55) which prohibits public procurement practices as well as discretionary state aid (Wilks, 2005) and has ushered in the liberalization of public utilities (Thatcher, 2007). Along similar lines, scholars have also started to ponder whether states have lost governance capacity in an ever-more globalized economy (Strange, 1996).

A second set of scholars, instead, argues that despite the double process of globalization and Europeanization, states have found new reasons and modes to continue intervening selectively in the economy to structure and steer domestic markets. Thus, some scholars have aptly suggested that, in the age of regulation and liberalization, the state has increasingly engaged in new forms of market-supporting interventions (Levy, 2006) and discretionary policymaking via the strategic use of regulation (Bulfone, 2019a; Levi-Faur, 2009; Thatcher, 2014) or even regulatory forbearance (Dewey & Di Carlo). Other scholars have instead pointed at new forms of off-balance-sheet interventions where European governments under the single currency's fiscal straightjacket increasingly resort to national promotional banks for economic governance (Mertens & Thiemann, 2018). Not least important, some scholars have argued that the primary concern for the state has gradually become that of ensuring the economic competitiveness of the political economy in a post-fordist, globalized economy (Cerny, 1997; Jessop, 1996).

Lastly, a third and recent strand of the literature has begun to focus on new industrial policy developments at the European level. Thus, for instance, Landesmann and Stöllinger (2020) show that EU spending for industrial policy purposes remains today much lower than national governments' spending. However, Mosconi (2015) and Ambroziak (2017) have observed an increased role of the European Commission in domestic and supranational industrial policy initiatives, especially when it concerns innovation and cutting-edge technology. Pianta et al. (2020) provide a more critical account of EU industrial policy, lamenting the lack of adequate financial resources and the lack of a comprehensive, consistent and accountable policy framework. Moreover, they criticize EU industrial policy for its "poor awareness of the need to ensure real economic convergence across Europe's countries and regions." With a very evocative title – i.e. "go big or go home" – the work by Redeker (2021) argues that in its current form, the EU lacks the fiscal capacity to conduct effective

industrial policy while also highlighting the distributional implications of EU industrial policy. While the study of national industrial policy has received great attention by scholars, academic debates on EU level industrial policy are at their infancy, not least because activist EU industrial policy constitutes a recent, and in fact ongoing, phenomenon. In this paper, we aim to contribute to these debates by providing what is to our knowledge the first systematic account of the reasons and modes through which the European Commission engages in new forms of EU-wide industrial policy in the European single market.

By so doing, however, this paper also constitutes a case study in supranational policy entrepreneurship in the European Union. Thus, studying the agency of the European Commission in the new EU industrial policy is of great relevance also for scholarly debates on European integration. On the one hand, in fact, scholars debate whether European supranational institutions like the Commission or the ECJ act as agents of market-enhancing integration in the EU (Höpner & Schäfer, 2012) or whether they foster the transnational embedding of the European single market (Caporaso & Tarrow, 2009). Here, the European Commission is generally portrayed as the active agent of the European regulatory state (Majone, 1994) and a key driving force behind the process of negative integration in domains ranging from national welfare states (Scharpf, 1998) or economic sectors/industries with a great concentration of state-owned incumbents (Billows, Kohl, & Tarissan, 2021; Jabko, 2006). On the other hand, scholars debate whether the Commission's supranational agency does have an impact European integration at a time when the financial crisis has provided a renewed impetus for intergovernmentalism (Schimmelfennig, 2015). Views range from scholars who have identified the Commission's supranational entrepreneurship as rather feeble (Hodson, 2013) or even in decline (Peterson, 2012) and other who highlight how the Commission remains an important policy entrepreneur driving economic policy change in Europe (Schön-Quinlivan & Scipioni, 2017); Mertens and Thiemann (2019). We contribute to these debates on EU supranational entrepreneurship by providing a detailed analysis of how the Commission has gradually set up institutions and practices similar to developmental network states to foster the upgrading of European innovative industries and protect the single market from foreign economic player.

3 Analytical framework: Technological Change, Geopolitics, and the Developmental Network State

As noted by the recent literature on EU industrial policy, there have been a plethora of recent industrial policy initiatives by supranational institutions. However, while extant literature criticises the fragmented nature of these initiatives, we propose to treat the Commission as a policy

entrepreneur and make sense of EU industrial policy through the lens of the developmental network state (DNS) (Block, 2008; O'Riain, 2004; **Evans.2012?**). This framework enables us to structure and rationalise the universe of policies implemented by the Commission to appreciate the inner logics of the nascent EU industrial policy. In fact, we posit, and then demonstrate below, that what may initially seem as a set of fragmented and disconnected policy initiatives by the Commission has, instead, a coherent developmental logic in line with the aims and functioning of NDSs. Our argument is that the Commission is creating new policies and repurposing older ones with an eye to solving network failures in the single market and foster collaborative advantages in cutting edge economic sectors. Given the lack of centralized political power and administrative capacity, the Commission deploys its developmental policy through three key functions of NDSs: (1) providing targeted resources to economic actors in the single market; (2) brokering innovation; (3) facilitating innovation through accommodating and protectionist regulatory policy.

Technological change and its iplications for the Commission's activism in EU industrial policy

Industrial policy has been around for a long time. It even predates the emergence of industrial capitalism (Gerschenkron, 1962). Yet, its aims and instruments have evolved over time (Bulfone, 2022). During the post-WWII era of "embedded liberalism" (Ruggie, 1982), the state would intervene to steer the economy via aggregate demand management (Marglin and Schor, 1992) and to shape the functioning and structure of domestics markets through various forms of industrial policy and state-owned enterprises (Thatcher, 2014). Relatively centralized state bureaucracies enjoyed considerable discretion and formal hierarchical powers which they employed to protect domestic producers from foreign competition, nurture national champions in strategic economic sectors and, more generally, counteract market failures and generate economies of scale (Mazzucato, 2013). Thus, for instance, the Ministry of International Trade and Industry played a pivotal role in fostering Japan's industrialization (**Johnson.1982?**); the Finance Ministry masterminded French dirigisme (Hall, 1986) and the Bank of Italy fostered industrialization through strategic credit policy in Italy's largely publicly-owned banking sector (Lutz, 1962; Posner, 1977). Industrial policies were targeted at the then dominant manufacturing sector, characterized by vertically integrated firms which managed and controlled the various stages of the production process under a single corporate roof (Fligstein, 1990). Thus, large corporations were to a large extent "self-sufficient" insofar as they disposed of the physical and human capital (especially engineering skills) as well as inhouse R&D facilities necessary to spur innovation.

Since the 1980s, improvements in transportation and technology together with increasing trade liberalization have fostered the restructuring of the global economy while altering the nature of the production and innovation process (For an overview of these trends, see Thun, 2008). These changes in the policy environment have led states to consider new ways through which to support innovation and economic development in a global knowledge-based economy.

Most importantly for present purposes, the digital revolution has significantly altered the production process by making it possible for firms to separate the various steps and functions in the value chain and outsource them to foreign jurisdictions. Advancements in information and communication technology have increased the ability of firms to digitize and transmit information across the value chain, making it no longer necessary for the design and production functions to be constrained under the same roof (Berger, 2005). These changes have enabled the de-nationalisation of economic space and the re-scaling of production manifested in the intensification of cross-national production networks (Castells, 2009; **Powell.2001?**). The restructuring of global production has taken place through both the outsourcing of production and strategic partnerships among firms. Firms have become increasingly fragmented as they break up their value chains and outsource different productive functions through foreign direct investment based on competitive advantage (Reurink and Garcia-Bernardo, 2020). Increasingly common is also the search for collaborative advantage among firms in cutting edge sectors (e.g. renewable energy). Thus, firms enter strategic transnational cooperations with partner firms abroad to treasure from different yet complementary specializations (e.g. skills, know-how) and productive capacity rooted in different national innovation and production systems (Nahm, 2021).

The dynamics have been especially linked to the rise of the knowledge economy, whereby economic actors have become ever mode dependent on human capital and knowledge for successful innovation and growth (Iversen and Soskice, 2019). Innovation is increasingly reliant on the combination of different types of knowledge, capabilities, skills and resources combined together in various, creative, ways through cross-fertilization of ideas and experimentation of new solutions and practices[4]. The growing complexity of the knowledge bases necessary for innovation in today's economy means that even large firms are no longer self-sufficient in their innovative capacity, depending ever more on external sources of innovative activity (Granstrand, Patel, & Pavitt, 1997). Thus, innovation has become ever more complex, requiring more and more capabilities which make national innovation systems and firms within them not self-sufficient. Most new technological innovations emerge and develop via network collaborations among a plethora of actors – scientists, engineers, technologists – working in different institutions – firms, universities, public laboratories – and require cooperation

[4]For a review of the literature, see Fagerberg, 2004).

among several firms along the value chain to bring an invention to mass production (Block & Keller, 2009).

The decentralisation of production and the increasingly collaborative nature of innovation in the knowledge economy have led states so-called developmental network states (Block, 2008; Evans, 2012; O'Riain, 2004) to experiment with new forms of networked industrial policy (Negoita, 2014). Differently from the post-war era, states' developmental states' efforts now aim to address network failures (Schrank & Whitford, 2011) which inhibit the formation and sustenance of decentralized production networks As noted by Negoita (2014, p. 4), "Network failure occurs when production and distribution of economic goods would be best served by network forms of organization, but for a variety of reasons these networks either fail to materialize or fail to become entrenched." Networks can fail for instance "because technologists or firms cannot find the partners they need or those partners may lack the competence or trustworthiness needed for successful collaboration" (Block & Negoita, 2016, p. 63).

Therefore, there is increasing need for public policy to take on an active role in the formation and maintenance of production networks (Whitford & Zeitlin, 2004). Based on insights from the literature on innovation (Fagerberg, 2004, p. 12), we posit that the European Commission is conveniently placed to address network failures within the European single market and bolster European production networks in innovative industries for two key reasons, one related to the scale of the single market, the other to differences in national innovations systems. First, as noted by the literature, innovation consists of new combinations of existing ideas, capabilities, skills, resources. Therefore, the greater the pool of economic actors (firms, universities, organized interests, etc.) which the state can cajole into cross-national production networks, the greater innovative potential there will be in the market. In this respect, while each national economy in Europe is by itself small (e.g. if compared to the US and China), the single market has the critical mass size which enables the Commission to harness collaborative advantages exponentially across the EU. Second, since innovation consists of cross-fertilization of various ideas and creative experimentation, the greater the variety of ideas, capabilities, skills, resources, the greater the scope for them to be combined in new ways, producing more complex and sophisticated innovation.

Therefore, the Commission is better placed than member states to act as a DNS in Europe because, from the supranational arena, it can mobilize economic actors across Europe operating within different national innovation systems and, more generally, institutional complementarities in support of innovation (Hall & Soskice, 2001).

The geopolitics of collaborative advantage in a globalized world

At least until recently - "globalization [has caused] a persistent and consequential divergence of industrial specializations and national institutions" (Nahm, 2021, p. 3; cf. Krugman and Venables, 1995, p. 858). Indeed, "as information technology radically reduced the costs of communication and control, and as transportation costs fell, it became rational to disperse manufacturing globally rather than concentrating it in one place" (Baldwin, 2014; Schwartz, 2018, p. 55). Fundamentally, modern capitalism developed simultaneously in a space where sovereign territories (dominium) with their historical trajectories of development persist, and a space where economic activity is transnationalized and beyond the control of any state (imperium). The inexorable thrust for capitalist expansion thrives on options for spatial relocation and specialization (Arrighi, 2009). Acting on this, countries attune their industrial policy strategies and capital attraction profiles accordingly (Reurink and Garcia-Bernardo, 2020; Schwartz, 2018, p. ch.3). Therefore, it is not "despite the global interconnectedness of modern economies [that] national trajectories of growth and policy-making remain distinct" (Hassel and Palier, 2020, p. 5), but rather *because* of it. The extent to which this dominium-imperium logic (Slobodian, 2018, pp. 10–12) can unfold, however, is predicated on the openness and predictability of global markets and domestic politics.

Already prior to the pandemic and Russia's invasion of Ukraine, the viability of a global division of labor has been put into question (Economist, 2012; Kurlantzick, 2016), leading some to ask whether 'globalization is over' (Green, 2019). The pre-pandemic interregnum (Babic, 2020) and crisis of the liberal international order was based on at least three structural developments: i) the rise of China (de Graaff et al., 2020), ii) the weakening of U.S. hegemony (Laffan, 2018; Tooze, 2018), giving rise to iii) our current decentered, unstable, and turbulent 'global disorder' (Lavery and Schmid, 2021). First, while China's uneven accession to the WTO provided the very place for globalized production to expand, its integration has also created dependence, unequivocally put into view by the pandemic. Moreover, Chinese firms are increasingly successful in penetrating Western economies and societies, reflecting the emergence of a state capitalist alternative to free market capitalism (Alami and Dixon, 2019). Second, the weakening of U.S. hegemony, its uncertain commitment to free trade and 'weaponization' of the remaining interdependence (Farrell and Newman, 2019) come on top of its 'decoupling' ambitions vis-à-vis China, leaving the EU somewhere in the middle. This finally leads to a much more uncertain and unstable geopolitical and geoeconomic context in which the Single Market's fundamental principles of (reciprocal) openness, a level playing-field, and multilateralism are no longer guaranteed. Compounded by the pervasive supply chain issues brought forward by the pandemic, observers have now started to ponder the options for diversifying or even reshoring supply chains (Barbieri et al., 2020; Times, 2021).

The role of EU institutions in this global context has not yet been explained. Even in IPE perspectives, the European Commission is depicted as an inward-looking institution concerned only with the smooth functioning of its internal market (Bürbaumer, 2020; Curran, 2015). The turn to its new industrial policy and its explicit linkage to the global context ('strategic autonomy') suggest to rather conceive of the Commission as an outward-looking institution. In fact, we know that the EC closely monitors what happens globally (Meissner, 2018, pp. 199–200). What we propose is that to address geopolitical pressures and innovation market failures, the Commission has come to foster regional collaborative advantage. The economies of scale in the single market and the diversity of producers and national economies offer a fruitful space to do so. In a way, they arguably offer their own *internal* dominium and imperium logic, but one that can be stabilized by a supranational institution on the top and domestic welfare states below.

Table 1: Industrial policy phases

	International context	Production regime	Technological context	Role of the state	Mode of economic governance	Aim of national industrial policy	Instruments of national industrial policy	EU level industrial policy initiatives	EU constraints on industrial policy
Interventionist Phase (1950s-1970s)	Embedded liberalism	Fordism	2nd industrial revoluation	Active Keyenesian state	Hierarchy	Supporting strategic industries; bridging technology gap vis-à-vis U.S.; Nurturing national champions.	State ownership, economic planning, M&A control, subsidies, procurement, aggregate demand management.	Creation of intergovern-mental initiatives (e.g. PREST, ESPRIT, EurATOM, Airbus)	Weak
Liberal Phase (1980s-2010s)	Globalization, financializa-tion, rise of EMU	Post-fordism	3rd industrial revoluation	Competition & consolidation state	Markets	Improving framework conditions for markets; Enhancing international competitive-ness; preventing government failures.	Strategic re-regulation; strategic regulatory non-enforcement; FDI attraction in GVCs; off balance sheet IP through NDBs.	Preventative and puntative stance against market distortions; limited funding for R&I, exemption for agriculture	Strong
Post-hegemonic Phase (2020s-)	Secular stagnation, geopoliticiza-tion, digitization	Franchise economy	4th industrial revoluation	Developmental network state	Public-private	Remedying market failures (twin transitions); pursuing strategic autonomy; nurturing European Champions.	Relaxed state aid rules; De-risking funds.	Active brokering of industrial alliances; facilitating protection of single market; targeted resourcing for R&I	Flexible

Source: authors' elaboration

The EU Commission as a DNS

To analyse the working of the EU Commission in the new EU industrial policy, we employ the analytical framework on NDS elaborated by Block (2008). A DNS can be operationalised into four distinct but complementary tasks: (1) targeted resourcing; (2) Brokering; (3) Facilitation; (4) Protection[5].

Targeted resourcing involves public officials identifying through consultations with experts and the business community important technological challenges necessary to overcome for economic development. Officials then provide resources targeted to groups that have promising projects for achieving technological innovation and breakthroughs. Brokering can take the form of technological and business brokering. Technological brokering involves putting together already existing technologies or people or laboratories together in new creative ways. This occurs through several initiative which the state launches in order to create multiple windows to which scientists and engineers, working in universities, government laboratories or business settings can bring ideas for innovations and receive funding and other types of support. Business brokering involves setting up networks which enable technologists to connect with private investors – and NPBs – to acquire the funding necessary to develop and commercialized products.

Facilitation consists of a set of actions which the state puts in place to facilitate the emergence of innovation. These can be of "infrastructural nature" or regulatory. The former include infrastructure building and the provision of public goods necessary for market to function and economic actors to operate. The latter involve a plethora of regulatory policies such standard setting, regulatory facilitations/simplification.

Protection, very similar to early developmental policies (Gerschenkron), generally consists of tariff or non-tariff barriers imposed by the political authority to protect domestic market actors. However, in today's globalized economies, protection can often consist of regulatory measures aimed at screening FDI and allow only selected investments for concerns of national security (e.g. in key strategic sectors like energy or telecommunications) or unfair competition (e.g. by foreign companies which are either directly or indirectly backed or subsidied by the state, e.g. Chinese corporations). Below, we apply this analytical framework to analyse and make sense of the plethora of industrial policy initiatives performed by the EU Commission.

[5]We have decided to omit Block (2008)'s 'opening windows' category because in our eyes, it cannot be effectively distinguished from facilitation. Rather, we see a need to take on board protection as a distinct category reflecting the change towards a more geopolitical world.

4 The European DNS in action

Why has the European Commission forsaken its mission to promote market-enhancing regulation to become an active promoter of industrial policy? And how is a fiscally and politically constrained bureaucracy supposed to fulfill its new objective? Below, we address both questions, focusing first on the 'why,' and then on the 'how.'

4.1 The Commission's activism in the age of technological and geopolitical change

Since 2020, discussion on reshoring production as a result of supply-chain uncertainty have been at an all-time high (Google Trends, 2022). And data on supply chain bottlenecks support the image that perturbations to globalized production networks are here to stay (Kamali and Wang, 2021), especially given China's absence of an exit-strategy from its zero-covid policy. Yet, it would be a mistake to attribute all disruption and uncertainty to covid-19 or even recent political turmoil. For instance, data from Global Trade Alert (2022) shows a secular increase in subsidies conferred to businesses in China since at least 2010. Subsidized firms are increasingly propelled into international markets, and uproot the playing field as it was before. Additionally, the American stance against China in global trade and manufacturing has only toughened under president Biden.

When it comes to technological change, there are two important developments. The first would be the ever-increasing importance of digitalization and technological change. Through the platform-revolution (Seidl, 2021, pp. 7–8), a number of (non-European) tech firms form the 'infrastructural core' of increasingly digitalized economies and societies (Dijck et al., 2018, p. 12; Hendrikse et al., 2022). Underlining this shift, since 2016, the value of data flows outweighs the value of physical trade flows (McKinsey, 2016). More generally, Schwartz (2021) shows how over time, profits have flowed more and more to IPR-heavy firms, emphasizing the need for innovation even more. A recent survey by Mediobanca of the 400 largest multinationals indeed shows manufacturing and technology sectors outpacing growth of other sectors by a wide margin (Mediobanca, 2018 XXV). The second development concerns the nature of innovation itself. As discussed in section 3, the networked nature of innovation makes it more challenging for individual firms to commit the fiscal resources and human capital needed to spur innovation. Moreover, the very IPR-heavy firms dominating global capitalism have less incentive to invest because an increase in profits is more easily obtained through share-buybacks (Schwartz, 2021), thus providing another market failure.

The challenges these developments pose have not gone lost on the European Commission. In its 2005 industrial strategy, the endorsement of markets could not be clearer: "The main role of

industrial policy is to provide the right framework conditions for enterprise development and innovation in order to make the EU an attractive place for industrial investment and job creation. It is evident that it is primarily private sector businesses that create economic growth, not the public sector" (European Commission, 2005, p. 3). When introducing the 2020 industrial strategy, however, Commissioner for Internal Market Breton said "managing the green and digital transitions and avoiding external dependencies in a new geopolitical context requires radical change - and it needs to start now." (**Breton.2020?**). The fact that perceptions about a changed world lead to real change is also reflected in the aftermath of the ill-fated Alstom-Siemens merger. When the Commission blocked the merger in 2019, it rejected the outward-looking plea to create a European champion to face global competition on the ground of market distortion. After promising a Franco-German inspired revision to its competition policy (cf. Bundesministerium für Wirtschaft un Energie and Ministère de l'Économie et des Finances, 2019; Politico, 2019), it approved Alstom's acquisition of Bombardier - a Canadian railway conglomerate - to create a 'global mobility leader' (Financial Times, 2020).

The view of a changed technological and geopolitical reality is also espoused by EU policy officials. For instance, the Commission has seen that for high-tech areas such as electric car batteries, "the market was not delivering" (interview 2). When it comes to electric battery production,

> Finding two to 3 billion euros. I mean, that's a challenge for even the biggest companies, let alone the start ups that were in this field. And if the big car companies themselves were not going to invest, it was difficult to see where this money would come from. So that was the conundrum. That was the challenge. That's why the commission got involved (interview 2).

Interestingly, "many of the car companies were keen to maintain the links that they already had with the existing big Asian battery producers" (interview 2) due to reasons of efficiency and cost. However, the Commission stepped in because "from the Commission's point of view, you want to make sure that Europe is at least a player in this" (interview 2). Thus, rather than a market-centered logic, the Commission here opted for a more strategic logic to intervene. In no small part, geopolitical motivations played a role here. "And 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 3). Thus for the Commission changing its mission, "the global dimension is, of course, a very, very important one here" (interview 3).

4.2 How the Commission operates as an NDS

Below, we present a mapping of the DNS-functions the Commission has - over time - taken on. We follow the money by tracing industrial policy programs through the last three multi-annual financial framework programs, then we look at how the Commission increasingly brokers alliances, before we turn to facilitation and protection.

4.2.1 Targeted resourcing

Analysis of MFF over three cycles Substantiate with analysis of 3 types of resources:

- Directly managed
- Indirectly managed
- Shared

Purpose is to highlight how the Commission targets resources to economic actors within the single market to foster collaborative advantage among firms and countries. The Commission provides resources for developmental projects through three types of funding programmes: directly managed, indirectly managed and shared funding programmes. It provides targeted resources through various types of financial instruments, namely business loans, microfinance, guarantees and venture capital (e.g. EIC Fund). The Commission thus directly provides funding (e.g. for Horizon Europe) which is managed through its DGs or EU Executive Agencies. Or, the Commission operates indirectly through the resourcing conducted by other related entities, e.g. the European Investment Bank (where it nominates one director and monitors projects) or with the European Investment Fund in which the Commission is a shareholder with a 30% stake. Or, the Commission shares responsibility with member states in 70% of EU funding, where member states plan and implement projects while the Commission monitors and supports.

4.2.2 Brokering

European Innovation Council and Small and Medium-sized Enterprises Executive Agency (ESMEA). Established on 1 April 2021, EISMEA replaces the previous Executive Agency for Small and Medium-sized Enterprises (EASME). EISMES groups together in one agency all the activities of the European Innovation Council (EIC) and the programmes related to small and medium-sized enterprises:

European Innovation Council. The European Innovation Council (EIC) has been established under the EU Horizon Europe programme. It has a budget of €10.1 billion to support 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. Related to the "opening window" task,

b. Single Market Programme.

c. Interregional Innovation Investments.

d. Smart specialization platform

European Institute of Innovation and Technology (EIT). The EIT is an independent EU body established in 2008 to strengthen Europe's ability to innovate. It is an integral part of Horizon Europe. Its aim is to bring together organisations from business, education and research and find innovate solutions to pressing global challenges to create, cooperate and innovate. EIT supports the development of dynamic, long-term European partnerships among leading companies, research labs and higher education. These partnerships are called EIT Knowledge and Innovation Communities and each is dedicated to finding solutions to a specific global challenge, from climate change and sustainable energy to healthy living and food. The EIT is Europe's largest innovation ecosystem and connects innovators and organisations. We power innovators and entrepreneurs across the EU and beyond to turn their best ideas into cutting-edge products and services. Commission indirectly ensures the steering and functioning of this innovation ecosystem through appointment and monitoring powers. In fact, in accordance with the EIT Regulation, 12 members are appointed to the EIT Governing Board by the European Commission. The European Commission considers the balance between higher education, research, innovation and business experience as well as gender and geographical balance when appointing members to the EIT Governing Board members. Moreover, in accordance with the EIT Regulation, the European Commission appoints an observer to take part in the meetings of the Governing Board and of the Executive Committee.

4.2.3 Facilitation

How does a developmental network state facilitate the growth of its industries? The nature of facilitation has an enabling side that allows for the infrastructure to grow technologies, and a regulating side that provides the environment for such technologies to grow, all in consultation with its key sectors and businesses.

The most significant regulatory development concerning industrial policy in the single market is the launch of important projects of common European interest (IPCEI)[6]. As part of the broader reforms to state-aid and competition policy, the Commission sought to formalize the criteria that classify when member states can apply for exemptions of state aid rules (interview 2). Crucially, there must be a market failure and at least two member states should sign on to the proposal. Around 2012, 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 2). The absence of investment and network coordination were deemed market failures that particularly needed state involvement to be resolved (interview 3). It was the Commission who was the first mover here, before member states and industries jumped on board.

Since the launch of the IPCEI strategy in 2014, several projects with billions of funding have been approved. Two battery projects, a project on microchips, and a forthcoming hydrogen project show increased involvement of the Commission to not only identify key growth areas as is has since the Lisbon Strategy, but also actively facilitate the emergence of such industries. The IPCEI instrument shows the Commission operating as a DNS; not only is it more than simply a horizontal industrial policy aimed at creating a competitive business environment. The Commission has also proactively identified key areas of importance and repurposed parts of its regulatory state apparatus to deal with the market failures identified. In the wake of the covid-19 emergency, the vulnarability of supply chains and geopolitical risks attached have given even more impetus to continue on this course.

In addition to IPCEIs, the Commission has recently also launched a new strategy on standard setting. It aims to leverage the EU's age-old but increasingly challenged market power to dictate global product standards. The strategy was introduced months after China launched a similar strategy and after successful Chinese efforts to standardize next-generation lithium batteries (European Commission, 2022). In this sense, even the oldest certainty of the single market is no longer unquestioned.

Regulation also has an enabling side. Another answer to Chinese efforts is the launch of the Global Gateway project, pitted directly against China's belt and road initiative. Aimed to leverage 300 million euro's in investment, the goal is to upgrade digital and physical infrastructures. Such infrastructural investments can enhance the competitiveness of EU industries. Additionally, the Commission aims to enable small and medium enterprises through various venture capital funds and systems. The point of departure is twofold. On the one hand, the trouble SMEs face in securing

[6]The legal basis for IPCEI is Article 107 section 3B in the TFEU (formerly article 87 TEC). Although present since the Treaty of Rome, it has only become commonly used since 2008 (interview 1)

access to financing are well documented. On the other hand, there exists a longstanding desire in Europe to have more 'unicorn' companies (i.e. start-ups in the tech-sector valued at least $1 billion). Currently, it has only a third as many as the United States (Politico, 2020). In addition to the capital markets union, the Commission has repurposed parts of the Horizon Europe programme to act as venture capital for high risk projects. The Commission selects projects for funding and - if successful - becomes a shareholder in the project. In sum, the EU Commission's facilitative role has been recent and many initiatives have come off the ground only after the global financial crisis.

	Offensive	**Defensive**
Increase capacity	IPCEIs, Chips Act, GAIA-X, Global Gateway Strategy	Farm-to-Fork strategy, Capital Markets Union, COSME
Prevent distortion	FDI screening, procurement screening, trade enforcement officer	Digital Markets & Digital Services Acts, standard setting

Table 2: Facilitation types

4.2.4 Protection

Protecting EU firms from RoW

- `FDI-screening`

  - what else?

One of the most prominent shifts away from market-enhancing regulation in both discursive and policy terms has been the rise of open strategic autonomy and digital sovereignty (Schmitz and Seidl, 2022). As a result of the structural technological change and rampant geopolitical challanges identified before, EU policy elites increasingly change their tune of enthousiasm for free trade. In a world order that is increasingly power-based, they argue for a more assertive toolkit that can make sure the EU can defend its interests when cooperation is impossible. In particular, EU policy

officials see distortions in the single market by foreign state-backed enterprises out-competing home-grown firms (Weyand, 2022). This happens both in procurement, FDI attraction, and trade. To tackle the 'geopolitics of value chains' (Breton, 2022), the Commission has recently introduced a set of initiatives in all these policy areas. A new 'chief enforcement officer' post has been created to make sure that trading partners conform to the standards agreed in EU treaties; potential distortions in the EU's level playing-field stemming from state-backed foreign investors are tackled by the new foreign direct investment screening mechanism, and further bolstered by a soon to be adopted tool that does the same for procurement (Breton, 2022); a toolkit for identifying and preventing foreign interference in research and innovation without preventing international collaboration, allowing research institutions to "stay open, but do it responsibly" (**Killeen.2022?**)

Finally, the Commission facilitates industrial policy defensively too. By means of the digital markets and digital services Acts, it aims to prevent market distortions by big foreign enteprises in the digital and platform domain.

Conclusion

The main purpose of this paper has been to show how through a set of geopolitical and technological changes, the European Commission has reoriented its role as a regulatory custodian of free-market principles and negative integration towards an active conduit of industrial innovation in the vein of a developmental network state. This development fits in the 'geopolitical' turn taken under the Von der Leyen Commission, and shows how even without treaty change, the European institutions are flexible enough to re-orient themselves to anything from Neo-Keynesian monetarism (van 't Klooster, 2021) to a (hidden) investment state (Mertens and Thiemann, 2019). We now add to the mix a developmental network state fostering active industrial policies to catalyse the twin transitions of digitalization and decarbonization.

[Paragraph on theory take-aways?].

It would be wise, however, to qualify the optimistic tone on three grounds. First, the move to a more active role for the state and a rebalancing of public and private power is not universal. In the green side of the twin transition, we rather see a strengthening of private power through so-called de-risking programs that inherently require commitments from public authorities to make projects 'investable' and to guarantee against failure with taxpayer money (Gabor, 2021). Second, and closely related, some initiatives that are ostensibly examples of industrial policy such as Intel's provisioned 'megafabs' are in fact corporate welfare due to the absence of conditionality and lack of further state involvement (Bulfone et al., 2022). Combined with questionable initiatives such as Gaia-X, it is clear

that low state capacity can also lead to waste and failure. Third, the disbursement of funds befalls the 'usual suspects' and incumbent industries. The car and microelectronics sectors, as well as the energy sector, are already at the top of the European productive ecosystem. While there are many reasons to want to maintain their global competitiveness, there seems little to no attention paid to the regional asymmetries and value chain dynamics they reproduce. In this sense, we concur with Pianta et al. (2020) that a more serious incorporation of laggard industries is warranted.

References

Aggarwal, V.K., Reddie, A.W., 2020. New Economic Statecraft: Industrial Policy in an Era of Strategic Competition. Issues & Studies 56, 2040006. https://doi.org/10.1142/S1013251120400068

Aiginger, K., Rodrik, D., 2020. Rebirth of Industrial Policy and an Agenda for the Twenty-First Century. Journal of Industry, Competition and Trade. https://doi.org/10.1007/s10842-019-00322-3

Alami, I., Dixon, A.D., 2019. State capitalism(s) redux? Theories, tensions, controversies. Competition & Change 24, 70–94. https://doi.org/10.1177/1024529419881949

Ambroziak, A.A. (Ed.), 2017. The New Industrial Policy of the European Union, 1st ed. 2017. ed, Contributions to Economics. Springer International Publishing : Imprint: Springer, Cham. https://doi.org/10.1007/978-3-319-39070-3

Arrighi, G., 2009. Adam Smith in Beijing: Lineages Of The 21St Century. Verso, London.

Babic, M., 2020. Let's talk about the interregnum: Gramsci and the crisis of the liberal world order. International Affairs 96, 767–786. https://doi.org/10.1093/ia/iiz254

Babic, M., Garcia-Bernardo, J., Heemskerk, E.M., 2020. The rise of transnational state capital: State-led foreign investment in the 21st century. Review of International Political Economy 27, 433–475. https://doi.org/10.1080/09692290.2019.1665084

Baldwin, R., 2014. Trade and Industrialization after Globalization's Second Unbundling: How Building and Joining a Supply Chain Are Different and Why It Matters, in: Globalization in an Age of Crisis. University of Chicago Press. https://doi.org/10.7208/chicago/9780226030890.003.0006

Barbieri, P., Boffelli, A., Elia, S., Fratocchi, L., Kalchschmidt, M., Samson, D., 2020. What can we learn about reshoring after Covid-19? Operations Management Research 13, 131–136. https://doi.org/10.1007/s12063-020-00160-1

Berger, S., 2005. How We Compete: What Companies Around the World Are Doing to Make it in Today's Global Economy. Crown Business, New York.

Bianchi, P., Labory, S., 2020. European Industrial Policy: A Comparative Perspective, in: The Oxford Handbook of Industrial Policy. Oxford University Press, pp. 593–620. https://doi.org/10.1093/oxfordhb/9780198862420.013.22

Block, F., 2008. Swimming Against the Current: The Rise of a Hidden Developmental State in the United States. Politics & Society 36, 169–206. https://doi.org/10.1177/0032329208318731

Breton, T., 2022. Speech by Commissioner Breton at the conference "A stronger industry for a more autonomous Europe". European Commission - European Commission.

Bulfone, F., 2022. Industrial policy and comparative political economy: A literature review and research agenda. Competition & Change 10245294221076225. https://doi.org/10.1177/10245294221076225

Bulfone, F., Ergen, T., Kalaitzake, M., 2022. No Strings Attached: Corporate Welfare, State Intervention, and the Issue of Conditionality. MPIfG Discussion Paper 22/2, 34.

Bundesministerium für Wirtschaft un Energie, Ministère de l'Économie et des Finances, 2019. A Franco-German Manifesto for a European industrial policy fit for the 21st Century.

Bürbaumer, B., 2020. TNC Competitiveness in the Formation of the Single Market: The Role of European Business Revisited. New Political Economy 1–15. https://doi.org/10.1080/13563467.2020.1806222

Castells, M., 2009. The Rise of the Network Society, 2nd edition. ed. Wiley-Blackwell, Chichester, West Sussex ; Malden, MA.

Chang, H.-J., Andreoni, A., 2020. Industrial Policy in the 21st Century. Development and Change 51, 324–351. https://doi.org/10.1111/dech.12570

Curran, L., 2015. The impact of trade policy on global production networks: The solar panel case. Review of International Political Economy 22, 1025–1054. https://doi.org/10.1080/09692290.2015.1014927

de Graaff, N., ten Brink, T., Parmar, I., 2020. China's rise in a liberal world order in transition – introduction to the FORUM. Review of International Political Economy 27, 191–207. https://doi.org/10.1080/09692290.2019.1709880

Dijck, J. van, Poell, T., Waal, M. de, 2018. The platform society. Oxford University Press, New York.

Economist, T., 2012. The rise of state capitalism. The Economist.

European Commission, 2022. Speech by Commissioner Breton. European Commission - European Commission.

European Commission, 2020. A New Industrial Strategy for Europe (No. COM(2020) 102 final).

European Commission, 2014. For a a European Industrial Renaissance.

European Commission, 2005. Implementing the Community Lisbon Programme: A policy framework to strengthen EU manufacturing - towards amore integrated approach for industrial policy (No. COM(2005) 474 final).

European Commission, 1990. INDUSTRIAL POLICY IN AN OPEN AND COMPETITIVE ENVIRONMENT: Guidelines for a Community approach (No. COM(90) 556 final).

Evans, P., 1995. Embedded Autonomy. Princeton University Press.

Farrell, H., Newman, A.L., 2019. Weaponized Interdependence: How Global Economic Networks Shape State Coercion. International Security 44, 42–79. https://doi.org/10.1162/isec_a_00351

Financial Times, 2020. EU approves Alstom-Bombardier deal to create train-making giant. Financial Times.

Fligstein, N., 1990. The Transformation of Corporate Control. Harvard University Press, Cambridge, Mass.

Gabor, D., 2021. The Wall Street Consensus. Development and Change 52, 429–459. https://doi.org/10.1111/dech.12645

Gerschenkron, A., 1962. Economic backwardness in historical perspective: A book of essays. Belknap Press, Cambridge, Mass.

Gill, S., 1998. New constitutionalism, democratisation and global political economy. Pacifica Review: Peace, Security & Global Change 10, 23–38. https://doi.org/10.1080/14781159808412845

Google Trends, 2022. Google Trends. Reshoring.

Green, J., 2019. Is Globalization Over? Polity Press, Cambridge , UK ; Medford, MA.

Hall, P.A., 1986. Governing the economy: The politics of state intervention in britain and france. Oxford University Press; Oxford University Press.

Hassel, A., Palier, B., 2020. Tracking the Transformation of Growth Regimes in Advanced Capitalist Economies, in: Growth and Welfare in Advanced Capitalist Economies. Oxford University Press, Oxford. https://doi.org/10.1093/oso/9780198866176.003.0001

Hendrikse, R., Adriaans, I., Klinge, T.J., Fernandez, R., 2022. The Big Techification of Everything. Science as Culture 31, 59–71. https://doi.org/10.1080/09505431.2021.1984423

Iversen, T., Soskice, D., 2019. Democracy and Prosperity: Reinventing Capitalism through a Turbulent Century. Princeton University Press, Princeton, New Jersey.

Kamali, P., Wang, A., 2021. Longer Delivery Times Reflect Supply Chain Disruptions. IMF Blog.

Krugman, P., Venables, A.J., 1995. Globalization and the Inequality of Nations*. The Quarterly Journal of Economics 110, 857–880. https://doi.org/10.2307/2946642

Kurlantzick, J., 2016. State Capitalism: How the Return of Statism is Transforming the World. Oxford University Press.

Laffan, B., 2018. The Next European Century? Europe in Global Politics in the Twenty-First Century. Journal of Contemporary European Research 14, 303–309. https://doi.org/10.30950/jcer.v14i4.1037

Landesmann, M.A., Stöllinger, R., 2020. The European Union's Industrial Policy, in: The Oxford Handbook of Industrial Policy. Oxford University Press, pp. 620–660. https://doi.org/10.1093/oxfordhb/9780198862420.013.23

Lavery, S., Schmid, D., 2021. European Integration and the New Global Disorder*. JCMS: Journal of Common Market Studies n/a. https://doi.org/10.1111/jcms.13184

Lutz, V., 1962. The central bank and the system of credit control, in: Sayers, R.S. (Ed.), Banking in Western Europe. Oxford University Press, Oxford.

Maggor, E., 2021. The Politics of Innovation Policy: Building Israel's "Neo-developmental" State. Politics & Society 49, 451–487. https://doi.org/10.1177/0032329220945527

Majone, G., 2011. The Transformations of the Regulatory State, in: Leisering, L. (Ed.), The New Regulatory State. Palgrave Macmillan UK, London, pp. 31–56. https://doi.org/10.1057/9780230343504_2

Majone, G., 1997. From the Positive to the Regulatory State: Causes and Consequences of Changes in the Mode of Governance. Journal of Public Policy 17, 139–167.

Marglin, S.A., Schor, J.B. (Eds.), 1992. The Golden Age of Capitalism: Reinterpreting the Postwar Experience, WIDER Studies in Development Economics. Oxford University Press, Oxford. https://doi.org/10.1093/acprof:oso/9780198287414.001.0001

Mazzucato, M., 2013. The Entrepreneurial State: Debunking Public vs. Private Sector Myths, 1 edition. ed. Anthem Press, London ; New York.

McKinsey, 2016. Digital Globalizaiton: The New Era of Global Flows.

Mediobanca, 2018. Multinationals: Financial aggregates 2018.

Medve-Bálint, G., Šćepanović, V., 2020. EU funds, state capacity and the development of transnational industrial policies in Europe's Eastern periphery. Review of International Political Economy 27, 1063–1082. https://doi.org/10.1080/09692290.2019.1646669

Meissner, K.L., 2018. Commercial realism and EU trade policy: Competing for economic power in Asia and the Americas, Routledge/UACES contemporary European studies. Routledge, Taylor and Francis Group, London ; New York.

Mertens, D., Thiemann, M., 2019. Building a hidden investment state? The European Investment Bank, national development banks and European economic governance. Journal of European Public Policy 26, 23–43. https://doi.org/10.1080/13501763.2017.1382556

Mosconi, F., 2015. The New European Industrial Policy: Global Competitiveness and the Manufacturing Renaissance. Routledge, London.

Nahm, J., 2021. Collaborative Advantage: Forging Green Industries in the New Global Economy. Oxford University Press, New York. https://doi.org/10.1093/oso/9780197555361.001.0001

Negoita, M., 2014. Globalization, state, and innovation: An appraisal of networked industrial policy. Regulation & Governance 8, 371–393. https://doi.org/10.1111/rego.12033

O'Riain, S., 2004. The Politics of High Tech Growth: Developmental Network States in the Global Economy, Structural Analysis in the Social Sciences. Cambridge University Press, Cambridge. https://doi.org/10.1017/CBO9780511499609

Pianta, M., Lucchese, M., Nascia, L., 2020. The policy space for a novel industrial policy in Europe. Industrial and Corporate Change 29, 779–795. https://doi.org/10.1093/icc/dtz075

Politico, 2020. Europe's reheated industrial strategy. POLITICO.

Politico, 2019. France claims big win against Vestager in battle for champions. POLITICO.

Posner, A.R., 1977. Italy: Dependence and political fragmentation. International Organization 31, 809–838. https://doi.org/10.1017/S0020818300018683

Redeker, N., 2021. After the German Election What's next in EU industrial policy? Jaques Delors Centre Policy Brief 6.

Reurink, A., Garcia-Bernardo, J., 2020. Competing for capitals: The great fragmentation of the firm and varieties of FDI attraction profiles in the European Union. Review of International Political Economy 1–34. https://doi.org/10.1080/09692290.2020.1737564

Ruggie, J.G., 1982. International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order. International Organization 36, 379–415.

Sandholtz, W., Zysman, J., 1989. 1992: Recasting the European Bargain. World Politics 42, 95–128. https://doi.org/10.2307/2010572

Scharpf, F., 1998. Negative and Positive Integration in the Political Economy of European Welfare States, in: Rhodes, M., Mény, Y. (Eds.), The Future of European Welfare: A New Social Contract? Palgrave Macmillan UK, London, pp. 157–177. https://doi.org/10.1007/978-1-349-26543-5_8

Schmitz, L., Seidl, T., 2022. Protecting, Transforming, and Projecting the Single Market. Open Strategic Autonomy and Digital Sovereignty in the EU's Trade and Digital Policies (Preprint). SocArXiv. https://doi.org/10.31235/osf.io/wjb64

Schwartz, H.M., 2021. Global secular stagnation and the rise of intellectual property monopoly. Review of International Political Economy 1–26. https://doi.org/10.1080/09692290.2021.1918745

Schwartz, H.M., 2018. States Versus Markets: Understanding the Global Economy, 4 edition. ed. Red Globe Press.

Seidl, T., 2021. Commodification and Disruption. Theorizing Digital Capitalism. EIF Working Paper 02/2021, 33.

Slobodian, Q., 2018. Globalists: The End of Empire and the Birth of Neoliberalism, First Edition. ed. Harvard University Press, Cambridge, Massachusetts.

Thatcher, M., 2014. From old to new industrial policy via economic regulation. Rivista della regolazione dei mercati 2, 6–22.

Thatcher, M., Vlandas, T., 2021. Foreign States in Domestic Markets: Sovereign Wealth Funds and the West. Oxford University Press, Oxford. https://doi.org/10.1093/oso/9780198786085.001.0001

Thelen, K., 2020. Transitions to the Knowledge Economy in Germany, Sweden, and the Netherlands, in: Growth and Welfare in Advanced Capitalist Economies. Oxford University Press, Oxford. https://doi.org/10.1093/oso/9780198866176.003.0006

Times, F., 2021. Just when you thought the chip shortage was over... Financial Times.

Tooze, A., 2018. Crashed: How a Decade of Financial Crises Changed the World. Viking, New York.

van 't Klooster, J., 2021. Technocratic Keynesianism: A paradigm shift without legislative change. New Political Economy 1–17. https://doi.org/10.1080/13563467.2021.2013791

Warlouzet, L., 2017. Governing Europe in a Globalizing World: Neoliberalism and its Alternatives following the 1973 Oil Crisis, 1st edition. ed. Routledge, London ; New York, NY.

Weiss, L., 2014. American Inc.?: Innovation and Enterprise in the National Security State. Cornell University Press.

Weyand, S., 2022. The Double Integration Doctrine, a Conversation With Sabine Weyand - Groupe d'études géopolitiques. https://geopolitique.eu/.

Appendix

Interviews

So far, we have conducted 3 online interviews with 3 individuals. Each interview was semi-structured and guided by a questionnaire. The interviews lasted between 40 and 60 minutes. Table 3 gives an overview of the interviews conducted.

Table 3: Interviews

Interview	Description	Date of Interview
Interview 1	Policy official DG Comp	February 2021
Interview 2	Senior policy official DG Grow	March 2021
Interview 3	Senior policy officical DG Comp	March 2021